REP. CALVERT ISSUES THREE CHALLENGES TO SPACE COMMUNITY AND ASKS FOR THEIR HELP

2007 Space Symposium
April 10, 2007
Colorado Springs, CO

Below is the full text of Rep. Calvert's speech:

Good morning! Thank you Bob for that kind introduction and thank you to the Space Foundation for hosting this premier event.

I would like to welcome you all to the 23rd National Space Symposium – "Toward a New Reality."

It has certainly been a new reality in Congress since January! We're taking politics to a whole new level now. The presidential contest has already begun and you can't swing a cat without hitting 2 or 3 colleagues who think they ought to be the next Commander-in-Chief. It used to be that the safe subject at a Washington dinner party was the weather but with the global warming debate, even the weather is political! Any day I expect The Weather Channel to have separate call-in lines for Republicans, Democrats and Independents.

As many of you know, I am the former Chairman of the Subcommittee on Space and Aeronautics and the current Ranking Member. Mark Udall, now Chairman of the Subcommittee, is as committed to America's space enterprise as I am and I look forward to working with him on issues vital to the space and aeronautics community. I also have the pleasure of serving on the House Armed Services Committee and Natural Resources Committee with Mark.

The theme of this year's symposium is a fitting one - it is a new reality and today I would like to talk about three challenges facing America's space community: support, funding and competition. I certainly don't have all the answers and will be asking for your help in finding the solutions.

The first challenge is to reverse the erosion of support for NASA and their space exploration activities. Not all Members of Congress find space exploration awe-inspiring and an integral part of keeping our nation globally competitive. This is a severe problem, especially for human space flight, and our first challenge to build support is to make space compelling again. While significant, we can no longer call Low-Earth Orbit progress, and a return to the Moon must be more than a repeat of an accomplishment achieved almost 40 years ago.

One critical caution as we go back to the future is that our first space age was driven by a para-military competition with the Soviets which proved to be a fickle companion – it was not a source of enduring support. As we mature into the Second Space Age we must think about ways to make the U.S. space enterprise compelling over a long period of time - not just exciting for brief intervals.

I agree with NASA Administrator Mike Griffin's recent op-ed in Space News. He stated that while there are many economic, scientific and military reasons for space exploration, they are not the only reasons why we explore. Griffin wrote "The real reasons we do things like exploring space involve competitiveness, curiosity and monument building." He is absolutely right. Despite all the benefits mankind has gained from space exploration– it is really the desire to be great, to do something great that pushes mankind. We see it all around us – from our servicemen and women performing incredible acts of heroism in war to the individual who is compelled to sail around the world alone. People, especially Americans, are pre-conditioned to want greatness. Space exploration is rooted in mankind's thirst for discovery and that desire is still there.

If we are successful in creating a sustained interest in space exploration, perhaps future generations will once again answer "Astronaut" to the age old question of "What do you want to be when you grow up?"

It is a challenge for our generation to show our kids the exciting possibilities and rewards that exist in space careers. Advertising in space could be one way in which NASA elevates its current visibility among typical Americans. The government could make space assets available for commercial advertising and marketing opportunities. Currently commercial launch vehicles have several logos that represent customers, satellite and launch manufacturers, which is a good first step.

Perhaps the next step is the creation of an advertising system similar to those used by the PGA, National Public Radio or the Smithsonian Institute - all of which have long-term, dedicated and tasteful sponsorships. Of course, I understand this is an area that draws concern about safety and public image issues. By no means do I envision bumper stickers on the Mars Rover or a blinking neon sign on the International Space Station.

When I return to Congress after the recess, I will introduce legislation to authorize space advertising for NASA with the goal to bring in extra funding for the Agency's prize authority under the current Centennial Challenges program and to raise awareness among private entrepreneurs about the business opportunities in space. The legislation will also create a commission to recommend criteria appropriate for space advertising.

Currently the Centennial Challenges program conducts prize competitions for revolutionary, break-through accomplishments that advance the Vision for Space Exploration and other NASA priorities. The Centennial Challenges program authorized by Congress and implemented by NASA to engage private enterprise is, as are all Agency programs, subject to the congressional appropriations process. However, my proposal would create a trust fund – the Innovation Fund - for the receipts of space

advertising revenue which would allow the prize authority to increase without the dependence on annual appropriations. The result would be a self-sustaining prize authority program funded well above the current request of $20 million for the next five years.

Sponsorships through space advertising could take many forms – for example, a company could sponsor a Space Cam on the International Space Station that could be accessed by classrooms around the world for educational purposes. Universities who study atmospheric changes could partner with private enterprise to sponsor a multi-spectral camera for observation. As a former business man, I could easily see how this fund could generate $100 million after it's up and running. I envision that most advertisements could be virtual thus not adding weight to launches or mass to vehicles. In fact, the very first challenge could be to design the program itself or to have one of our space entrepreneurs deliver a camera to the International Space Station.

I know many of you in this room probably have even better ideas and so I ask the first question – how do you think we can make space compelling to the American people and future generations?

The next challenge is intertwined with support: the need for funding. In 2005, the House of Representatives overwhelmingly supported by a vote of 383 to 15 the NASA Authorization Act which was an affirmation of the Vision for Space Exploration. However, two of those "no" votes were from Appropriators, one of whom is now the current Chairman of the House Appropriations Committee. This is a problem as NASA finds itself at a precarious time trying to ramp up spending to move America beyond Low-Earth Orbit while also meeting the demands of the Agency's diverse portfolio of missions. Last year Congress funded NASA at half a billion dollars less than the President requested and about $1.6 billion less than Congress authorized.

There is a dangerous trend of bi-partisan non-support for funding NASA in Congress even with 60% of Americans supportive of space exploration. In the current atmosphere of competing budgets, NASA is struggling to maintain congressional support from the authorization to the appropriations process – and it is the appropriation that counts. I used to say that some of my best friends are appropriators, but now it's all my best friends are appropriators.

There are two important amendments that were offered last year that I'd like to bring to your attention. One amendment to the appropriations bill which funds NASA would have completely de-funded the Agency's Mars exploration program and the second would have shifted almost half a billion dollars away from NASA for non-space related activities.

As a strong advocate for NASA and the Vision for Space Exploration, I worked with my fellow NASA supporters in the House to successfully fend off these threats. Yet the reality is that Members of both parties supported these amendments and by large margins, the first amendment received 145 votes and the second received 185 votes.

In its appropriations bill, NASA competes with the Commerce Department, Justice Department and most other science agencies for funding. You can bet NASA will be a target again this year and we must be prepared to defend NASA funding against grabs from other areas.

Fortunately, the recently House passed Fiscal Year 2008 budget included an additional $2 billion for science, space and technology. Since our budgets are non-binding, it will be critical to achieve continuity from the budget to the appropriations process which will require bi-partisan congressional support.

Another challenge for funding is how to judiciously acquire and produce the instruments needed to operate in space. This is particularly important for military space acquisitions – which are suffering from skyrocketing cost growth for extremely complex systems that are taking up to a decade or more to produce.

The American taxpayer, weary of budget deficits, simply wants "more bang for their buck." It is imperative to find the right balance of new technology while capitalizing on what exists today. For example, NASA is working to improve on existing systems and assets. The replacement system for the shuttle, the Orion and Ares, is built upon existing Space Shuttle and Apollo technology. Some people have criticized the lack of development of a new vehicle but in the reality of smaller budgets, NASA has done exactly what it must do in order to move forward.

NPOESS is an example of a sensor too far and how cultural problems arise when military and civilian efforts are integrated. The Space Radar is an exciting program as it will give us unique capabilities. Unfortunately, the Space Based Radar is also an example of the generic problem of cost-control. So the problem is solved in a two step process: first, share the asset between DoD and the intel community – that's a good thing. The second is to move the project off the regular budget and make it black. While it is good to share the burden and jointly scope requirements, it's not so good if Congress won't know how much it costs until we read about it in The New York Times.

Cleary we must improve the up-front engineering and integration estimates for satellite systems. I know that DoD, along with other partner agencies, take this challenge seriously and are working to make improvements in these areas.

Despite unexpected increases in R&D projects, it is critical that we continue to invest in new technology as we capitalize on existing systems. In fact, of the $2.2 trillion federal budget, $143 billion or 6.5% is proposed for our nation's R&D investment – this is slightly below what a typical computer manufacturing company may spend. Depending on the industry, R&D may run between 2 and 15% - anything above 15% is considered an exceptional investment. The U.S. is the current global leader in R&D investment and we should continue to make R&D a priority in our budget because we're better off if we are the ones who invent the future.

Adding to the budget crunch is the difficulty agencies have in prioritizing their R&D project requests – what they need and what they want are often two very different things. So instead of selecting five quality projects to be delivered on-time and on-budget, we end up with ten projects over-budget and behind-schedule. In the end, instead of agencies pruning projects down to those important to their goals, Congress slashes funding across the board. Again, the support issue comes into play – and Members of Congress are part of the problem. Understandably, we will advocate for projects vital to our home districts. Unfortunately, this does not always translate into the most effective and cohesive national policy.

Returning to NASA as a case study, in addition to those established Members with district project loyalty, there about 60 new Representatives and Senators in the 110th Congress who have never registered a vote on space exploration or military space. Because we passed a two-year NASA bill in 2005, we won't have an authorizing or policy setting vote this year. So the new members' first space vote will be this summer on the more difficult issue of appropriation levels for Fiscal Year 2008.

The second question I pose to you and others in the space community is how will you educate the new Members of Congress, as well as the relevant incumbent members, about why our civilian and military space programs are a priority for the U.S? One way in which to influence Members is to call or write their offices. Suppliers should visit and communicate with their congressional representatives about the importance of the projects they supply. If Members are educated, they will be better equipped to make the right decision to support our American space enterprise.

A crucial part of our overall space policy is to ensure that both our civilian and military space programs have the "Rules and Tools" to continue to be the international leaders in the Second Space Age. This requires us all to be vigilant and cognizant of the actions of other countries. The U.S. must understand how other countries view their role in space and how that may impact our interests. This brings us to the last challenge: international competition.

When speaking about potential competitors throughout the space program, China seems to come up as part of the discussion now, more than ever. Most people seem to be of two minds when it comes to China: some believe in the Peaceful Rise scenario while others lean towards a more skeptical view of China's activities. It is no secret that I fall under the latter category.

I hesitate to pick a fight with someone who buys ink by the barrel and paper by the ton, but I am compelled to quote an editorial by Aviation Week and Space Technology criticizing my position on China, specifically their military and space activities. In October 2005, Aviation Week wrote "Resurrecting a Cold-War mentality best left undisturbed, Rep. Ken Calvert implies that the 2020 time frame in which the U.S. would return to the Moon is a period in which the U.S. and China might be rivals in space exploration…demonizing China, potentially baseless demonizing at that, isn't the

answer. There isn't even any evidence that China wants to land astronauts on the Moon within the next 25 years."

Last month China's senior space scientist told reporters at the annual National People's Congress in Beijing, "The goal to land an astronaut on the moon can surely be achieved in 15 years."

At a recent hearing I asked Administrator Griffin if the Chinese have the capacity to get to the Moon before we return and he answered in the affirmative. I do not believe China's goal to go to the moon will be just an elaborate exercise in planting the flag and heading back home – or even an ongoing peaceful presence on the moon. The challenge we face is their possible usage of space, up to and including weaponization.

On January 11, 2007, China successfully destroyed a weather satellite, after three failed tries and last fall, they temporary blinded a U.S. reconnaissance satellite. China's military budget will grow by 17.8% this year – and that's only the percentage that has been made public. According to The Washington Times, the U.S. government and private specialists believe it may be considerably higher.

As usual, China loudly protests any allegation that their space, or even military, programs are malicious in nature. I think it is naïve, and dangerous, to believe that China has only peaceful interests in mind when they have yet to fully disclose information about their military and space programs.

The fact is no one knows what exactly is going on behind the closed doors of the Communist regime in China. Unlike American society in which a Chinese journalist is free to ask questions about our military and space programs and facilities, no such questions are allowed to be put to the Chinese leadership.

However, there are some new realities regarding China that deserve careful examination.

In March, The Financial Times reported that China replaced the U.S. as the biggest source of exports to the European Union. The National People's Congress of China recently granted limited private property rights.

While these free-market advances are encouraging signs of integration and liberalization, it may also be possible that the Communist leadership is simply pacifying the people to buy time. The Chinese Communist regime has the benefit of history – they saw what happened to the Soviets under PERA-STOYKA {Perestroika} and GLASS - NOAST {Glasnost.} The Chinese are trying to reap the financial benefits of capitalism without allowing the freedoms that accompany democratization. For example, many people thought the internet would open Chinese society but instead the Chinese government has been able to control the information flow on the internet – sadly with the help of American companies.

The recent A-SAT test and blinding of one of our satellites gives us a glimpse of the regime's possible hostile aspirations and begs the question: which will come first - a reform movement that shifts the Chinese system to a more open, self-governing, property-owning society? Or will the Communist regime obtain superpower status and all the autonomy that comes with it?

By no means am I trying to start the second Cold-War or even compare the Chinese to the Soviet Union. In fact, I believe the Sino-American relationship is far more complicated. With apologies to Winston Churchill and his famous quote about Russia - for me, China is a relationship, wrapped in a challenge, inside a quandary.

So our options, with the information we have, are to either assume the Chinese are peaceful or assume they may have unfriendly intentions. I prefer to place my bet on the cautious side. By all means, I would welcome a free and open China as a trustworthy competitor, and even a friend, but until then - in this case - the best offense is a good defense – especially in space.

Just as Alfred Thayer Maa- HAN explained that naval power was the deciding factor in the domination of the sea and in warfare, so must we apply and explore the same principles for space. From his influential treatise on naval warfare written in 1890 The Influence of Sea Power Upon History, he stated that naval power resulted from geographical position, excess production, proper national character, and a supportive government. Enjoying all these characteristics, Americans, he wrote "whether they will or not … must now begin to look outward. The growing production of the country demands it." Our nation's dependency on space assets necessitates a comprehensive space doctrine that reflects and builds on Maa-HAN's work. It is up to this generation and the next to develop applications of how we will continue to utilize access to the "new frontier."

Last year, I met with two Air Force Academy scholars to discuss overall U.S. space doctrine. The Space Foundation has been a leader in the development of space doctrine through the education of policymakers and their support of a forum in Washington, DC called the Congressional Space Power Caucus for the exchange of ideas. Our efforts will take another step forward later this month when the National Defense University hosts a two-day conference titled "Towards A Theory of Spacepower." What is abundantly clear is that we need all of our best minds thinking about U.S. space doctrine.

Again, this is a challenge for everyone in this room and leads me to the third and final question: What should U.S. doctrine be for space and how should it address competition and possible threats?

Because I know many of you already have answers to send me, let me give you the email address now. It is SecondSpaceAge@mail dot house dot gov

The United States, in both the private and public sectors, understands the value of strong policy, and space exploration policy is no exception. Since the gauntlet was thrown by

President Kennedy to walk on the moon, America has searched for that next great step for mankind. Those of you in this room are paving the way and answering the tough questions about the future of space enterprise in the United States. It is clear that we can't do it without mutual cooperation between the public and private sectors. This is a joint venture that I think we all embrace as a challenge.

As we work towards a new reality of space exploration we must remember why we do it, why we work so hard to remain the global leader in space. We do it to continue a proud U.S. tradition of passing on a greater America than the one we inherited. Our children, the future space explorers, deserve the best and we need to expect the best. Fewer and fewer high school students are opting to study in the technical fields – a trend that is reversely mirrored in places such as China, India and many of the EU countries. Our economy is information-based, perhaps you could say intelligence-based. In order to continue our leadership position we must not only attract the best minds but produce the best minds.

The solution is not about the physics, math and science – those are the tools. It's about inspiring our kids to dream and propelling them to achieve. The solution is recapturing the spirit of 1962 when every kid dreamed of becoming an astronaut. If we can meet the challenges of today, we can give our kids back that dream for tomorrow.

Thank you and enjoy the rest of the symposium!

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