

Fiscal Year 2010 Defense Department Appropriations Requests

- ***\$7,340,000 for Acoustic Intelligence (ACINT) Measurement Signature Intelligence (MASINT) Tape Digitization Program***
 - **Purpose:** To continue the efforts to digitize and preserve the vital intelligence data stored within the analog tapes of the ACINT Archive and used by the Office of Naval Intelligence (ONI). Funding would be utilized to increase the percentage of analog data to be digitally preserved.
 - **Justification:** This initiative is intended to enhance the survivability of critical intelligence data used by the U.S. Navy being stored on aging analog tapes in the ACINT Archive. This project has been previously funded: FY09 - 1,200,000 and FY08 - 2,000,000
 - **Authorization:** The National Acoustic Intelligence Laboratory at the Office of Naval Intelligence (ONI) within the National Maritime Intelligence Center (NMIC) has been authorized to analyze and validate authority for hydro –acoustic signatures, Public Law No: 110-329. Additional annual authorization requested in FY10 National Defense Authorization Bill.

- ***\$2,000,000 for Aging Aircraft Advanced Autonomous Robotic Inspections***
 - **Purpose:** To enable the Air Force to develop an advanced, fully autonomous robotic inspection vehicle capable of carrying a range of inspection sensors to include ultrasonic and electric current probes. The deployment of this inspection vehicle will also utilize an advanced neural network based vision system which will be able to characterize abnormalities that can lead to the destructive corrosion of an airframe structure. Finally, the neural network vision system will be utilized to form the foundation for fastener pattern recognition to make the inspection vehicle fully autonomous.
 - **Justification:** This project will take advantage of Oklahoma’s software and engineering industry by providing and attracting technical expertise to the state and aiding the United States Air Force in their maintenance and repair of Aircraft, one of the missions undertaken at Tinker Air Force Base in Oklahoma City.
 - **Authorization:** Section 132 of The Duncan Hunter National Defense Authorization Act for Fiscal Year 2009 (Public Law No: 110-417) requires the maintenance of the aging KC-135 fleet. Robotic inspections will aid in this effort. Additional authorization requested in FY10 National Defense Authorization Bill.

- ***2,000,000 for Advanced Ultrasonic Inspection of Helicopter Rotor Blades and Other Composite Components***
 - **Purpose:** To deploy advance non-destructive inspective equipment and techniques for the inspection of aging military aircraft. The inspection equipment will provide the military with the ability to conduct comprehensive, digital inspections to improve maintenance accuracy, speed, and cost.
 - **Justification:** Currently the method for inspecting helicopter rotor blades and other laminated structures is by performing a visual inspection and a physical inspection through the use of a ‘tap’ hammer. This basic inspection method is not capable of accurately determining the exact degree or boundaries of the damage to a rotor blade and is open to inspector interpretation. With the lack of quantifiable data to accurately determine the serviceability of a rotor blade, there is an increased level of risk in the component failing. Additionally, there is the continued increase in maintenance downtime and unnecessary refurbishment of serviceable components unless an advanced inspection system is developed which can provide the fidelity and sensitivity required to see the small cracks and corrosion that could lead to catastrophic part failure.

- **Authorization:** The Department of the Army is required to maintain their helicopter fleet, robotic inspection will aid in this mandate, Public Law No: 110-329. Additional authorization requested in FY10 National Defense Authorization Bill.
- **\$3,000,000 for Aging Systems Sustainment and Enabling Technologies (ASSET) (OSU Project)**
- **Purpose:** The ASSET program augments military readiness by expanding the Department of Defense manufacturing base for producing problem-parts for aging aircraft and weapons systems. ASSET has a successful 14-year record of support for DOD, creating savings that range from 15%-85%. Funding provided by this request will be used to continue the ASSET program and to enhance its effectiveness in performing its mission.
 - **Justification:** The ASSET program develops, tests, and transfers cost-effective logistics support technologies to reduce the costs associated with support of aging weapon systems and aircraft. This improvement program addresses DOD needs for procuring replacement parts for aging systems and aircraft, and helps DOD confront problems associated with corrosion. This project has been previously funded: FY09- 2,000,000 -- FY08- 2,000,000 -- FY07- 1,000,000 -- FY06- 1,500,000. Also requested by Congressmen Lucas and Boren.
 - **Authorization:** Supports the principal missions of the Office of the Assistant Deputy Under Secretary of Defense for Maintenance Policy and Programs [ADUSD (L&MR) MPP] to: Serve as the principal advisor for policies and procedures for maintenance support of major weapon systems and military equipment. Provide the functional expertise for centralized maintenance policy and management oversight for all weapon systems and military equipment maintenance programs and related resources within the Department of Defense, Public Law No: 110-329. Additional authorization requested in FY10 National Defense Authorization Bill.
- **3,200,000 for Airborne Infrared Surveillance System (AIRS)**
- **Purpose:** To develop a land based airborne infrared capability providing precision tracking, feature extraction, and discrimination capabilities for targets in the boost and mid-course phases of flight. The AIRS system is currently integrated on a Gulfstream IIB (HALO-II) and DC-10-10 (WASP) aircraft, supports the Missile Defense Agency (MDA), Deputy for Test (MDA/DT), Airborne Sensor (ABS) program, collecting radiometric signature data on cooperative targets in support of ballistic missile defense system (BMDS) development requirements.
 - **Justification:** This infrared capability could be integrated with either manned or unmanned high-altitude, long-endurance airborne platforms. Until an operational space-based system becomes available, this capability provides a contingency for surveillance of medium-range and long-range missile threats to the United States and our allies. This project has been previously funded: FY09- 800,000 -- FY07- 3,500,000 -- FY08- 2,000,000 -- FY06- 6,000,000. Also requested by Congressmen Sullivan and Boren.
 - **Authorization:** Supports the Missile Defense Agency's (MDA) Airborne Test and Measurement Support (ATMS) program, Public Law No: 110-329. Additional authorization requested in FY10 National Defense Authorization Bill.
- **\$4,000,000 for Ammunition Peculiar Equipment Out-loading Module (MP3)**
- **Purpose:** Additional funding for the module is needed to fully demonstrate an automated out-loading test bed located at McAlester Army Ammunition Plant. The system combines state of the art robotics and computer controlled conveyance systems capable of automatically loading bulk ammunition into ammunition containers being sent to the field. The benefits of the system are both safety and increased efficiency

- **Justification:** The project will increase skill level and longevity for workers at McAlester Army Ammunition Plant (MCAAP), and provide out-loading for ammunition. Also requested by Congressman Boren.
- **Authorization:** Authorization requested in FY10 National Defense Authorization Bill.

➤ ***Bill Language for Biomass-Derived Alternative Fuels (no funding requested)***

- **Purpose:** The project accelerates certification and purchase of biomass-derived alternative fuels and prompts DOD to plan for acquisition, blending, distribution, and storage issues that will arise upon introduction of alternative fuels as commodity in DOD.
- **Justification:** As the largest consumer of fuel in the U.S. government, the Department bears the responsibility to explore all potential methods by which to achieve national energy goals, including weaning the U.S. from foreign sources of supply. Also important is the development of a fuels strategy that includes use of a single fuel to meet multiple ground and air vehicle fuel requirements in a theater of operations. Continued development, test and evaluation, and procurement of alternative fuels that are renewable, domestically produced, and lower in carbon emissions than both petroleum-based fuels and coal-to-liquid/gas-to-liquid alternatives remain critical to this exploration effort. The Air Force remains in the forefront in investigating alternative fuels and has made significant progress in certification of a 50/50 blend of JP-8 and a gas-to-liquid alternative fuel for the B-52, C-17, and B-1. Air Force plans call for certification of its entire fleet by 2011. The program was recently expanded to all Services with the goal of certifying all ground and air vehicles that use JP-8 on a 50/50 blend of JP-8 and a biomass-to-liquid alternative.
- **Authorization:** Subtitle D: Sec. 334 of The Duncan Hunter National Defense Authorization Act for Fiscal Year 2009 (Public Law No: 110-417) requiring alternative fuel research. Additional authorization requested in FY10 National Defense Authorization Bill.

➤ ***5,000,000 for Call for Fire Trainer II/Joint Fires and Effects Trainer System (JFETS)***

- **Purpose:** This system will enable our servicemen and women to train in a real combat environment and continue the center of excellence at Fort Sill. In 2007, the United States Joint Forces command rated JFETS the best simulator for training of Joint Terminal Attack Controllers (JTACs) among all of the armed services. JFETS is a leading edge, immersive, virtual reality training simulation at Ft Sill, Oklahoma. It trains joint observers prior to deployments worldwide with particular emphasis on Afghanistan and Iraq. Joint special operations units and Air Force JTACs are determining how to integrate JFETS into their training.
- **Justification:** This immersive simulation has unsurpassed realism by incorporating photorealistic graphics, advanced audio capabilities, and multiple stimuli for the joint observer. JFETS' greatest asset is its ability to train students to make sound decisions in a multi-tasked, combat-like environment. Complies with requirements laid out in Capabilities Production Document (CPD) II Approval. This project has been previously funded: FY09- 4,500,000 -- FY07- 3,000,000. Also requested by Congressman Cole.
- **Authorization:** Fulfills Capabilities Production Document (CPD) Approved by Department of the Army G-3, LTG James Lovelace, on 16 January 2007 (Encl 1) for Call for Fire Trainer (CFFT) II. JFETS is a component of the CFFT II as detailed in the CPD, Public Law No: 110-329. Additional authorization requested in FY10 National Defense Authorization Bill.

➤ ***\$1,000,000 for Center for Aerospace Supplier Quality (CASQ)***

- **Purpose:** CASQ develops and deploys innovative solutions to expand the pool of businesses capable of fulfilling defense equipment requests, making the defense and commercial supply

chains more efficient. CASQ has researched and developed methodologies that incorporate Oklahoma's manufacturing capacity for on-demand materials shortages addressing critical back-order problems related to the United States' on-going combat operations. CASQ builds partnerships among prime contractors and small businesses who can respond faster and be profitable at lower total cost compared with the large aerospace businesses. CASQ is also contributing to the nation's economic recovery by helping at-risk companies who are involved in older industries. CASQ and its major university partners can insert technology that enables these at-risk companies to become competitive in aerospace, renewable energy and advanced manufacturing.

- **Justification:** CASQ coordinates with its partners in the Manufacturers Alliance and the State CareerTech system to identify opportunities for new processes and productivity tools. This saves existing jobs, grows more jobs and is a vehicle to keep jobs in the U.S. rather than off-shoring jobs. With this funding, CASQ will facilitate interaction between industry, government, and academia to address aerospace and defense industry requirements, boosting our national defense supply chains.
- **Authorization:** Supports the principal missions of the Office of the Assistant Deputy Under Secretary of Defense for Maintenance Policy and Programs [ADUSD (L&MR) MPP] to: Serve as the principal advisor for policies and procedures for maintenance support of major weapon systems and military equipment. Provide the functional expertise for centralized maintenance policy and management oversight for all weapon systems and military equipment maintenance programs and related resources within the Department of Defense, Public Law No: 110-329. Additional authorization requested in FY10 National Defense Authorization Bill.

➤ *Bill language to Modify of 18 USC 2460 – The 50/50 Rule*

- **Purpose:** To clarify performance of depot maintenance work.
- **Justification:** Department of Defense has considered altering the procedures for performing depot maintenance by separating modification work from traditional depot maintenance. However, the Department of Defense currently performs major modifications during the depot maintenance process. Separating modification work from depot maintenance will have an immediate and negative impact on the performance of both missions.
- **Authorization:** Supports the principal missions of the Office of the Assistant Deputy Under Secretary of Defense for Maintenance Policy and Programs [ADUSD (L&MR) MPP], by modifying 18 USC 2460.

➤ *\$22,000,000 for Defense Experimental Program to Stimulate Competitive Research (DEPSCoR)*

- **Purpose:** The DEPSCoR helps to build national competitiveness for research and education by funding in science and engineering fields important to national defense. The program is intended to improve the capabilities of institutions of higher education to develop, plan and execute science and engineering research that is competitive under the peer-review system.
- **Justification:** Eligible states are invited, through their NSF State EPSCoR Committee, to compete for research awards in areas identified by the Department in broad agency announcements regularly published by the Services. The DEPSCoR program funds important research priorities within Oklahoma, such as research directly related to the needs of Tinker Air Force Base, such as Target Detection and Tracking, research on aircraft fatigue and fracture, drag reduction, coatings to protect aircraft aluminum alloys and combustor concepts for propulsion gas turbines. Research is also directed for the needs of the warfighter, such as real time chemical and biological sensors, surveillance and battlefield assessments, and the use of adapting and learning Intelligent Robots Teams for Reconnaissance. This project has been

previously funded: FY09- 14,833,000 -- FY08- 17,078,000 -- FY07- 9,532,000 -- FY06- 12,564,000.

- **Authorization:** Fulfills policy guidance of the Office of the Deputy Under Secretary of Defense for Laboratories and Basic Sciences [ODUSD (LABS)] for science and engineering research to be administered through the Army Research Office (ARO), Office of Naval Research (ONR), and Air Force Office of Scientific Research (AFOSR) with the cooperation of the Experimental Program to Stimulate Competitive Research (EPSCoR) State Committees, Public Law No: 110-329. Additional authorization requested in FY10 National Defense Authorization Bill.

➤ ***\$10,000,000 for Development of Demilitarization Equipment for Cluster Ammunition***

- **Purpose:** The U.S. Army currently has more than 500,000 tons of ammunition in storage in the demilitarization account and cluster ammunition represents approximately 25% of these assets. The requested funding would provide state-of-the-art demilitarization machines for cluster ammunition to be installed at the Defense Ammunition Center (DAC) in McAlester, OK.
- **Justification:** This project will assist in the demilitarization of cluster munitions for civilian use.
- **Authorization:** Supports demilitarization requirement in Sec. 2405 of Public Law No: 110-181 the National Defense Authorization Act for Fiscal Year 2008. Authorization requested in FY10 National Defense Authorization Bill.

➤ ***2,500,000 for DOD Regional Technology Outreach Center-Oklahoma***

- **Purpose:** The Oklahoma DoD Technology Outreach Center will identify, evaluate, deploy, and transfer to Federal, State and local first responders DoD technology items and equipment in support of homeland security. The Oklahoma center will serve as a means of putting DoD technology in the hands of first responders of all types at no cost to the user and no obligation to purchase the equipment.
- **Justification:** All appropriated funds will be used to purchase an initial allotment of unmanned ground robotic systems and other technology deemed necessary to support and enhance state and local Anti-Terrorism response capabilities, pay payroll and operating costs, and fund training for local personnel and agencies in and around the Oklahoma center. Also requested by Congressman Cole.
- **Authorization:** Supports section 1401 of Public Law 108-136 requiring the Secretary of Defense to identify, evaluate, deploy, and transfer to Federal, State, and Local first responders DoD technology items and equipment in support of homeland security. Authorization requested in FY10 National Defense Authorization Bill.

➤ ***\$7,500,000 for Dual Mode Mortar SAL Integration***

- **Purpose:** Funding will allow the development and production of a 120mm GPS-guided precision mortar round for the U.S. Army, which would achieve a desired accuracy of less than 5 meters with the added integration of a semi-active laser (SAL).
- **Justification:** Funding, will allow an expeditious development of a product to provide the capability of a precision-guided mortar round, which is urgently needed by U.S. combat forces in Afghanistan. Final assembly of the product will occur at the McAlester Army Ammunition Plant in McAlester, Oklahoma.
- **Authorization:** Request fulfills 2004 Joint Requirements and Oversight Council (JROC) approved request for a precision guided mortar. The 2007 cancellation of the Precision Guided Mortar Monition program left the requirement unfulfilled. Authorization requested in FY10 National Defense Authorization Bill.

➤ ***\$4,000,000 for E-6B Strategic Communications Upgrade (VLF-TX)***

- **Purpose:** This upgrade will provide for the modification of a Very Low Frequency Transmitter (VLF-TX) obsolescence requirement, in addition to the High Power Transmit Set (HPTS) subsystem.
- **Justification:** These upgrades are critical to the E-6B execution of the TACAMO mission located at Tinker AFB and provide communications to the nation's strategic ballistic missile submarine force as a part of the Minimum Essential Emergency Communication Network (MEECN). This project has been previously funded: FY09- 47,100,000. Also requested by Congresswoman Fallin.
- **Authorization:** Supports TACAMO mission at Tinker, AFB. Requested in President's Budget without proper funding. Authorization also requested in FY10 National Defense Authorization Bill.

➤ *\$400,000 Enterprise Identity Management Practices and Policies*

- **Purpose:** The Center for Applied Identity Management Research (CAIMR) is proposing, with DoD support, to study how industry solutions to handling large volumes of data for identity management decision making can be applied to the problems faced by a government entity such as DoD. DoD has a need to develop an information model to make faster, smarter, and more accurate decisions regarding identity management applications across the enterprise. This model will help to control users, access, and risk in several mission critical areas including the protection of facilities, networks, and critical infrastructure, as well as supporting the warfighter and terrorist screening.
- **Justification:** CAIMR will study the enterprise-wide information and privacy challenges and problems faced by the DoD in their enterprise identity management initiatives. This will include assessing current efforts to fuse biometric data, both soft and hard, with biographical or information-based identity data that is used for authentication, verification, and validation purposes. CAIMR will study how the private sector effectively uses similar data for authentication and identity purposes, while maintaining privacy, and recommend how DOD can best adopt or tailor these industry best-practices to fit the Department of Defense's unique needs. CAIMR works with current industry leaders in identity information management and can leverage those resources and expertise to DOD's advantage.
- **Authorization:** Fulfills FY08 Biometrics Science and Technology Program budget language: "Standards development for biometric use in support of identity management is still in the early stages. Project will focus on standards for those modalities not adequately covered and to ensure DOD acceptable standards are accepted by commercial, DoD, interagency and international bodies." Additional authorization requested in FY10 National Defense Authorization Bill.

➤ *\$53,900,000 for Family of Medium Tactical Vehicles (FMTV) and Trailers*

- **Purpose:** The Oklahoma National Guard currently has on-hand 40% of the required FMTV's and 20% of the trailers. The Oklahoma National Guard currently has many of the older legacy vehicles. Expending maintenance dollars on these legacy vehicles is not cost effective.
Justification: The current level of fill for the FMTV and trailers does not allow the Oklahoma National Guard to conduct necessary training and could hamper response to national or state emergency situations. With additional FMTVs and trailers, the Oklahoma National Guard will increase its capacity to respond to state, regional, and national emergencies. Also requested by Representatives Lucas, Boren, and Fallin.
- **Authorization:** Fulfills National Guard Association of the United States (NGAUS) Army National Guard (ARNG) requirement of 31,000 FMTV's. Included in President's Budget without required funding. Authorization also requested in FY10 National Defense Authorization Bill.

➤ ***\$75,600,000 for F-16 229 Engines***

- **Purpose:** These funds will upgrade the engines of Block 42 F-16s in the Oklahoma, and Ohio Air National Guard units with F100-PW-229 engines.
- **Justification:** As of fiscal year 2001, 39-229 engines have been acquired. Total support to finish the upgrades to the F100-PW-229 engines for Oklahoma and Ohio total \$75.6 million. This total equals 14 engines (\$72.8M), 8 install kits (\$1.0M) and various support costs (\$1.80M). This will bring the Oklahoma and Ohio Air National Guard F-16 wings to 100% on the F100-PW-229 engine buys. Additionally, it allows the Oklahoma Air National Guard to be more effective in deploying to theatre. This project has been previously funded: FY08 23,000,000 – FY06 21,000,000. Also requested by Congressmen Lucas, Sullivan, and Boren.
- **Authorization:** Fulfills Air National Guard unfunded requirement contained in USAF FY09 Unfunded Requirements List for engine upgrade for aircraft to be compatible with other USAF Air Expeditionary Force aircraft. Additional authorization requested in FY10 National Defense Authorization Bill.

➤ ***\$7,000,000 for FIDO Explosive Detector***

- **Purpose:** To provide soldiers with the capability to identify and interdict both explosive devices and those who manufacture these devices by detecting explosive vapors and residues.
- **Justification:** The FIDO explosive detector was initially developed under Defense Advanced Research Projects Agency (DARPA) funding for the detection of landmines. Its successful use in combat operations in Iraq and Afghanistan for the detection of IEDs and persons involved in the manufacturing and placement of IEDs has led the Army to select this capability for expedited program fielding through its CDRT process. FIDO received the Army's 2005 10 Greatest Inventions Award and systems, both Hand Held and mounted on UGVs, have been arriving in Theater throughout 2007 and 2008, purchased mainly by unit level O&M funds. By the early 2009 the density reached over 1500 systems. Based on current Army planning, there is a requirement for the completion of the additional enhanced capability of detecting C-4 and homemade explosives (peroxides/ANFO). This will provide the capability to detect most of the explosives being used against Coalition Forces operating in Iraq and Afghanistan. This project has been previously funded: FY09 3,000,000 – FY07 3,000,000 – FY06 1,200,000. Also requested by Representative Fallin.
- **Authorization:** Requested in President's Budget without required funding. Fulfills JAIEDO and DARPA requirements for detection of explosives, Public Law No: 110-329. Additional authorization requested in FY10 National Defense Authorization Bill.

➤ ***\$2,000,000 for FIDO Explosive Detector***

- **Purpose:** The FIDO explosive detector initially developed under DARPA funding for the detection of landmines is now being used in OIF/OEF for the detection of IEDs and persons involved in the manufacturing and placement of IEDs.
- **Justification:** Fido received the Army's 2005 10 Greatest Inventions Award and systems, both Hand Held and mounted on UGVs, have been arriving in Theater throughout 2007, purchased mainly by unit level O&M funds. By the end of 2008 the density should reach over 1200 units. The driving factor for the funding is support, replacement and procurement of deployed systems. Based on early support data this support amount for the next 2 years could be in the range of \$12M. However, if there is another surge of systems deployed the amount could approach \$20M (based on 5000 systems). In addition there is a requirement for the completion of the additional capability of detecting C-4 and home-made explosives (peroxides/ANFO). This would provide

the capability to detect most of the explosives being used against Coalition Forces operating in OIF and OEF. The estimated R&D cost for this expanded capability is \$2M.

- **Authorization:** Fulfills DoD unfunded requirement for procurement and replacement of FIDO units currently downrange, Public Law No: 110-329. Additional authorization requested in FY10 National Defense Authorization Bill.

➤ ***\$4,000,000 for Forward Osmosis Water Purification***

- **Purpose:** Request will ensure that US Special Operations Forces have the capability to generate safe drinking water during remote deployments, emergencies, or during the disruption of the supply train, giving commanders new capabilities for mission planning by extending mission duration, thereby enhancing force projection.
- **Justification:** Forward osmosis is the only personal water technology that can reliably work with the very cloudy, contaminated waters typically found in the current theaters of operations.
- **Authorization:** Request fulfills inadequately funded Special Operations Command FY09 Defense Budget request in line 81 for Soldier Protection and Survival Systems. Authorization requested in FY10 National Defense Authorization Bill.

➤ ***\$10,000,000 for Ground Warfare Acoustical Combat Systems of netted sensors (GWACS)***

- **Purpose:** GWACS are multi-sensor systems that can detect, locate, discriminate and give precision targeting data of hostile fire to Blue forces in a net-centric environment. Additionally, they create total battle space situational awareness both in open and urban terrain, and provide precision targeting data for combined and integrated fire support.
- **Justification:** Funds will be used to accelerate the development and fielding of GWACS technology, which is critical and urgently needed for small arms detection, force protection, and situational awareness at all command levels in open and urban terrain operations in Iraq and Afghanistan. This project has been previously funded: FY09 2,000,000 – FY06 1,250,000. Also requested by Congressmen Sullivan and Boren.
- **Authorization:** Fulfills requirement in 2007 Marine Corps. Strategic Plan, pages 12-15 “Developing solutions to the counter sniper problem is at the top of our technology development goals for the Lab in the next year to the limits of our available resources (and other priorities).” Public Law No: 110-329. Additional authorization requested in FY10 National Defense Authorization Bill.

➤ ***\$1,300,000 for Information Assurance Secure Emergency Notification System Initiative- RZ AFRL WPAFB***

- **Purpose:** Secure Emergency Notification System (SENS) 1st Year Request of five year plan to be compliant with “H.R. 3482”
- **Justification:** In accordance to the 2002 Congressional Mandate “H.R. 3482” for Information Technology Security, SENS is to improve program performance and ensure that future security needs are met by integration into its IT infrastructure a secure emergency notification network of sensors and communication devices for each laboratory facility. 1.1 TASK 1: Design, Develop, Acquire and Integrate a Secure Emergency Notification System throughout Laboratory Facilities at WPAFB to provide a common, integrated, secure emergency notification system capable of alerting AFRL/RZ staff members of current or prospective emergency or disaster situations. The Secure Emergency Notification System (SENS) must be capable of simultaneously alerting staff in multiple buildings via a variety of media devices.
- **Authorization:** Fulfills U.S. House passed requirement in the Cyber Security Enhancement Act of 2002 and fulfills Army regulation AR-525-13 which implements structural anti-terrorism standards. Additional authorization requested in FY10 National Defense Authorization Bill.

- ***\$5,000,000 for Institute for Information Security (University of Tulsa)***
 - **Purpose:** The Institute for Information Security (iSec) at The University of Tulsa (TU) is one of America's premier cyber security programs integrating education, training, research and outreach activities.
 - **Justification:** iSec is the lead institution in the NSF and DoD Cyber Service (Cyber Corps) initiatives, which train students for security positions with the U.S. government and military. Funding provided under this request will provide iSec with financial resources for advanced instrumentation and research. Continued financial support for iSec will enhance the Institute's ability to carry out its mission of providing training and instruction in cyber security skill sets, which are vital for confronting and thwarting cyber threats to national security. This project has been previously funded: FY09 2,500,000. Also requested by Congressmen Sullivan and Boren.
 - **Authorization:** Request assists the United States Army Information Systems Engineering Command (USAISEC) primary mission for information security as well as the Air Force Cyber Command, Public Law 110-329. Additional authorization requested in FY10 National Defense Authorization Bill.

- ***\$3,500,000 for Irregular Warfare Integration Platform***
 - **Purpose:** US Aircraft Engineers will guide the survivability team in the full assessment and development of the work plan for the 46th Test Wing. STI Technologies, Inc., an Oklahoma Corporation with offices in Tulsa and Oklahoma City, is an intricate member of the Information Technology Security Team. The aircraft is designed specifically for the Irregular Warfare and for Counterinsurgency (COIN) and Intelligence, Surveillance and Reconnaissance (ISR) missions.
 - **Justification:** The 46th Operations Group is located at Wright-Patterson Air Force Base in Dayton, Ohio. The 46th Operations Group (OG), as a part of the United States Air Force Air Armament Center, is charged with test and evaluation of all USAF weapons as well as Surveillance, Command and Control Systems. The Aerospace Survivability and Safety Flight is part of the 46th OG's Munitions Test Division (OGM). The Aerospace Survivability and Safety Flight provide 46 OG/OGM with the capability to perform live fire testing of weapon systems in a highly instrumented test facility (Aerospace Vehicle Survivability Facility - AVSF).
 - **Authorization:** Fulfills 2006 Quadrennial Defense Review (QDR) requirement for DoD to shift to irregular warfare. Authorization requested in FY10 National Defense Authorization Bill.

- ***\$5,500,000 for Joint Fires and Effects Training System (JFETS)***
 - **Purpose:** During the conduct of operations in Iraq and Afghanistan, artillery units have primarily been tasked with recurring non-traditional missions, and therefore have not had the opportunities to maintain/retain core competencies. This systemic situation has caused epidemic problems in the field artillery. In response to this trend, the fires community has expressed a need to train core competencies using a mobile immersive joint fires trainer down range
 - **Justification:** FY10 represents an opportune time to leverage and augment the proven underlying JFETS architecture to create a system that will provide mobile training for joint fires observation and fires coordination. Working in concert with the Joint Fires Product Line team to mitigate redundancy and leverage competencies across the United States Army, the Institute for Creative Technologies proposes to analyze and identify the components and effort required in order to create a mobile immersive joint fires trainer. This project has been previously funded: FY09 2,000,000 – FY08 2,000,000 – FY07 1,800,000 – FY06 2,500,000.

- **Authorized:** JFETS Architecture request fulfills stated U.S. Army need for interactive virtual training, Public Law No: 110-329. Additional authorization requested in FY10 National Defense Authorization Bill.
- ***\$2,500,000 for Joint Fires and Effects Training System (JFETS)***
- **Purpose:** The application of precision fires and effects is an essential capability not only in the Global War on Terrorism but in virtually the entire spectrum of conflict for which US defense forces prepare. Live fire training cost and environmental impact are limiting factors in the volume and frequency of Soldier training in this domain.
 - **Justification:** Virtual simulation training for Joint Fires and Effects is intended to mitigate these limitations, for both initial training and currency, by reducing total cost and increasing the total number of training repetitions Soldiers may experience. JFETS at the Fires Center of Excellence (FCoE), Fort Sill Oklahoma has received funding to develop an excellent prototype; Joint Forces Command rates the JFETS Close Air Support Module as the best in existence. The current system design limits throughput and, as a result, Instructors at the FCoE are unable to use the system to its fullest potential for their classes. Also requested by Representatives Cole and Fallin.
 - **Authorization:** Request will enhance JFETS system at the Fires Center of Excellence at Fort Sill, OK. This asset fulfills a stated U.S. Army requirement for interactive virtual training, Public Law No: 110-329. Additional authorization requested in FY10 National Defense Authorization Bill.
- ***\$5,000,000 for KC-135 Aero-Medical Evacuation Upgrade***
- **Purpose:** The funding would be used to start the KC-135 Aero-Medical Upgrade process. Initial aircraft targeted would be located at Tinker AFB, OK. These aircraft are owned by the 507th ARW, a joint Air Force Reserve Command and OK Air National Guard unit.
 - **Justification:** Modification of KC-135 aircraft would allow OK ANG 137th Aeromedical Evacuation Squadron to use the aircraft for dedicated missions. The 137th lost their C-130 aircraft in the last BRAC and are currently without dedicated aircraft. Also requested by Congressman Cole.
 - **Authorization:** Request fulfills KC-135 Aircraft Extension Program (AEP) Capabilities Development Document recommendations in light of block 45 reorganization contained in H.R. 4986 to extend the life of the KC-135 due to issues with KC-X procurement. Additional authorization requested in FY10 National Defense Authorization Bill.
- ***\$4,000,000 for Lightweight Composite Structure Development for Aerospace Vehicles***
- **Purpose:** Funding would improve, qualify, and test advanced composite materials for Aerospace Vehicles. The military has a demonstrated need for a domestic source of new advanced carbon fibers and testing protocols. Second-source qualification of composite materials only currently available from foreign suppliers will allow military suppliers to have access to lower cost domestic sources of composite materials.
 - **Justification:** As indicated in a recent DoD sponsored report on Reducing DoD Fossil-Fuel Dependence (JSR-06-135), significant attention was focused on lightweighting of manned and unmanned ground and air vehicles through advanced materials, such as composite structures. This project has been previously funded: FY09 800,000 – FY08 1,200,000 – FY06 1,000,000. Also requested by Congressman Sullivan.
 - **Authorization:** Request is unfunded item in President's Budget. Begins to fulfill recommendations of DoD sponsored report on Reducing DoD Fossil-Fuel Dependence (JSR-06-135) to lighten weights of manned and unmanned air and ground vehicles, Public Law No: 110-329. Additional authorization requested in FY10 National Defense Authorization Bill.

- ***\$5,000,000 for MCAAP Bomb Line Modernization***
 - **Purpose:** Funding will provide critical upgrades to the Bomb Explosive load lines at McAlester Army Ammunition Plant (MCAAP).
 - **Justification:** MCAAP serves as the only load facility for all Air Force and Navy general purpose bombs. MCAAP also loads all Penetrator and specialty bombs for the services such as the Massive Ordnance Penetrator (MOP), Massive Ordnance Air Burst (MOAB), and the BLU 126 Low Collateral Damage Bomb. The load facilities at MCAAP were constructed in 1942. While they have been upgraded over the years there is no funding mechanism in place at Working Capital Funded facilities for major modernization efforts. Funding is necessary to support new explosive load requirements and much needed modernization upgrades to the equipment used throughout the explosive load facilities. The project has been funded previously: FY09 1,200,000. Also requested by Congressman Boren.
 - **Authorization:** Supports 5 year plan expansion of MCAAP facility, Public Law No: 110-329. Additional authorization requested in FY10 National Defense Authorization Bill.

- ***\$4,500,000 for Mission Readiness Improvement Program (MRIP)***
 - **Purpose:** MRIP accelerates comprehensive solutions identified under the Congressionally-funded PILOT program that limit the usefulness of the aging C/KC-135 fleet. An accelerated system for modernization is critical to the mission readiness of the multi-use KC-135 fleet which is vital in extending the utility and global reach of the C/KC-135.
 - **Justification:** MRIP program will assist in the recapitalization of the latest iterations of the KC-135 fleet. Much of this work is done at Tinker, AFB. Also requested by Congressman Boren.
 - **Authorization:** Supports Expeditionary Logistics for the 21st Century (eLog21) for improvement of aircraft availability, and will assist in fulfilling mission of the Office of the Assistant Deputy Under Secretary of Defense for Maintenance Policy and Programs [ADUSD (L&MR) MPP], 18 USC 2460. Additional authorization requested in FY10 National Defense Authorization Bill.

- ***\$7,400,000 for Mobile Ammunition Processing Facility(MAPF)***
 - **Purpose:** MAPF is a self-sufficient facility for processing ammunition returned by in-theatre military units with the added ability to re-issue ammunition without having to return it to a major ammunition supply point.
 - **Justification:** If funded the MAPF facility will consist of three transportable workshops, a power generating and air compressor unit, ground matting, overhead shade cover and sufficient ammunition peculiar equipment and hand tools. MAPF meets a critical need as U.S. combat forces transition in and out of the war theatres in Iraq and Afghanistan. Also requested by Congressman Boren.
 - **Authorization:** Request supports troop draw down in Iraq and surge in Afghanistan by allowing down range processing of ammunition. Authorization requested in FY10 National Defense Authorization Bill.

- ***\$3,000,000 for Multifunctional Garment Systems for Prevention and Protection(OSU)***
 - **Purpose:** Funding will be used to create advanced multifunctional designs for a suite of next-generation integrated body armor systems with enhanced protection and comfort properties but lighter in weight.
 - **Justification:** This initiative will develop next-generation ballistic materials for use in personal armor and multi-functional performance material finishes designed to meet the needs of DOD and civilian occupations. Funding will be applied to research, design and testing of next-

generation multifunctional technologies and materials desperately needed to create more effective body armor and other protective systems to save the lives of soldiers and civilian workers. This project builds on the foundation established in FY 2006-2009 by continuing design of critical next generation armor and smart apparel systems. Also requested by Congressmen Lucas and Boren.

- **Authorization:** Request plays crucial role in development of “Limb Protection Program” per the Army Research Lab synopsis of the program Institute for Protective Apparel Research and Technology Marine Corps initiative produced in light of Improvised Explosive Device (IED) protection language from Joint Improvised Explosive Device Defeat Organization (JIEDDO) in Public Law 110-417. Additional authorization requested in FY10 National Defense Authorization Bill.

➤ ***\$2,700,000 for National Repository of Digital Forensic Intelligence (NRDFI) and the Center for Telecommunications and Network Security (CTANS) (OSU)***

- **Purpose:** CTANS at the Oklahoma State University is an academic leader in information assurance (IA) and the first institution anywhere qualified in all six domains of the Committee for National Security Systems. NRDFI will function as a tool with broad application for law enforcement and the global war on terror. Funding will be used to enhance and expand the capabilities of CTANS to design, implement, initially populate, and test the NRDFI of Digital Forensic Intelligence. These funds will provide the resources for rapid development, testing, and deployment of the prototype NRDFI.
- **Justification:** CTANS and NRDFI programs will provide dynamic research opportunities to OSU students and faculty, attract technical expertise to Oklahoma, and develop a needed tool for the intelligence community. This project has been previously funded: FY09 1,200,000 – FY08 1,120,000. Also requested by Congressmen Lucas and Boren.
- **Authorization:** NRDFI and CTANS support the forensic and cyber security missions of several agencies, Public Law No: 110-329. Additional authorization requested in FY10 National Defense Authorization Bill.

➤ ***\$1,800,000 for Oklahoma Unmanned Systems Alliance (OK-USA)(OSU-OU)***

- **Purpose:** OK USA conducts research and testing in critical areas where team members from Oklahoma State University and the University of Oklahoma have significant experience and where an immediate contribution to the wider Unmanned Aerial Systems (UAS) support to the Department of Defense can be made.
- **Justification:** Funding this joint OU/OSU venture will support the testing and research activities of OK USA. The research and testing initiatives will contribute to the development of policy to govern the use of Unmanned Aerial Systems for military and civilian purposes. Also requested by Representatives Lucas, Boren, and Fallin.
- **Authorization:** This joint OU/OSU program responds to NASA, FAA, and DoD requirements in reference to the growing unnamed aerial vehicles market. Including Sec 111 of the Duncan Hunter National Defense Authorization Act for Fiscal Year 2009 (Public Law No: 110-417). Authorization requested in FY10 National Defense Authorization Bill.

➤ ***\$7,000,000 for OverSite WMD Multi-Sensor Response and Infrastructure Protect System***

- **Purpose:** The Oklahoma National Guard (OKNG), 63rd Weapons of Mass Destruction (WMD) Civil Support Team (CST) requires additional funding to enhance their ability to prevent-- and respond to—terrorist attacks.
- **Justification:** The OverSite© system provides WMD detect and analysis capability and a fully integrated and functional suite of equipment capable of providing command and control,

interoperable wireless communications, a suite of Acoustic, Biological, Radiological, Nuclear, Explosives (ACBRN-E), and Command, Control, Communications, Computers and Cyber for Intelligence, Surveillance and Reconnaissance (C5ISR) sensors. System configurations consist of unobtrusive mobile configurations (i.e., RV) and fixed or de-hutted configurations with extended capability tailored for the CST.

- **Authorization:** Underfunded OKNG item in President's Budget. OKNG requires additional funding to complete WMD mission. Authorization requested in FY10 National Defense Authorization Bill.

➤ ***\$7,500,000 for Precision Guidance Kit (PGK) Technology Development***

- **Purpose:** The PGK technology development addresses the Army's need for increased precision for the Infantry Brigade Combat Teams.
- **Justification:** The Army's 155mm PGK program is providing more responsive, more precise fire support capabilities. This same technology is adaptable to 105mm artillery and 120mm mortar rounds. Units in the field have expressed the need for this capability specifically for the 105mm Artillery and 120mm mortar systems.
- **Authorization:** Supports DoD Multiple Operational Needs Statements in reference to stated artillery requirements, Public Law No: 110-329. Additional authorization requested in FY10 National Defense Authorization Bill.

➤ ***\$5,000,000 for Printed Harsh Environment RFID Sensors***

- **Purpose:** Current estimate for corrosion maintenance is over \$1B per year (Air Force Handbook 109th Congress). The risk to the warfighter and the national security is too great to allow aging air craft to fly without early preventative maintenance. New aircraft have the potential of fewer problems, but problems still exist and can be very expensive if not corrected.
- **Justification:** Printed sensors capable of detecting cracks, excess strain or excess temperature would allow the aircraft to be optimally used without unnecessary repair because of the risk. Printed Harsh Environment RFID Sensors would save hundreds of millions of dollars each year by allowing the air craft to be optimally used and repaired only when truly necessary.
- **Authorization:** Assists in fulfilling the principal mission of the Office of the Assistant Deputy Under Secretary of Defense for Maintenance Policy and Programs [ADUSD (L&MR) MPP], 18 USC 2460. Page 64 of the USAF Handbook addresses readiness and maintenance concerns on aging aircraft.

➤ ***\$35,000,000 for Readiness and Environmental Protection Initiative***

- **Purpose:** REPI has proven to be highly effective in addressing encroachment. REPI funding, combined with funding from state and NGO partners, prevents this encroachment through acquisition of easements from willing landowners, thereby ensuring the continued viability of key installations like Fort Sill.
- **Justification:** Encroachment resulting from incompatible development and loss of habitat continues to pose a major long-term threat to readiness and to the viability of Ft Sill and other military installations, ranges, and airspace throughout the country. This threat will intensify over the near to midterm as a result of the convergence of ongoing initiatives to increase the end strength of the Army and Marine Corps, the global restationing of forces, realignments resulting from BRAC 2005, and the fielding of new weapons systems. REPI involves partnerships between DOD and state and local governments and conservation NGOs to share the costs of acquiring protective easements from willing landowners. This project has been previously funded: FY09 56,000,000 – FY08 46,000,000 – FY07 42,000,000 – FY06 37,000,000.

- **Authorization:** Supports 10 USC 2684a proposal signed in July 2006 for the Fort Sill Army Compatible Use Buffer Program. Additional authorization requested in FY10 National Defense Authorization Bill.
- ***\$1,500,000 for Reduction of AFSOC Washout Rates***
- **Purpose:** The program will provide data and analysis to Air Force Special Operations Command that will prove useful in finding ways to reduce the washout rate and fulfill staffing requirements.
 - **Justification:** Combat airmen are deployed deep into hostile areas to rescue downed pilots or to designate targets for destruction by air borne munitions including missiles and smart bombs. In order to accomplish these missions, individuals must be able to walk long distances with heavy loads, evade capture, avoid detection and endure extreme environments. Combat airmen must not only be in superb physical condition but also have the psychological strength needed to endure pain, uncertainty and fear. For these reasons, very few individuals entering the Air Force can become combat airmen
 - **Authorization:** Request seeks to fulfill requirement for enhanced human performance found in “AFSOC\ FY08-33, Annex B, to Capability Analysis Documents Prioritized Capability Deficiency List and Deficiency Descriptions, Deficiency 376, Enhanced Human Performance in Extreme Conditions.” Authorization requested in FY10 National Defense Authorization Bill.
- ***\$10,000,000 for Rehabilitation Technology Transition Center***
- **Purpose:** This funding would transition prosthetics technology that has been developed through DARPA’s \$70 million R&D program to clinical practice to improve amputee patient care. Commercialization of this technology would be essential to military and veteran amputees, especially those from the wars in Iraq and Afghanistan.
 - **Justification:** Substantial investment in prosthetic research since the start of the war efforts in Iraq and Afghanistan may not reach the military and veteran amputee users intended to benefit without the support and development of a mechanism to transfer technology from DOD into patient care. The Rehabilitation Technology Transition Center is one such mechanism.
 - **Authorization:** Fulfills requirement to use DARPA funded technologies that benefit veterans and the general public, Public Law 85-325 and Department of Defense Directive 5105.41. Authorization requested in FY10 National Defense Authorization Bill.
- ***\$1,900,000 for Secure Information Technology Initiative-USAF AFRL RZ***
- **Purpose:** Provide/Install Common Access Card (CAC) Physical Security Entry System: Scope, procure and install a secure card reader system for various buildings at the AFRL/RZ Edwards AFB Rocket Site. This will consist of providing secure entry for numerous locations and sites throughout the Propulsion Directorate’s Edwards Rocket Site. The contractor will be responsible for working with RZ-west personnel to scope the security requirements of the site, analyze options, procure and install equipment.
 - **Justification:** The upgrade of the Propulsion Directorate Information systems will play a key role in the development and transition of world-class propulsion and power technologies to the “SECURE” warfighter by providing enhanced engineering design and analysis tools to meet the Congressional Mandate.
 - **Authorization:** Supports EADB AFRL Propulsion Directorate (PR) infrastructure that is vital to DoD information security mission. Authorization requested in FY10 National Defense Authorization Bill.
- ***\$7,000,000 for Secure Supply of High Purity Carbon Nano Tube Solutions***

- **Purpose:** SouthWest NanoTechnologies is working with the nation's largest supplier of nanotube solutions for micro-electronic applications, Brewer Science. This collaboration will enable SWeNT to provide micro-electronic grade nanotubes for US Defense applications, and to meet DOD's mandate to assure a U.S. supply source for these materials.
 - **Justification:** This request will attract technology knowledge and skill to the Norman area and Oklahoma as a whole. Additionally, I will provide a consistent U.S. source for nanotube and micro-electric materials.
 - **Authorization:** Supports DoD Space Mission by securing supply of carbon nano-tubes. Authorization requested in FY10 National Defense Authorization Bill.
- ***\$4,800,000 for Tactical Metal Fabrication (TacFab)***
- **Purpose:** Funding will assist in the RESET efforts and address the need for cast parts for aging and worn-out small to medium size crew-served weapons.
 - **Justification:** There is significant need for cast parts for tanks, vehicles, guns, and other weapons systems. Soldiers and Marines in Iraq have expressed a need for a mobile foundry, co-located with deployed forces. The Tactical Metal Fabrication System will provide this capability to serve as a companion and complement to the MPH. Such an asset, when positioned at the Army's organic U.S.-based industrial overhaul and repair facilities, can significantly contribute to easing current RESET demands. This project has been previously funded: FY09 2,000,000 – FY08 2,400,000. Also requested by Congressman Cole.
 - **Authorization:** Program will assist in Iraq/Afghanistan drawdown/surge efforts, especially in the area of RESET. Authorization requested in FY10 National Defense Authorization Bill.
- ***\$4,477,000 for Technology Applications for Security Enhancement (OSU)***
- **Purpose:** An effective National Biosecurity Plan must address components of Prevention, Preparedness, Response and Attribution in quarantine and defense, including international commercial trade in civilian and military contexts. The work of the multidisciplinary Oklahoma State University team that makes up the Center for the Mitigation of Evolving Threats (CMET) will enhance our national chemical and biological (CB) threat preparedness in an integrated multi-stage framework, including early detection systems, mediation of CB threat impacts, and forensic investigation for criminal prosecution.
 - **Justification:** Funding for this initiative will be used to by CMET to assist in the effort to develop an effective National Bio-security Plan that addresses prevention, preparedness, response and attribution in quarantine and defense, and international commercial trade in civilian and military contexts. Also requested by Congressmen Lucas and Boren.
 - **Authorization:** Request will support NIP bio-security plan. Authorization requested in FY10 National Defense Authorization Bill.
- ***Bill Language for Transfer of Navy Aircraft N40VT***
- **Purpose:** Proposed language will provide the statutory authority for the Secretary of the Navy to transfer title and associated liability for the X-49A Vectored Thrust Ducted Propeller (VTDP) Compound Helicopter (FAA No. N40VT) to Piasecki Aircraft Corporation.
 - **Justification:** The objective of the X-49A flight test is to demonstrate potential of the VTDP Compound Helicopter Technology to significantly increase speed, range, ceiling, survivability, reliability and affordability of existing and future rotary wing aircraft. According to the Department of the Navy, the most cost effective means for allowing the X-49A to fly beyond NATOPS limits without undue liability or risk to the U.S. government is to transfer title and associated liability to Piasecki Aircraft Corporation. Flight tests will demonstrate the technical

feasibility, general military utility and cost reduction potential of the VTDP technology for application to variety different types of current and future rotary wing aircraft.

- **Authorization:** Request will transfer aircraft previously authorized in bill language to Piasecki Aircraft Corporation for further test and evaluation. Also removing direct liability from DoD. Authorization requested in FY10 National Defense Authorization Bill.

➤ ***\$6,000,000 for UML UAV/UAS Test Facility(OSU)***

- **Purpose:** The OSU University Multispectral Laboratories (UML) has established a National Unmanned Aerial Systems (UAS) Test Facility adjacent to Fort Sill restricted airspace. This facility provides unique opportunity to conduct UAS flight testing while remaining within restricted airspace where UAS flights are exempt from Federal Aviation Administration (FAA) regulations.
- **Justification:** Funding will be used to complete all activities began in fiscal year 2009 to establish the UAS Test Center. The UAS Test Center's initiatives will help solve issues of UAS use related public safety, certifications, subsystems testing, and pilot training along with developing and testing a national policy on employment and flight operations of UAS's in US airspace. This project has been previously funded: FY09 2,400,000. Also requested by Congressmen Lucas, Cole, and Boren.
- **Authorization:** Supports 2004 US Special Forces Command "Hostile Forces Tagging, Tracking & Locating (TTL) service requirement, Public Law No: 110-329. Additional authorization requested in FY10 National Defense Authorization Bill.

➤ ***\$1,000,000 for University of Central Oklahoma Paralympic and Community Archery Facility***

- **Purpose:** The purpose of this project is to enhance the University of Central Oklahoma's Archery, US Paralympic Training Site and military program initiatives.
- **Justification:** The creation of an indoor/outdoor archery range for our Olympic and Paralympic athletes and military service members, as well as the various university, primary education and community programs, will provide and operational first-class, community and competitive archery range on land provided by the Oklahoma Department of Wildlife Conservation. The project reaches many demographics- military and civilian alike.
- **Authorization:** Request seeks to fulfill DoD requirement to Veterans for recovery and reintegration into society in wounded warrior language in Title 15 of Public Law 110-181. Additional authorization requested in FY10 National Defense Authorization Bill.