

for the effort he has undertaken, and hope that my colleagues on this side of the aisle would accept the amendment and work with the gentleman to see that his ultimate report is, in fact, issued so this body can learn lessons from the Kosovo crisis.

Mr. Chairman, I want to also thank the gentleman from New Jersey (Mr. SMITH), my distinguished chairman, who has also been a tireless advocate for finding peaceful solutions to international crises, and I look forward to adding my support to the vote on this amendment.

Mr. KUCINICH. Mr. Chairman, I yield myself such time as I may consume to first say that my work on this amendment was inspired by the leadership of the gentleman from Pennsylvania (Mr. WELDON), who saw a very important moment in the history of the Kosovo conflict and rallied Members from both sides of the aisle to a higher level of participation, and I want to publicly thank him not only for supporting the amendment but also for his almost singular leadership in this House on behalf of peace. So I thank him for his support.

Mr. Chairman, I yield 1 minute to the gentlewoman from Georgia (Ms. MCKINNEY).

Ms. MCKINNEY. Mr. Chairman, I join my colleagues in commending the gentleman from Ohio for his amendment and for the wonderful work that was done during this period of crisis that we have recently faced. I want to lend my voice of support for the work that the gentleman does, his efforts on behalf of peace and on this amendment, and I thank him for introducing it.

Mr. KUCINICH. Mr. Chairman, I reserve the balance of my time, but also want to thank the gentlewoman from Georgia for her support and for her participation and her efforts over the past year.

Mr. SMITH of New Jersey. Mr. Chairman, I would like to inquire as to how much time remains.

The CHAIRMAN. The gentleman from New Jersey (Mr. SMITH) has 3 minutes remaining.

Mr. SMITH of New Jersey. Mr. Chairman, I yield myself such time as I may consume.

Mr. Chairman, I agree with my good friend, the gentleman from Ohio (Mr. KUCINICH), who has sponsored this amendment calling for a study of the role of diplomacy regarding the Kosovo conflict, and I want to thank him for his very thoughtful amendment. Everything he does is thoughtful, and this is just another example.

I personally voted against military action, Mr. Chairman, and history will someday give us a clue and perhaps some real answers as to whether or not diplomacy before the conflict was working and whether diplomacy during the conflict was responsible for ending the conflict.

I support the notion of an independent panel to examine this. We have ample reason for concern that a report

by the administration about its own policies would simply be a defense or an apology for those policies and little more. This administration certainly has a record of paying, at best, lip service to congressional initiatives in foreign policy.

I would also like to say that the report must, in addition to considering the question of diplomacy versus military intervention, assess the situation on the ground in Kosovo to which the international community was seeking to respond. The ideas of conflict resolution, preventive diplomacy, and negotiated settlements are theoretical concepts, and they do not incorporate the notion that one side might not have had one ounce of good will and instead had a clear willingness and desire to commit genocide instead.

Finally, diplomatic initiatives are supposed to be motivated by good intentions, and most are, but the report should consider that not all motivations are good. Having just returned from St. Petersburg session of the OSCE Parliamentary Assembly, many of us were subject to a heavy dose of Russian propaganda which, among other things, alleged that there was no dissent here to the administration's policies. That is obviously false, and I must say I would not want to see Russian initiatives to have been considered well intentioned just because they were diplomatic.

As a critic of the NATO action, I do not want to see a report which would simply vindicate my own beliefs. It must also assess whether diplomatic alternatives in dealing with a regime with a track record like that of Slobodan Milosevic might have made a just solution to the Kosovo crisis all the more elusive. Otherwise, the report would be no different than the latest administration proclamation of the wisdom of its ways.

Having said this, Mr. Chairman, I strongly support the gentleman's thoughtful amendment and I recommend the full House adopt it.

Mr. Chairman, I yield back the balance of my time.

Mr. KUCINICH. Mr. Chairman, I yield myself the balance of my time, and I wish to thank the gentleman from New Jersey for his thoughtful and analytical approach to this important question. I also want to thank him for his leadership on human rights, which has animated his support not only for this amendment but for his work in so many vital areas in this Congress.

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I am very pleased to have the support on both sides of the aisle.

Mr. Chairman, I yield back the balance of my time.

The CHAIRMAN pro tempore (Mr. MILLER of Florida).

The question is on the amendment offered by the gentleman from Ohio (Mr. KUCINICH).

The amendment was agreed to.

Mr. SMITH of New Jersey. Mr. Chairman, I move that the Committee do now rise.

The motion was agreed to.

Accordingly, the Committee rose; and the Speaker pro tempore (Mr. BE-REUTER) having resumed the chair, Mr. MILLER of Florida, Chairman pro tempore of the Committee of the Whole House on the State of the Union, reported that the Committee, having had under consideration the bill (H.R. 2415) to enhance security of United States missions and personnel overseas, to authorize appropriations for the Department of State for fiscal year 2000, and for other purposes, had come to no resolution thereon.

#### ELECTION OF MEMBER TO COMMITTEE ON APPROPRIATIONS

Mr. CALVERT. Mr. Speaker, I offer a resolution (H.Res. 225) and I ask unanimous consent for its immediate consideration in the House.

The SPEAKER pro tempore. The Clerk will report the resolution.

The Clerk read as follows:

H. RES. 255

Resolved, That the following named Member be, and he is hereby, elected to the following standing committee of the House of Representatives:

Committee on Appropriations: Mr. BLUNT of Missouri.

The SPEAKER pro tempore. Is there objection to the request of the gentleman from California?

There was no objection.

The resolution was agreed to.

A motion to reconsider was laid on the table.

#### SPECIAL ORDERS

The SPEAKER pro tempore (Mr. OSE). Under the Speaker's announced policy of January 6, 1999, and under a previous order of the House, the following Members will be recognized for 5 minutes each.

#### HONORING ASTRONAUT PETE CONRAD

The SPEAKER pro tempore. Under a previous order of the House, the gentleman from California (Mr. CALVERT) is recognized for 5 minutes.

Mr. CALVERT. Mr. Speaker, I rise today on the sad occasion of the recent loss of a great American hero. Pete Conrad truly embodied our Nation's preeminence in space exploration and the progress of our Nation's space program.

As a lifetime fan of space exploration, I have been inspired by Captain Conrad's achievements in space and devotion to building America's space program.

I recently had the honor of meeting this great man, a brief meeting that I will never forget. In the short amount of time we spent together, I sensed the passion and dedication he held for our Nation's space program. As I shook his hand to say goodbye, I knew that I had just met a true American hero.

Captain Conrad's memorable career as an astronaut is very well documented. He was the third man to walk on the Moon. He was aboard four missions to space. He set numerous records for space travel, including the endurance record for an individual in space and the world space altitude record. His achievements helped pave the way for our Nation's success in space exploration, which have recently included the early stages of the International Space Station and the successful mission to Mars.

For these heroic efforts, he received the Congressional Space Medal of Honor among his other distinguished career awards and medals.

Not so well known, however, were his activities following his retirement from NASA and the Navy. Pete Conrad continued his dedication to our Nation's space program by promoting America's commercial activities in space.

Throughout his 20-year career at McDonnell Douglas, Captain Conrad led many efforts to advance our Nation's emergence in space exploration. During this time, he earned the reputation as a leader in private space industry. More recently, through his establishment of a group of companies called the Universal Space Lines, Captain Conrad continued his activities to ensure that America would remain the preeminent Nation in space.

The continued development of commercial activities in space will be the lasting memory of Captain Conrad.

I believe Pete Conrad was intricately responsible for our Nation's long-standing posture as a leader in space. As we develop commercial space activities and benefit from them, we should remember that without the leadership, dedication, bravery, and ingenuity of Captain Pete Conrad, these would not have been possible.

I send my condolences to Pete's family, friends, associates.

Pete, thank you for inspiring me and our entire Nation.

When I think of Pete's lifetime achievements, I get inspired to gleefully exclaim the first word he spoke as he took his first step on the Moon: "Whoopee".

Godspeed, Pete. I will remember you always.

Mr. Speaker, I yield to my friend, the gentleman from California (Mr. ROHRBACHER).

Mr. ROHRBACHER. Mr. Speaker, I would like to at this moment to submit for the RECORD a testimony that Pete Conrad gave before my subcommittee, and I chair the Subcommittee on Space and Aeronautics in this House Committee on Science, on October 1, 1998, which was his testimony at the 40th anniversary of NASA. The title of his testimony was "Life Begins at Forty."

It is a terrific, terrific vision for the future that Pete outlined his goals for America's space program in the next millennium.

Mr. Speaker, I commend my friend, the gentleman from California (Mr.

CALVERT), for being here tonight. I will have 5 minutes a little bit later on to say my piece, as well.

The gentleman from California (Mr. CALVERT) is just one of many people like myself who have been inspired by Pete Conrad, a man who is not just a great pilot and a great technician but a beautiful human being, a person with an incredible sense of humor.

And of course, let me just say to the gentleman from California (Mr. CALVERT) that when he quoted Pete and his first word when he stepped onto the Moon, I think he had to give a little bit more umph to it. It was "whoopee!" And not just "whoopee," because Pete Conrad had a zest for life and was just a fantastic human being. He was a naval pilot who was a very successful naval pilot.

Today we buried Pete Conrad in Arlington Cemetery. And as we stood there and as his body was about to be lowered down, a team of naval pilots flew over that site and one pilot peeled off and headed straight for the heavens. And that is Pete heading straight for the heavens. It was a glorious sight.

We just thank God for men and women in our military and in the service of our country as astronauts and the rest like Pete Conrad, leading the way for America.

#### NASA 1998: LIFE BEGINS AT FORTY

TESTIMONY BEFORE THE SUBCOMMITTEE ON SPACE AND AVIATION OF THE HOUSE COMMITTEE ON SCIENCE, CONGRESSMAN DANA ROHRBACHER, CHAIRMAN

CHARLES "PETE" CONRAD, JR., CHAIRMAN AND CHIEF EXECUTIVE OFFICER, UNIVERSAL SPACE LINE, INC., NEWPORT BEACH, CA, OCTOBER 1, 1998

Good afternoon Chairman Rohrabacher, Congressman Gordon, and other honored members of the Space and Aeronautics Subcommittee. I'd like to thank you for inviting me to speak to the Subcommittee about the future, and the role NASA can play to develop that future. Having been a long time NASA team member on Gemini, Apollo and Skylab, I rode the wave of public support and popularity the U.S. space program engendered through the 1960s and early 1970s.

I enjoyed the rare opportunity of being an astronaut for this great country, but the bigger legacy I hope to leave behind is a robust commercial space industry making money for America in the 21st Century. I can't speak for the entire industry, but I would like to speak for my part of it, Universal Space Lines (USL). USL is a small business just over two years old, but already with over fifty employees. Our long-term company goal is to position ourselves as the world's premier provider of affordable commercial space transportation services, including purchase and operation of both expendable and reusable launch vehicles. Our current products range from the commercial tracking and commanding of satellites, to a near term, low cost expendable launch vehicle for small to medium payloads. And Mr. Goldin will be interested to hear we've begun planning for the eventual transition to reusable launch vehicles as their technology matures.

Our success will primarily be driven by the growing commercial space sector. Commercial space revenues will exceed \$100 billion annually at the turn of this Century, a figure far greater than today's combined NASA and

Air Force space budgets. And remember: this new millennium is only 15 months away!

As many as a thousand or more new commercial communications satellites will be placed in orbit during the next decade, extending the World Wide Web into the sky. Iridium, Globalstar, Teledesic and others are literally betting tens of billion dollars on the opportunity to cash in on an annual trillion-dollar global communications market.

My company and others are gambling we will be a part of the emerging commercial space industry. However, we should not become too sanguine about the power of the word "commercial." Both NASA and the Defense Department will also play a major role, for good or for bad, in the ultimate environment that emerges. In the years ahead my hope is that this Congress will help guide our nation to establish a free and competitive market in which all companies can participate fairly. NASA, if it so chooses, can be a major player helping the transition to a commercially focused profitable space industry.

As an example of how our country dealt with a similar issue from our past, I'd like to draw your attention to the early history of commercial aviation. Between the late 1940s and early 1960s, during a post war era of declining budgets, NASA (and its predecessor agency, the NACA) and the Air Force invested in a host of experimental aircraft that opened America's skies to military and commercial aviation. In particular, experimental and military jet aircraft spawned the thriving commercial aviation industry we have inherited today.

During those early pivotal years after World War II, visionary leaders in the Air Force and NASA pursued a technology policy of building and flying demonstration hardware; hardware that was built quickly and flown often. These early investments pushed aviation into a thriving, commercially focused and profitable industry. Our challenge today is to ensure the same opportunity is afforded our budding commercial space industry. Just as the success of our aviation industry hinged on the introduction of affordable and reliable aircraft, the commercial space industry can't truly take off without affordable and reliable launch vehicles.

#### FORTY YEARS HENCE: THROUGH A GLASS DARKLY

Mr. Chairman, history is a funny thing, full of unexpected discontinuities. So before I try to look forward into the middle of the next Century, I'd like to briefly look back to the middle of this Century.

Forty years after the Wright Brothers first flew at Kill Devil Hills, B-17s and B-24s were bombing Germany, and the B-29 was in initial full scale production. In Germany, the Me-262, a jet fighter (and probably the finest airplane in the war) was also just entering initial full scale production. So, too, was the A.4 (the V-2)—an honest-to-God war rocket.

But we haven't seen the same sort of progress in the forty years since the founding of NASA in 1958. Why? In 1903, people aboard an airplane were called "aeronauts." Forty years later, they were called "passengers." Where are the passenger tickets to space available for purchase today?

A second cautionary analogy. USL is a business being run virtually. We depend upon the interconnectivity of the Internet. I have no idea how I would do my job without access to the information resources of the World Wide Web.

But the Web only came into existence around 1992—just six years ago!

And we're not at all unique—scores of other businesses are also now totally dependent upon the Web's existence.

How do you predict the coming of something like the Web? It's roughly equivalent

to being able to predict, in 1900, that the coming of the automobile is going to lead to the suburb, or to drive-through fast food stands. . . .

I'm a bit reluctant, then, about trying to predict or describe what 2038 might look like. But I can describe what I'd like it to look like.

#### STRATEGIC U.S. GOALS IN SPACE FOR THE NEXT 40 YEARS

The committee has asked, "What should be the strategic goals of the U.S. in space for the next forty years?" I think that there are four overarching goals. (1) Foster a commercial space industry. (2) Explore the Solar System. (3) Settle the Solar System. (4) Explore the Universe.

For the first time, there now exists a nascent commercial launch services industry. It came slowly into existence during the last part of the 1990s, and it came into existence primarily because, for the first time, NASA didn't try to strangle this new industry in its cradle. The foremost thing a medical doctor learns is "First, do no harm." This prime principle of medicine should also become the foremost policy of the Federal Government with respect to the newborn commercial launch industry.

Exploration of the Solar System will be done by robots and by humans. In the case of robots, these missions will be primarily scientific, and could be pursued by the Government, or by academia, or both. Commercial data purchase is one method that either or both could pursue as a means to achieve their exploration goals, and at the same time save money, and again at the same time help to foster a commercial space sector.

Exploration by humans will probably be confined to the inner Solar System over the next forty years—i.e., Luna, Mars, and the small bodies (asteroids). These explorations will also be primarily scientific, certainly so in the case of Mars, but in the case of Luna and the asteroids, one can easily see economic rationales. There are thus business cases that can be made and that will be pursued.

Settlement of the Solar System may begin with Luna. There's lunar water ice at both poles, making settlements and outposts on Luna tremendously easier to accomplish than might have been otherwise. Lunar water ice, in a phrase, changes everything. One might even speak of a lunar "Cold Rush."

The exploration of the Universe is primarily a scientific one, using space-based astronomy facilities. Such work, of course, is done to "do" science, but a lot of this science will begin to lay the ground work for the first robotic missions to the near stars, possibly in the 22nd Century.

#### THE SINGLE ISSUE THAT MUST BE ADDRESSED

But before any of the above can be attempted, much less accomplished, there must be Cheap Access to Space. You need to be able to get to low Earth orbit ("LEO") easily, frequently, reliably, and cheaply. There is no inherent technical barrier to the creation of such a capability—"only" engineering development need occur for cheap, easy to operate, robust access to low Earth orbit to become available.

And as has been pointed out, once you're in LEO, in terms of energy, you're halfway to anywhere else in the Solar System.

#### ROLES OF THE FEDERAL GOVERNMENT

The second issue the Subcommittee wished addressed is "What are the appropriate roles of the federal government in pursuing those goals?" I would argue that there are four roles for the Federal Government. The first appropriate role is to support and encourage science, both directly funding it as well as

helping to encourage and underwrite its accomplishment by the private sector and academia. This also applies to exploration activity, both human and robot. The Government ought to help academia and the private sector explore, through underwriting, partnerships, tax credits, and other such mechanisms. In some rare cases, the Government itself might also mount its own explorations. These were the patterns and methods of exploration employed by Spain and England in the 1500s and 1600s, as well as by the United States in the 1800s.

The second appropriate role of the Federal Government in my opinion is to foster long-term, high-risk technology development. The Federal Government should strongly invest in next generation technology, including experimental reusable launch vehicles and military demonstration hardware.

The third activity that I feel is appropriate for the Federal Government to pursue is that of the use of space for the defense of the United States.

Finally, the Federal Government has, I believe, an important, if not critical, role in the encouragement and incentivization of the growth of the nascent entrepreneurial commercial launch industry.

#### SHORT TERM POLICIES TO ACCOMPLISH THESE GOALS

"What policies and priorities should Congress and the Administration be putting in place in the near term to begin the transition to the future?"

Here are a few of the possible options I think would go a long way in the short term for encouraging and incentivizing the growth of our emerging commercial launch industry.

NASA and the Air Force should procure all launch services via competitive bids that are truly open to all companies, not just the largest defense contractors. These "fly before buy" launch service contracts must not develop new launch vehicles; instead, they should be structured like the Air Mail "service" contracts of the 1930s to encourage private investment. During the next forty years NASA should transition totally out of operating space launch vehicles, or of on-orbit support infrastructure.

Space science data should be purchased by NASA in order to help to support science and the development of a commercial space sector. Resupply and support of the International Space Station should be provided commercially by the private sector, so as to also help support the development of a commercial space sector. The International Space Station should also be commercially operated.

In parallel, Congress can also pass legislation providing incentives to the commercial space transportation sector. One possibility is investment tax credits to incentivize the creation of launch service providers. Such credits ought to be able to be traded. Other possibilities include interest write-offs, leg-islated market incentives like "air-mail," and regulatory improvements. All of these incentives can help give birth to a thriving commercial launch industry modeled after today's aviation industry. The one thing we must not do is create a monopoly where a single company controls the ability to launch critical commercial and military assets into space. Guaranteeing government loans or market share for a single company would be catastrophic to the emerging commercial industry.

In the future tax credits may also be an appropriate mechanism for helping to encourage long term goals, such as Lunar missions and settlement.

A third policy thrust should be to robustly invest in the experimental technology and

military demonstration hardware that supports truly low cost space launch vehicles. No technology investment is required for expendable launch vehicles, as the commercial sector is well positioned to develop such vehicles today. Instead, the government should be investing in the longer term, higher risk reusable launch vehicle technologies that promise to reduce launch costs by two orders of magnitude.

Mr. Goldin at NASA has already done a good job with his early investments in experimental vehicles, but it's just the first step. NASA's early, but underfunded plan to fly many "Future-X" experimental vehicles is an excellent blueprint for the future. In the past, Mr. Goldin has shared his vision of "blackening the sky with X-vehicles"—not prototypes or commercial vehicles, but pure experimental demonstrators. If we truly want low cost launch vehicles, it will require the flight of many experimental vehicles built by many different companies.

The policy goal of flying X-vehicles for technology demonstrations should become the basic way that the government (and NASA) should approach technology development. Build 'em, fly 'em, and break 'em—both by intent and accident, this approach has led to today's thriving commercial aviation industry.

In coordination with NASA, DoD should also be investing in their own experimental vehicles and early military demonstration hardware. Either the Air Force or the Navy should develop a Military Spaceplane capability that supports global reach and the ability to defend U.S. interests "anywhere, anytime," with dramatically smaller force structures than exist today. Blue ribbon panel after blue ribbon panel has advocated the need for such technology investments starting with General Moorman's Space Launch Modernization Panel in 1994. Most recently, the Defense Science Board is recommending an ongoing investment in the Space Maneuver Vehicle flight tested at Holloman AFB just last month.

Finally, while institutional changes are not necessarily required at NASA, the mindset must change. NASA should be the leading advocate of change and the transition to a primarily commercial space industry. Nonetheless, the real change is up to Congress. NASA, the Administration, and Congress must decide to place funding and budget priorities on the side of change. The Government should be investing in technology, experimental vehicles, and military hardware for the defense of the country.

#### 2038: FREE PEOPLE IN FREE SPACE

The United States is at a seminal point in our transition to a commercial space industry. If we choose to encourage and incentivize the move towards a commercially based space industry we can accelerate and fundamentally enable America's move into space. We did this once before when America invested in the technology of commercial aviation, and it paid handsome dividends. Now it's time to build the same bridge to the future of commercial space.

Thank you, Mr. Chairman, for this opportunity to present USL's views. I would be pleased to answer any questions you or any other Members might have.

The SPEAKER pro tempore. Under a previous order of the House, the gentleman from Florida (Mr. HASTINGS) is recognized for 5 minutes.

(Mr. HASTINGS of Florida addressed the House. His remarks will appear hereafter in the Extensions of Remarks.)