take the ideas of this bill, we can work together in a common way, Democrats and Republicans, and we can move forward a bill and actually get it passed this Congress. It is still my goal. It is still my desire. It is my yearning, and I believe it is the yearning of the American public.

THE INFLUENCE OF AERONAUTICAL RESEARCH ON MILITARY VICTORY

The SPEAKER pro tempore (Mr. TANCREDO). Under the Speaker's announced policy of January 6, 1999, the gentleman from Virginia (Mr. PICKETT) is recognized for 60 minutes as the designee of the minority leader.

Mr. PICKETT. Mr. Speaker, early this year the nations of the North Atlantic Treaty Organization, the NATO alliance achieved a military victory in Yugoslavia. The military objective of the 3-month long campaign in the Yugoslav province of Kosovo was to drive the Serbian armed forces out of Kosovo.

This objective was achieved largely through the use of air power applied in a sophisticated and comprehensive manner. The bulk of the sorties flown were executed by fighter-bomber aircraft based in Italy between 200 and 300 miles away from their objectives in Yugoslavia.

These sorties were accomplished largely by F–15E, AF–8B, and F–16 aircraft operated by the United States, Belgium, the Netherlands, and other European countries, and Tornado attack aircraft operated by Great Britain and Germany and also French attack aircraft used by the Air Force of France.

In addition, heavy, long-range bombers, B–52s and B–1Bs based in England and B–52s based in Missouri delivered a substantial fraction of the weapons on the targets.

Finally, unpiloted reconnaissance aircraft were used extensively for the first time in this conflict.

Although air power has been a significant component of all warfare since 1939, it can be argued that this was the first campaign where air power was absolutely the dominant factor.

Given what has happened in Kosovo, it is a legitimate question to ask how the air power that achieved that victory was created. The record shows that it did not happen overnight. In 1944, the Commander in Chief of the U.S. Army Air Forces, General Henry H. (Hap) Arnold said, ''the first essential of air power is preeminence in research.'' The key word in this statement is research. It is important to understand how this research was performed, who paid for it, and how the results were used.

In 1917, a provision was put in the Naval appropriations bill to create a National Advisory Committee for Aeronautics called NACA because the inferiority of American aircraft during World War I was patently obvious, not a single airplane of American design or manufacture was used in combat during World War I.

The decision to create NACA changed that circumstance for all time. A research laboratory in Hampton, Virginia, the Samuel Pierpont Langley Aeronautical Laboratory was established a year later, and from then on, the United States of America has been preeminent in military aviation.

For a short period, the Germans and the Japanese built more airplanes than the United States during World War II. However, after less than 2 years, American air power emerged in vastly superior numbers with aircraft that were decisively superior in quality. The reason why the United States could accomplish this end was due in large measure to the research done in the laboratories of the National Advisory Committee for Aeronautics between the First and Second World Wars.

All-metal airplanes, efficient radial engines, accurate flight control systems that made dive-bombing possible were all developed during those years in the NACA laboratories with the assistance of the military.

A strong and independent civilian research agency had been created to advance knowledge in aeronautics. The chairman of the committee was always a civilian, but both the Commanding General of the Army Air Corps and the Chief of the Navy's Bureau of Aeronautics were statutory members of the committee. Thus, a close connection to the military was assured.

Things have changed since the end of the Second World War, but the aeronautical strength of the United States still depends on the successor institution to the NACA that was established after the end of the Second World War.

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In 1958, the launch of the Sputnik by the Soviet Union as the first man-made object to orbit the Earth stimulated the creation of the National Aeronautics and Space Administration, NASA. This organization consisted of all of the facilities of the old NACA plus some military facilities that were added to enhance the space mission of the new agency.

The National Aeronautics and Space Act of 1958 made the new agency responsible for continuing the support of military aviation. This most important mission has been successfully accomplished for the past 40 years and the results were evident in the Kosovo campaign.

The most successful fighter-bomber of the 20th century is undoubtedly the F–16. The facilities of the National Aeronautics and Space Administration were used extensively during the decade of the 1970s to develop the flying qualities of this aircraft. Many thousands of hours of wind tunnel and flight simulator time were devoted to the creation of the F–16.

The former commander of the Israeli Air Force and the current president of the state of Israel, Ezer Weitzmann, has called the F–16 the ''Spitfire'' of the 1980s after flying the F–16 himself. Weitzmann became famous in 1948 when he flew a black painted ''Spitfire'' in the Israeli war of independence. Thousands of pilots across the world have agreed with his assessment.

The F–15 aircraft was also a product of NASA technology through the employment of NASA's extensive facilities. The conically cambered wing on the F–15 was a product of NASA research and the attack version of this airplane, the F–15 ''Strike Eagle,'' is one of the most potent attack aircraft in the world.

Finally, the concept of vertical takeoff in land combat aircraft originated in the United States and was picked up by British aerospace concerns. The first version of the aircraft that eventually became the ''Harrier,'' the ''Kestrel,'' was extensively tested in NASA facilities in the 1960s. The ''Harrier'' eventually evolved into the AV–8B, which was also tested extensively in NASA flight simulators and wind tunnels. The former was particularly important in developing the complex flight control system for this aircraft.

As previously mentioned, a remarkable feature of the Kosovo air campaign was that a significant fraction of the damage done on the ground was due to aircraft that were based more than a thousand miles from the combat zone. B–52 and B–1B bombers based in England delivered thousands of tons of bombs and other guided weapons on targets in Kosovo and Yugoslavia.

Even more impressive was the achievement of the stealthy B–2 aircraft which flew its missions from Whiteman Air Force Base in Missouri, 5,000 miles from the target zone. An F–16 can carry two thousand-pound bombs, and a B–1B can carry 24 of these so that a single mission by a B–1B bomber might be equivalent to 12 sorties by an F–16.

Both the B–1B and the B–2 were the creations of an industry supported by NASA facilities. Neither would have been built without thousands of hours of wind tunnel and simulator time devoted to them in government-owned NASA facilities.

Even more important was the application of NASA research results to both aircraft. These results range from aerodynamics, materials, and flight controls to the human factors that had to be considered to protect the pilots and the crew from the environments that they would face in accomplishing their missions.

Finally, the Kosovo campaign was the one in which unpiloted aircraft were extensively used for reconnaissance that turned out to be a decisive factor in the campaign. Unpiloted vehicles have been around for a long time and were used as target drones and as experimental test vehicles during experiments that traditionally involved the destruction of the vehicle.

However, recent advances once again pioneered by NASA in flight control

systems and in sensors have made it possible to use unpiloted vehicles for many other purposes. Probably the first application of unpiloted vehicles requiring sophisticated technology was the highly maneuverable aircraft test vehicle. This was a small, unpiloted aircraft with a sophisticated flight control system designed to perform experiments in maneuvering regimes that had not yet been explored with piloted aircraft. The experiments done by NASA with this vehicle during the 1970s demonstrated to all concerned the utility of unpiloted aircraft for sophisticated purposes.

In the last two decades, a large variety of unpiloted aircraft have been developed and with the recent advances in control systems and communication systems and in the ability to transmit intelligence data in real-time to command posts, unpiloted reconnaissance aircraft have come into their own.

A special example is the ''Predator'' unpiloted reconnaissance aircraft that played a very important role in Kosovo. In one incident, a ''Predator'' vehicle spotted a concentration of Serb troops on the ground and with accurate pictures transmitted by satellite link reported the concentration and its location to the command post. This information was then used to divert a flight of B–52 bombers that had already been on another mission to the troop concentration which was accurately located by the GPS signal transmitted by the ''Predator.''

The B–52s bombed the troops, killing most of them on the ground. This kind of coordinated attack with heavy bombers guided to the target using unpiloted aircraft and a sophisticated command and control system was a decisive element to secure the victory in this campaign.

The technology to do all of this could not have been developed without the aeronautical research performed in NASA's research centers. The research performed to create the aircraft systems described here dates back to the 1970s, somewhere between 20 and 30 years ago.

In 1970, the aeronautics budget of NASA was approximately 25 percent of the agency's budget, some $1 billion out of a total of $4 billion. It was this heavy investment in aeronautical technology that in a very real sense made the victory this year in Kosovo possible.

Today, however, we have a very serious problem. The aeronautics budget in NASA today is a much smaller fraction than it was in 1970, about $2 billion out of $14 billion or just 14 percent. In terms of spending power when inflation is factored into this calculation, NASA's investment in aeronautical research today is about half of what it was 30 years ago.

One result of this massive reduction in aeronautical research has been that many important NASA aeronautical research facilities have had to be shut down entirely or perhaps mothballed. This has forced some U.S. aerospace firms to use European facilities. More important, it has become difficult to attract the best talent into NASA's aeronautical research enterprises.

In the past year, this situation has reached the crisis stage because further reductions in NASA's aeronautics research are now being proposed. In view of this circumstance, it is legitimate to ask the question where the knowledge and the technology will come from to make victory possible in another Kosovo perhaps 20 years from now.

The sad fact is that we are no longer making the investments necessary to maintain the kind of Air Force that has the capability that we have today. This situation can only be changed by reversing the trend in aeronautical research funding and reinvesting in this critically important technology. An investment in NASA aeronautics program of about $4 billion annually is what is required to maintain our effort.

General Arnold's statement of more than half a century ago is as valid as it is was then. The security of the United States and the stability of the world depend on a relatively small investment in advanced aeronautical technology so that NASA can continue to do the work which will allow the United States to maintain its leadership and superiority in military aviation.

I urge all Members to support this effort.

LEAVE OF ABSENCE

By unanimous consent, leave of absence was granted to:

Ms. CARSON (at the request of Mr. GEPHARDT) for today on account of official business.

Mr. HASTINGS of Florida (at the request of Mr. GEPHARDT) for today on account of official business.

Mr. WICKER (at the request of Mr. ARMEY) for today on account of official business.

Mr. MANZULLO (at the request of Mr. ARMEY) for today on account of illness.

Mr. ROGAN (at the request of Mr. ARMEY) for today on account of a death in the family.

Mr. SHAW (at the request of Mr. ARMEY) for today on account of official business.

Mr. KINGSTON (at the request of Mr. ARMEY) for today and September 14 on account of impending Hurricane Floyd.

SPECIAL ORDERS GRANTED

By unanimous consent, permission to address the House, following the legislative program and any special orders heretofore entered, was granted to:

(The following Members (at the request of Mr. MCNULTY) to revise and extend their remarks and include extraneous material:)

Ms. JACKSON-LEE of Texas, for 5 minutes, today.

Mr. FALEOMAVAEGA, for 5 minutes, today.

Mr. RUSH, for 5 minutes, today.

Mr. MCGOVERN, for 5 minutes, today.

Mr. CUMMINGS, for 5 minutes, today.

(The following Members (at the request of Mr. WELDON of Florida) to revise and extend their remarks and include extraneous material:)

Mr. GREEN of Wisconsin, for 5 minutes, September 15.

Mr. METCALF, for 5 minutes, today.

Mr. EHLERS, for 5 minutes, today.

Mr. WELDON of Florida, for 5 minutes, today.

Mr. FOSSELLA, for 5 minutes, today.

ADJOURNMENT

Mr. PICKETT. Mr. Speaker, I move that the House do now adjourn.

The motion was agreed to; accordingly (at 8 o'clock and 25 minutes p.m.), under its previous order, the House adjourned until tomorrow, Tuesday, September 14, 1999, at 9 a.m. for morning hour debates.

EXECUTIVE COMMUNICATIONS, ETC.

Under clause 8 of rule XII, executive communications were taken from the Speaker's table and referred as follows:

4020. A letter from the Administrator, Farm Service Agency, Department of Agriculture, transmitting the Department's final rule—Flood Compensation Program (RIN: 0560–AF57) received September 3, 1999, pursuant to 5 U.S.C. 801(a)(1)(A); to the Committee on Agriculture.

4021. A letter from the Congressional Review Coordinator, Animal and Plant Health Inspection Service, Department of Agriculture, transmitting the Department's final rule—Horses From Morocco; Change in Disease Status [Docket No. 98–055–2] received September 3, 1999, pursuant to 5 U.S.C. 801(a)(1)(A); to the Committee on Agriculture.

4022. A letter from the Administrator, Farm Service Agency, Department of Agriculture, transmitting the Department's final rule—Small Hog Operation Payment Program (RIN: 0560–AF70) received September 3, 1999, pursuant to 5 U.S.C. 801(a)(1)(A); to the Committee on Agriculture.

4023. A letter from the Administrator, Agricultural Marketing Service, Department of Agriculture, transmitting the Department's final rule—Milk in the New England and Other Marketing Areas; Order Amending the Orders [DA–97–12] received September 3, 1999, pursuant to 5 U.S.C. 801(a)(1)(A); to the Committee on Agriculture.

4024. A letter from the Director, Office of Regulatory Management and Information, Environmental Protection Agency, transmitting the Agency's final rule—Avermectin B1 and its delta-8, 9-isomer; Pesticide Tolerance [OPP–300916; FRL–6380–7] (RIN: 2070–AB78) received September 3, 1999, pursuant to 5 U.S.C. 801(a)(1)(A); to the Committee on Agriculture.

4025. A letter from the Director, Office of Regulatory Management and Information, Environmental Protection Agency, transmitting the Agency's final rule—Chlorfenapyr; Re-Establishment of Tolerances for Emergency Exemptions [OPP–300910; FRL–6095–8] (RIN: 2070–AB78) received August 26, 1999, pursuant to 5 U.S.C. 801(a)(1)(A); to the Committee on Agriculture.

4026. A letter from the Director, Office of Regulatory Management and Information,