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SPACE AND NATIONAL SECURITY IN THE 21ST CENTURY

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EXCERPTS FROM
SPACE AND NATIONAL SECURITY
IN THE TWENTY-FIRST CENTURY
CONGRESSMAN MAC THORNBERRY

This transcript produced from cassette tapes provided by CSIS.

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JOHN HAMRE: ... It's caused by Secretary Rumsfeld pioneering work with the space commission. And, of course it did help that he became the Secretary because this is one of those commissions that was going to end up doing something. I've served on a number of commissions that have largely been keeping dust off of the wood on the shelves rather than get anything done, but this is one that was actually going to do something because the chairman of the commission moved into a position where he could do something. More than that though, I think that the commission was, he was a real disciplinarian. Those of you who sat on or participated in this commission have some idea how hard he worked. That really stellar group of folks that were involved with the commission activities. To me the commission was one thing but the proof of the pudding occurred in Afghanistan. People have no idea that this was the first real space war. When you get right down to it. The precision the communications the excellence in skill of our forces would not have been possible with the central role

that space played in this conflict. It's a story probably we're not going to tell very well. Because, frankly there's a lot of dimensions of this story that we can't talk about. But it was exceptional and in many ways to me it marks a transition. I think in many past conflicts around when we were going through the Kosovo thing. Space was absolutely essential. But it was basically augmenting what we was being done on the ground. I'd rather think that when the history is being written here, it's going to be much more about a space war. And so I think it's very timely and important that we take this opportunity to be a little bit retrospective, introspective about space both its commercial applications, and frankly its security applications, because I think that this was very much a turning point. We're very lucky this morning to help start our discussions today. To kick off and to key note our discussions (with) Congressman Mac Thornberry. I've had a chance to work with Congressman Thornberry, five years I think. Maybe five (or) six years, I must confess the first four weren't all that pleasant. I was on the receiving end of some pretty hard questions. At the

time I was at the (D)epartment and we would be summoned to go before the Armed Services Committee and it is intimidating to be questioned by a smart and dedicated member of Congress. I mean there's a lot of a member of Congress that's not (tough) let's be honest. But, Mac Thornberry was always a threat. This is one of the guys that you would look to and say what is he interested in, what is he going to ask, and try to figure out what's going to happen. Because, this is a very dedicated and capable member of Congress who has made himself a student. And that by and large is, by my reckoning, the success of members of Congress. You look at the stand outs overtime and invariably, they spend their time listening carefully. And when they ask a question the first time, it's worth listening to. That has been my experience with Congressman Thornberry. Currently, I'm working <unintelligible> with him on Department of Energy Issues because he has been on the forefront of insisting that the Department of Energy both honor its security obligations to the country and still provide the best science in the world. He's been very much a leader in the House of

Representatives on that issue. So it's in multiple capacities that we welcome Congressman Thornberry this morning to be with us. So let me not take any longer with my empty words and let's hear from someone who we should all be listening to very carefully, Congressman Mac Thornberry.

CONGRESSMAN THORNBERRY: Thank you, John. I appreciate CSIS taking the time and effort to put this meeting together. I appreciate the chance to be here with you. I got to confess I come here as John said, I think as a student in space, but certainly not an expert in space. I come from a district that has no particular interest in space particularly since the federal government decided to close the federal helium operations a few years ago. That was our last and only vestige of space interest. But I do come as someone that has come to believe that our future security and our future prosperity will be in part determined by how we approach space. I think it's important. And that's why I'm interested in it. In addition to the nuclear and strategic stuff, a major part of my work in Congress is an area that has come

to be known as transformation. How can we be sure that we are prepared for the security challenges of the future? How do we break out of the bureaucratic ruts that we get into in the Pentagon and on Capitol Hill? How can we better prepare ourselves for the future? As I say the word transformation has now become fashionable. And, so it's been used and misused in all sorts of different ways. It is even amazing to me however that some new roads and bridges in West Virginia are not only essential for homeland security they're transformational these days. So its anything that's going down the pike gets that label slapped on it. But as I have tried to look at the rate of change going on in the world around us and then try to look ahead and see the direction where some of the trends are taking. And also keep one eye looking back at the past and remember that every great power fell for some reason. There was some trend, some technological change, something that happened that knocked them off the ladder and try to look at the past future and present, and it just becomes abundantly clear to me that our approach to space is one of those keys that's going to determine

how long we get to stay at the top of the ladder. I think its essential for my children's future and for my country's future. And that's why I'm interested in it. As John said I think that there's no question Americans do not fully appreciate how dependent upon space we are now. And when I'm out giving the Iguana's club speech in Vernon, Texas. I try to take some time to describe to them, that when the farmers use satellite imaging to figure how much fertilizer to put on what part of their field, that is space . And when they pay at the pump that is space. And even at our ranch where we can now get as many television stations as you do in town on the cable there's space involved there. I have no doubt that the people do not appreciate the extent to which the war in Afghanistan is depended upon space. Although in some ways John's looking at the glass half full and I'm looking at oh how much better we could do. And I see that as a part of my job to keep pushing to say we could do better we could make fuller use of space. While space has certainly got more attention since the space commission works, Secretary Rumsfield's been there. I think in the broader sense

these are not the best of times for space. In some ways the importance of space is kind of receding somewhat from our consciousness. And in part is because of the war were involved in. We've been attacked with airplanes we've been attack with anthrax. We are worried about all of these other ways that people could attack us with bioterrorism and computers and all the rest. And as we're trying to focus on these other security measures, space is receding I think from somewhat from at least the public consciousness. Even though space is obviously critical in how we deal with each of those. But, for most people I think those issues are a long way away. And then you look at the programs, both on the civilian side and the military side. And you've got a lot of changes going on. You've got a variety of programs that have been cancelled, restructured, delayed. Cost estimates are no where near what they think they're going to be. There gets to be at least on the hill a feeling that we can't trust what these people are telling us about space its going to cost so much more let's make that a lower priority. Let's focus on the more concrete things that we can get our

hands on. You've got the new administrator of NASA saying that he has no confidence in the cost estimates for the space station. If he's got no confidence, how are we supposed to have confidence as we try to figure out where the taxpayer dollars are going. And yet, I do believe that we are at a crucial, crucial time. As we were trying to set up the legislative language for the space commission, We tried to set forth several questions we asked them to address. And as you know they came back and said were kind of at the end of the first era of space, that was focused on experimentation and discovery, but we are now on the threshold of a new era in the space age devoted to mastering operations in space. I think we are on that threshold. Even with the difficulties, even with the other stuff going on in the world. Were on that threshold and so decisions we need to make now are going to be very important for the long future. Let me mention some of the challenges I see that space has and then I want to mention some of the areas that I think we need to focus on. One challenge which is fairly obvious is a political challenge. There are not a lot of people

in anybody's district or in any part of government that are big advocates for space. There's some users of space and they want to keep using it the way they they're using it to help them do their other things, but there's not lots of folks that are putting political pressure to put more money into space. It kind of seems like everybody's for the future except when you have to give up something in the present to get it and that puts us in a tough spot. It's true that every year since I've been in Congress, we've had a vote on the floor of the house to kill the space station. It has never been successful yet I got to tell you that I think that the success <inaudible overdub>preventing the space station from going <inaudible>programs, rather than a deep seated political support or interest in space. Or any sort of sense that this is important for the future. It's more nostalgia for the past. It seems to me the American people that it's nice that we sent the scientist up to conduct experiments in space but I'm not sure they think it's really related to their everyday lives. But maybe if we find out about how bones age, it might be helpful someday. But it's not

exactly worth a lot of money. You all may know NASA. Tomorrow, we mark up the budget in the house budget committee. NASA was 3.8 of the federal budget in 1964 and 1965. This year it's going to be about .7 percent. Which is going to be the smallest percent of the federal budget NASA's ever been. Yet if its going to grow you're going to take that money from somewhere to do that you're going to have to have some political support and where is that political support going to come from to take that money from Medicare prescription drugs or what ever it is that you want to say. As we get further away from Neil Armstrong further away from the challenger to just coast along and assume that the dollars and the support are going to be there. I think space faces another challenge and that is a beaureaucratic challenge. By that I mean that departments and other parts of the government see space as a threat to their money if nothing else and maybe their careers maybe to their culture to their way of doing things and therefore there is a real sense that we aught to keep space in its place. And we see some of that going on. Even in the military it seems to me that

space somewhat runs against the grain. Of course their happy that space can provide intelligence and communication which we certainly seen breakthroughs in Afghanistan. But I still get the sense that we wanted used space to help us do our job in the ground and in the air. We don't want space to get to ugly and think that it has its own place, equal place at the table. Foreman vice chairman of the Joint chiefs Bill Owens said that identifying any specific organizational reforms is hard and difficult be cause every change challenges and threatens a host of entrenched military and beaureaucratic interests. I think that's partly what is happening in space. And even when we see some positive developments like the administrations saying we're going to put together a roadmap. That takes all the space programs together within some sort of budgetary constraints. It says this is the direction we want to go. If you'll notice what they do is they put all the space programs together and thin those out inside the space programs. They don't look at programs across the board we got this area. We decided to get so much money to space you'll all going to have to compete

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and see which one is the best but were not going to look at the broader range of programs and see that maybe space could play a role in some event. We are seeing a little bit more sensitivity. I don't know if you've noticed, but General Jumper has decided now in the Air Force there going talk about Air and Space not aerospace. But the real question that were going to have to look at is not the words that are used but the dollars and the real action that flows from it. In addition to a political and beaureaucratic challenge I think that space faces a vision challenge. Where are we going? where is our direction? The Space Council Report of 1993 found that after years of debating the future of space we still have to make hard decisions. It's like rearranging deck chairs on the Titanic without knowing where this ship is headed, and still arguing about who owns the deck chairs. I think maybe we've made progress since then. But I think there's still an element of truth in that In that our country still lacks a coherent national vision for space. From the civil, military, commercial, intelligence, side and tries to get the most benefit out of bringing those

things together in some sort of coherent fashion. And if we don't do that I'm afraid that we lose our ability to fully utilize space. (That) the space commission said that the key is to elevate space on the national agenda. And I think that is still true. Secretary Rumsfeld has done some good stuff and I want to talk about that in a second. But we still have the need to elevate space. The importance of space, our dependence upon space and the future of space national agenda. That's how we can help deal with this vision challenge. I believe. And of course we got to have a vision and good management. It seems like too often in space we've got one or the other and it's very hard to get both together. And if we have the vision but the management doesn't work then it takes time and takes attention support away from both. Let me suggest three areas where I believe we need to focus attention and effort. One is organization. President Eisenhower is quoted as saying, "the right system does not guarantee success but the wrong system guarantees failure. Because an effective system will suck the leadership into its cracks and fissures, wasting their time as they seek

to manage dysfunction, rather than making critical decisions." Last Year the space commissions said that the current interagency processes was inadequate to address the number and range of complicated space issues and they noted that its only going to get worse over time. And they also found that the portfolio under the NSC didn't have the staff support, didn't have the resources needed to have this sort of interagency approach to space. They recommended a senior interagency group for space with dedicated staff, that's focused on bringing all of the different investment in space: civil, commercial, military, intelligence bringing them together and trying to focus that on the future. Art Rudman commission also it was outstanding group of folks spent three years studying what are the national security challenges of the future. That was there Mandate. It was very broad. They came back and made the exact same recommendation as the space commission. That we've got to do a better job of having this interagency integration of space. And yet most people are afraid that the administrations policy in that regard is short of what was hoped for.

That we still don't have a deliberate coherent approach to implementing space policy. We got to have some sort of stronger mechanism at the top at the interagency level within the executive office of the president to try to bring this together. And I've got to say, that one of the things that Sept 11 makes very clear to me is that the line between what is military and what is defense and what is civilian and what is law enforcement is sometimes very thin, sometimes very fuzzy and sometimes not existent at all. I think it argues more strongly to bring together the assets we have. Make sure they're working for our best interest. And not trying to draw any false lines and saying oh that's just the military side we won't worry about what their doing. Oh that's just the civil side we won't worry what NASAs doing. It's got to be brought together because the line between what is a national security measure and what's not is a lot different than it used to be. Within the military, I think that, obviously, the Secretary has done a lot of good things in implementing the recommendations of the commission. We've got the new undersecretary in the Air Force we

have the Air Force being the executive agent for space we've got the sinks at space command separated out. The sink doesn't have to be a pilot anymore. I think just as importantly by the way, the Secretary has directed that each service enhance their professional military education on space at every level. Not just a special space course but everybody's got to understand more about space. We have asked for and they-are putting together a space budget a virtual space budget actually, we're still waiting to get the details on that. But there are clearly positive signs or positive movement that gives more emphasis on space. What he did not do is was make the undersecretary of defense for space as was recommended by both the Space Commission and again the Hart Rudman Commission. And there is still concern that there still fragmentation at the OSD level, there's still not somebody at OSD that can set down at that level with the interagency process and represent the department. He decided not to go that far. And yet if you get a little deeper. We've still got situations where somebody recently wrote, "The military communication satellite

network is literally the central nervous system for global Dodd operations. But among the services there are seven major satellite programs with two dozen spacecraft operating or planned, accessed by thousands of small ground terminals with different band widths and frequency capabilities. And so if we were ever going to have fast reaction mobile strike capability with space support having all these different stove top systems make it exceedingly difficult for us to do so. In my role as a student I was also, just before we started learning anything about some of the commercial imaging that's available which the department has taken advantage of. Seems like there are some real benefits out there that we for whatever reason that we are choosing to leave locked in a room somewhere that the war fighter might truly appreciate. I tell you it does seem to me that the pressure is on the Air Force on the military side to perform. They've got a lot of responsibility and not just if the people say air and space and not aerospace. But where the dollars go and what the real programs are going to be and what the real emphasis is going to be. And there will be people

like me that will continue to ask the question is this the right time for a separate force, is this the right time for a separate service. Maybe we're not there yet but we have to keep asking the question to see because one of these days and its going to be before most people will realize it, it will be the right time to have some sort of separate space force. While I'm on organization I've got to mention that it's not just the executive branch of government that has some organizational problems. If we could someday bring the executive branch into the 21st century, hopefully we can bring the legislative branch into the 20th century as far as organization goes. Space, for example, answers to something like 11 different committees on the hill and I fully recognize and acknowledged that. A second key in addition to organization seems to me to be personnel or people. I think at every hearing on every topic we hear that our greatest resources are people. We hear it so often that it becomes a cliché. And yet it is still true and particularly true I think with space. Because nothing else that we do is going to matter, if we don't find a way to get and keep top

quality people in space organizations and develop a space culture, that is innovative, risk taking, and focused on the future. And whether its DoD or NASA or other parts of the government I think there is still a need to establish a cadre of individuals that have real expertise in space. Some people think its going to take 10-15 years to really do that. And the longer we delay in trying to bring it together I think the more difficult its going to be. There's no question NASA had some difficulties, an IG report from NASA notes that they have not aligned personnel with their goals, and unless a pock line of trained people is replenished immediately by new college graduates, NASA will be in dire straits when 25% of their experienced employees reach retirement age in 2005. Since '93 NASA's already lost about 23% of its workforce. Couple of months ago, Air Force Director of Space Operations said he believes that Air Force and industry need to put more time in developing trained space professionals and that the shortage of trained space professionals is one of the reasons the Air Force is experiencing problems with some of its space programs. So you get a vicious cycle if you

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don't have enough people. If it does contribute to the programs having problems, the programs make it harder for people to get in to it. Contribute to the vision problem and it goes on and on and on. Of course it's not just the military NASA, NRO, and all sorts of people have difficulty with training and advanced education. Some people believe that we ought to have some sort of national space curriculum, maybe a national center of excellence at the post graduate level. To help form this cadre of space professionals and build a space community I think that's an idea worth exploring but I also believe that it's important that we help everybody understand even if you're not a space expert everybody needs to understand how important it is. But once we get these top quality people we have to learn how to treat them. One of the things that I've learned particularly in the military is that is that whatever you say is completely drowned out by what the promotion boards do. Or what the people do who assign people to various billups. In trying to continue to look for ways that we can push space forward and implement some of the recommendations of the space

commission one of the things I put in last years defense bill is the requirement that the Air Force develop a separate career field for space. In the hopes that we can help develop this cadre of individuals that we need. And then we need to maybe let people stay there longer. Part of the keys in developing key areas in the past has been to let people stay in positions for a lot longer than 2 or 3 years. Admiral Rickover was in his position for more than 30 years. I don't know if that's what it takes, but looking at the personnel rules the requirements that people rotate out the culture that says to get to the top you got fly planes or drive ships, all of that has got to be challenged and looked at again. Were still in a position where some people in technical fields can only rise so high in the military hierarchy. And we got to get to the day where the person sitting at a desk controlling the satellites for the UAV is valued just as much as the fighter pilot. If we can do that culturally, then we will have made some major progress. In addition to organization and people the other key I think for the future is the vision. Where we going? What is our

goal? What's our purpose? Space commission found that while organization and management are important the critical need is national leadership to elevate space on the national agenda. There are a lot of difficult issues and I know there's no guarantee that were going to get them all right. But I believe there is a guarantee that if we are paralyzed by an inability to move ahead and make decisions and have goals that were working towards with some sort of coherent space policy, that we will suffer the consequences far into the future. We've got to deal with launch ranges and launch vehicles. We've got to deal with ground stations and the growth and remote sensing. We got get the right mix of public and private investment of export controls and free markets we have to get the right mix of international involvement, and we got to have government investment to make sure our technology stays at least on step ahead. I tell you the thing that I'm most excited about in the president's budget that just came out is the new initiative on research and nuclear power for space craft. I'm sure that none of you all have ever played video games, but I

happened to watch my 12 year old's on occasion play video games. There's some of these things your looking for something in this video game and all of a sudden you get the right combination of hit this or jump into that then all of a sudden there's a whole new vistas that opens up all new rooms to look at or for us to pursue. For the navy I think electric drive, is one of those. I think for space getting more power up there with nuclear energy is one of those technologies that can open up whole new vistas. Of course what you hear mostly about is that it allows deep space exploration when you get out further from when solar power is effective the DoDs line is well were not really interested in that stuff. And we can do what we need to do with solar power. And were operating just fine. So don't bother us with that sort of thing. That seems exactly the sort of blinders approach that gets us in trouble. The possibilities of getting that much more power on anything in space or gives your rovers that much more range on Mars. But the possibilities of having that much more power has all sorts of possibilities for military applications as well. I

don't know if there will be a challenge to that in the budget and in the specific appropriations of bills but I think its one of the most important initiative the administration has going on. There's all sort of suggestions of where we ought to go. Some people say NASA out to divest itself of everything in the near earth and just move to deep space exploration. Other people say we ought to leave the space station behind and move toward developing a base on the moon as a base for further planetary exploration. It does seem to me it will be a shame if manned space flight is sacrificed because of the difficulties which NASA has experienced. And there are some people who believe that that is the direction that we may be headed; and that would worry me. On the military side we got to have a vision, as well. Dr. Edward Teller, the father of the H-bomb, wrote technology always develops much more rapidly than the human mind accepts new ideas. I think that is part of what we face in space. But it also means that developing the ideas of military doctrine are absolutely as critical if not more critical than the technologies that we develop. We've got to do a lot

more experimentation. Not only with new capabilities but testing for vulnerabilities, and looking at the possibilities that are out there. A lot of people think that particularly in space our simulation models are inadequate to look at the full range of possibilities but I've come to believe that experimentation for the military is one of the crucial foundations that will help us make sure we're prepared for the future. But ultimately we have got to move from support of ground and air operations to space control to force applications from space. It is a natural progression and that's where we got to go. It just makes sense with a growing dependency on space we have a growing vulnerability in space. And if you have this vulnerability in an area that is so crucial to the country's security and economy you got to protect it. And that means space control. Then it is not too far to say, if you want to have an ability to look at what's happening over the globe and deliver precision munitions anywhere from the globe you can do that better from space than anywhere else. We should not be afraid to think about, to plan for, and to study those things even right now.

Notice that at least in my mind in trying to talk about what's crucial for space. I talk about organization, personnel, and vision. I did not talk about technology. If you get those things right I think you're going to make the right decisions on what system you're going to invest in. Or what sort of research you're going to do, in what areas. I am afraid that we spend way too, and I realize that this is where a lot of you work, but, we spend way too much time worried about this system and that system and not enough about the processes that help us make decisions on those systems. And that really we short change some of the things that matter the most in the long run.

The British Military Router, Captain SirBacil Littlehart wrote in 1944, "that military history is filled with the record of military improvements that have been resisted by those who profited richly from them. Between the development of new weapons and new tactics for their adoption there has always been a time lag, often of generations, and, that time lag has often decided the fate of nations. That's really

what worries me and that's frankly what motivates me. The time lag between the development of a technology or an approach and the implementation of it. A time lag that is often generations. A time lag that often determines the fate of nations. Just because were leading the world in space, right now, there's no need to rest on our laurels. In fact, I think we've done too much of that. We've got to move out boldly, communicating with the American people as best we can, but exercising leadership even if they don't follow along quite as closely as we think they ought to. For I believe that our future security and our future prosperity is very much dependant, upon how we approach space and whether we are bold, innovative, risk taking and focused on the future. Thank you.