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SPEECH FOR THE 2008 NATIONAL SPACE FORUM

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SPEECH FOR THE 2008 NATIONAL SPACE FORUM

Senator Wayne Allard

Senator Wayne Allard is from the State of Colorado

Good afternoon. It is a pleasure to be here with all of you today at the National Space Forum, and it is an honor to be here with so many industry experts and leaders. I thank our sponsors, the Eisenhower Center for Space and Defense Studies at the U.S. Air Force Academy and also the Center for Strategic and International Studies, for hosting this important event and for giving me an opportunity to speak to you today. In the Senate I have long supported the Center for Space and Defense Studies, and I am pleased to see the Center executing its goals of supporting and fostering a national dialogue on space.

As a member of the Senate Appropriations and Budget Committees, a former member of the Senate Armed Services Committee, co-chairman of the Congressional Space Power Caucus, and member of the Air Force Academy Board of Visitors, I am extremely interested in the topic of this forum: the space policy challenges facing the new presidential administration.

Unquestionably, 2008 is shaping to be a landmark year in American history as we will be electing a president in the first true open-seat election in 80 years, as no incumbent candidate is running in the primaries. Certainly much has changed since then. In 1928 space travel and space exploration existed in imaginations, and was only conceptualized in the minds and drawing boards of the world's greatest scientists who could only hope man would possess the ability to reach outer space within their lifetimes. It would have been very difficult to conceive that just three decades later man would reach space, and 11 years after that monumental achievement, we would be walking on the moon and repairing orbital structures in space.

As Americans, we are now able to both celebrate our rich and storied history with space, while looking forward to what achievements lay ahead. Just last week the United States celebrated the 50th anniversary of Explorer 1, the first U.S. satellite to orbit Earth and today marks the 50th anniversary of the creation of the Advanced Research Projects Agency in response to Sputnik. NASA is also commemorating its golden anniversary this year. The first 50 years in space have yielded incredible results and discoveries that have shaped the world we live in today. Strategically, though, we have reached a crossroads; we have proven we can get there, and must now decide what we want to do, now that we're there.

While politically 2008 may be remembered as a year for the ages, 2009 will quickly usher in many difficult and daunting challenges for a new administration and our 44th president. Washington always has and always will play a game of competing priorities, and for space it will be no different. The administration will be forced to choose and determine where, and in what capacity, it wants to prioritize space, including NASA, the Department of Defense's numerous agencies and the regulation of commercial space. In a broad sense, space will be forced to compete for limited dollars with the numerous programs, departments and agencies supported by our government. Money will be used to equip and support our troops, as well as to meet the needs of veterans. Domestic priorities such as healthcare and social security are sure to require much attention, as will our evolving energy needs and of course the state of the economy is sure to factor in heavily as well.

After sifting through these many and sometimes conflicting priorities, the next President will face a

host of policy decisions within the numerous areas of space, including: retirement of the Space Shuttle and making operational the next general human spaceflight vehicles; joint civil and military Earth observation capabilities; replacement of national security space assets and next generation blocks; and government utilization of commercial remote sensing capabilities for geo-spatial intelligence needs.

To further complicate this task, these decisions and activities will not be made in isolation, as space activities have increased globally, with more nations seeking to gain strategic and economic advantages through the use of space. It is no longer just the U.S. and Russia in space. Globalization now reaches beyond the globe itself. New partners, like India, are seeking to send spacecraft to the Moon. And uncertainty around utilization of the assembled International Space Station means opportunities and the necessity for international cooperation in civil space will continue to expand dramatically.

America's accomplishments in space have been numerous and influential. I'm positive you all could recite dozens of examples of products and services we all use everyday that were created through our space programs that enhance our quality of life: ATM machines, GPS technology, enriched baby food, and athletic shoes are just a few of the thousands of products that exist. Despite all this success, the space industry and space agencies will have to continue to prove their worth and validate their usefulness to a new Administration in order to receive federal dollars. Our space programs and the commercial space industry have both developed through innovation and competition - these challenges are nothing new. Whether policy makers like it or not, space can't be ignored and will continue to evolve to become even more intertwined within our daily lives.

Through the years, space has continued to provide a distinct and unquestioned strategic advantage in ensuring our national security. Today's world is no exception, and our military depends on space more than ever. Space assets are used for targeting, communications, weather, intelligence, surveillance

and reconnaissance, navigation and numerous other functions. There is no doubt the military space domain is here to stay, the only question remains is how a new Administration will best utilize this platform.

From a policy perspective, a number of choices exist. How, and in what ways should we expand our space assets and to what degree are we willing to become even more dependent upon them for national security? In turn, to what degree do we need to protect our assets, and how significantly are they at risk? How will we apply existing, and perhaps outdated, space policies to this new world with real threats to our space domination? I agree with STRATCOM Commander General Kevin Chilton that the space domain needs a bit of an image change. We can't simply think of space as just an enabler for other domains, and we need to transition our thinking and protocol to allow our land, sea, and air components to adequately and effectively support our space assets as well. The new administration will have to choose how it will incorporate and integrate space more completely into the big picture of national security.

Further, I believe we are already overdue in determining and defining our comprehensive policy related to our strategic space assets. Existing policy states that other nations have the right to use space for peaceful purposes and also have the right to defend their interests. However, we lack clarity as to what enforcement mechanisms exist for the U.S., and to what extent we will go to defend our space interests. There is no definitive line-in-the-sand, no borders in this ever-changing world of competing space interests. Our overall national policies must be adjusted in order to be prepared for any threat that may exist.

As we all remember, the Chinese ASAT test collectively woke up the world and reminded us that we are not alone in space; it is not our playground and not solely our domain. Further, it proved that China has an intense interest in developing space capabilities. Major policy choices and decisions need to be made in order to counter and prepare for any

challenge to our space dominance. This is increasingly imperative as we become more dependent on our space assets as this increased reliance makes our satellites and other assets more appealing targets for potential enemies. These decisions must be made in conjunction with an increased integration of space assets into all defense-wide operations in order for the U.S. to meet our full potential and integrate into a unified network. Technology is advancing so quickly that our policies are failing to keep up, and new space integration doctrine must be created that standardize tactics and procedures. We cannot afford to stovepipe our capabilities.

This year already, the issue of space weaponry has made headlines. It has been reported that China and Russia are planning to introduce next week a draft treaty for the "Prevention of Placement of Weapons in Outer Space" at the International Conference on Disarmament in Geneva. In response, it is my understanding that U.S officials have announced their opposition to this treaty. This topic is certainly not going away, and has long-reaching political consequences. Likely, this will become an increasingly more influential political issue in coming years, and the next administration will need to develop policy specifically related to weapon proliferation in space as part of their comprehensive foreign policy strategy. As such, I predict that an unprecedented, concrete international agreement will be forged regarding the issue of weapons in space because the eventual prevalence of the issue and the attention it acquires world-wide. Further, I believe this will be sought with controversy and conflicting self-interests due to the parties involved, and it is my hope the U.S. does not compromise any of our self interests in such negotiations.

The next administration will also be confronted with the need to further incorporate and integrate cyber defense systems into our military. The Air Force has already stood up a provisional Cyber Command, and I've strongly advocated for its basing to be located in Colorado Springs, Colorado. Air Force Cyber Command will ensure the freedom from attack in the

cyberspace domain. This decade has already seen several attacks on our cyber infrastructure by China. In May 2001 Chinese hackers successfully took down the White House Web site for almost three hours. The effects of a cyber attack can be crippling. Last year, Estonia witnessed first-hand the effects of a successful large-scale attack when a coordinated Russian attack disabled many commercial and governmental websites in the nation for several days.

The cyber threat is real, and can amount to much more than a mere inconvenience. Its scope stretches far beyond the "white-collar warriors" who attack from behind their monitors. A successful attack is the equivalent of modern-day industrial sabotage. On the battlefield, our military uses cyber tools to disable and destroy remotely triggered IEDs in Iraq, conduct electronic warfare operations, halt terrorist use of GPS and satellite communications, and prevent jamming of frequencies. Disruption of these abilities can be deadly; these are not threats we can afford to take lightly. The next administration will have to determine to what degree we will incorporate cyberspace and how will that relate to our overall space goals. Further integration of many systems including the broader domains of space and cyberspace will be a daunting task, and could make the monumental Goldwater-Nichols Act of 1986 look like a simple piece of legislation.

In addition to the formal integration of these new platforms, the next administration will be confronted with the proverbial fork-in-the-road regarding missile defense. The Bush administration has been a strong advocate for the program and has significantly restructured our missile defense assets. The Missile Defense Agency (MDA) has received strong bipartisan support in Congress. The FY 2008 budget cycle, however, was not so kind. Last year, one of MDA's top priorities, the placement of proposed missile defense installations in Europe, was funded \$85 million below the budget request, and the project garnered headlines world-wide and triggered strong opposition from Russia.

Other important MDA programs also received decreased funding last year, including the Space Tracking and Surveillance System (STSS) sensor development project, which is critical to increasing our ability to actively monitor threats around the globe. STSS provides worldwide tracking, discrimination and fire control. This program was funded at about one-third less than the President's request. STSS has grown in cost, but remains essential to our ability to effectively monitor future threats. Additionally, other programs such as the Multiple Kill vehicle and the Airborne Laser are also crucial to developing a stronger and more sophisticated missile defense system.

Aside from cuts to these big-name projects, I was also disappointed in proposed Congressional funding cuts for education and development centers. The Missile Defense Space Experimentation Center located at Shriever Air Force Base is critical to develop our future space-based capabilities, and the advancements made there contribute directly to the success of such programs like STSS. I was able to work with my colleagues on the Appropriations Committee, Senators Inouye and Stevens, to keep the full requests, but the support was not automatic and does not bode well for the future of the program under a less enthusiastically supportive Administration.

In FY '08 Congress prioritized systems that are ready or nearing completion for deployment as opposed to more futuristic systems, and it will be intriguing to see what pattern develops entering the new administration. It is of great concern to me if the priorities reflected in FY 2008 continue to veer even farther away from long-term development. It is important for us to keep U.S. industries active in the program and include our allies like Japan, with whom we are cooperating to build an ICBM interceptor that could be deployed from an Aegis cruiser. In the long-term, the MDA's goal is to build a global system, which is equipped to meet an unpredictable global threat. As such, space is paramount to accomplishing this goal.

As you know, our system today consists of space-based detection sensors, ground-based and seaborne early warning and tracking sensors, ground-based interceptors in Alaska and California for long-range defense, transportable ground-based Patriot capability, and sea-based interceptors to engage short and medium-range ballistic missiles. Our system features multiple defensive layers with system elements working together synergistically to enhance the capability as a whole. As advanced as our system is, it is far from invincible as we are still very much tethered to the ground and sea.

The new administration and Congress needs to determine what degree of investment it wants to place in future development. What we lack right now is a specific program that would develop a space layer of interceptors. I would like to see this administration, as well as the next begin to develop such a layer. Unquestionably, this would translate into an incredible strategic advantage.

A layer of space-based interceptors would enable a global on-call missile defense capability that could produce a timely response to rapidly evolving situations, and would enable the U.S. to be prepared for all types of threats that could develop out of unpredictable locations.

Of course such capabilities are accompanied with a high price-tag, and must compete with other priorities within the defense budget as well as the national budget in a hotly contested political environment. Even so, it is important to remember that such developments would not exist in a vacuum, but would be part of a complex and integrated system. The next administration will have to choose which direction to take, and which way it wants to go: continue the trend demonstrated in the 110th Congress of prioritizing near term projects at the expense of future projects or invest in comprehensive long-term goals such as space-based interceptors that would be able to reach targets more rapidly and are capable of destroying enemy missiles in the boost phase.

Most certainly the cost of a ballistic missile nuclear strike against a U.S. city would be enormous; the economic toll alone is estimated to be \$4 trillion. There would be no conceivable way to calculate or compensate for the loss of life and moral. The next president must determine these priorities, assess our enemies' capability and make the best decision. After 60 years of developing missile defense technology, we have reached the point where we must choose a direction.

It is my prediction that within the next Administration, missile defense will become a much less polarizing political issue than it has been in the past. As countries like China and now Iran, which this week test-launched the country's first low-orbit research satellite, begin looking toward space, the threat to American space dominance will become more apparent. Despite recent events in China, North Korea and Iran, skeptics of missile defense continue to characterize the threat from other nations as hypothetical and merely an academic exercise because the U.S. has remained so much farther advanced than our adversaries. We will be forced to acknowledge and confront these challenges because they will be unavoidable. I predict the debate to shift from "should we" to "how should we best" invest in missile defense.

Utilizing space for national security comes in many forms, including data imagery. The next administration will have to determine the appropriate role for commercial geo-spatial data providers and the government. Particularly, the National Reconnaissance Office (NRO) and the National Geospatial Agency (NGA) has expressed concerns recently about the relationship and reliance upon commercial-data providers and expressed a need for more "in house" imagery services. With more commercial companies emerging with business cases for entering parts of space that were previously only in the government domain, the question will inevitably be raised as to what capabilities are vital, and what capabilities can be effectively provided by the private sector. This addresses an inherent and time-old debate over the usefulness of contractors,

and whether a particular service should be considered inherently governmental.

President Bush's Commercial Remote Sensing Policy from April 2003 states that the fundamental goals include "relying to the maximum practical extent on U.S. commercial remote sensing capabilities for filling imagery and geospatial needs." However a recent and influential report released last fall recommended against the current NGA model of using multiyear contracts with commercial data providers to procure imagery and favored a more traditional business model of government owned and operated satellites. The administration will be confronted with the decisions of how to regulate and manage the relationship between these apparent conflicting concerns. Industry is naturally concerned about this potential policy switch, and contends that if their business with the U.S. Government is greatly reduced, the market could give rise to foreign companies filling that void, companies that the U.S. has no control over, which could produce yet another security concern.

The incoming administration must pursue policies that will enable healthy commercial space activities in all sectors of the industry, while leveraging existing commercial space capabilities. The United States is facing unprecedented international competition in this arena. New competitors have emerged in the space exploration field. China, India, Japan, Russia and Europe are all taking a more active and innovative role in space travel and commercial development. The X-Prize Foundation recently announced the Google Lunar X Prize, which invites private teams from around the world to build a robotic rover capable of landing on the Moon. Virgin Galactic, based in California, has plans for SpaceShipTwo, a six-passenger space liner with suborbital passenger services in 2008. Overseas, EADS-Astrium is developing a four-person spacecraft to make suborbital trips with the possibility of the first commercial flight in 2012.

The next administration will also have to confront the reality of an emerging commercial space industry,

which is growing at the same time the government's space systems are in transition. By 2010 the Space Shuttle program will be retired, and it likely will be three to five years where NASA can not send man into space; the question remains what will fill that void? For this reason, it is imperative that the United States government continue to promote private and commercial space exploration, developing a vibrant and ground-breaking commercial sector. The question will also be raised about the appropriate usage of government funds, and if the government is financing projects that duplicate commercial capabilities. Recent developments in commercial and civil space exploration, namely Spaceship One, incorporate innovative technologies, knowledge and existing infrastructures to explore and support the future human space exploration. Further collaboration and communication will be needed to meet the requirements of future space exploration while pursuing a cost-effective and sustainable approach. Taking this new and unique opportunity to further develop partnerships with the private and commercial space industry will mean the United States maintains it competitive and technological advantage.

The administration will also have to formulate its long-term strategic vision; will it move away from President Bush's "vision for space exploration" that focuses on permanent lunar bases similar to the International Space Station and a return to the Moon by 2020 in preparation for eventual human exploration of Mars and other destinations? Will new alternatives be proposed and will a strategic shift take place? The Vision for Space has broad implications for NASA as almost all the funds are expected to come from other existing NASA programs. Congress is still seeking to balance NASA's exploration activities and other existing programs like science and aeronautics research. Congress last authorized NASA in 2005 for FY 2007 and 2008, so reauthorization of NASA in FY 2009 and beyond could provide a new administration the opportunity to shape future policies considerably. Given the current political situation, it is entirely possible that Congress will not be able to provide comprehensive and long-term authorization this year. That would provide the new administration

with an opportunity to implant a firm footprint on NASA's future.

NASA will need to reshape its workforce in order to better align the mix of skills with the needs for future missions, and to ensure that NASA will have the necessary skills to achieve the new vision. Consequently, NASA sees a need to identify those skills that will no longer be needed, take steps to retrain and reshape the workforce, and be able to provide specific skills that will be needed in the future.

In conclusion, after 50 years in space we truly have reached a crossroads and the next president will face complicated and vital decisions regarding our future in space. Chiefly, we need to encourage more math and science students. It is an alarming fact that universities awarded more than twice the number of bachelors' degrees in physics 50 years ago than they do today. We need to replace retiring space professionals in reinvigorate the workforce. This, to some degree is accomplished by forums like we have today. At its core, space exploration is inspirational. We strive to inspire the next generation of ambitious engineers, astronauts and explorers. I truly hope that more young people will be able to experience and benefit from space exploration. The Center for Space and Defense Studies and the Center for Strategic and International Studies perform a vital role in our efforts to bring attention back to space, and excite individuals about what possibilities that exist in the future. Thank you again for this opportunity.