



# Department of Defense Technology Transfer

## FLC MID-ATLANTIC REGIONAL MEETING

Cumberland, MD  
September 16, 2004

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# ***DoD Annual Report to Congress on Technology Transfer Programs***



**TechTRANSIT**

Welcome to TechTRANSIT, your access to Department of Defense technology transfer programs, policies, and resources. We promote partnering opportunities between the private sector and defense labs and improved accessibility of technology transfer information and activities.

U.S. Department of Defense Deputy Under Secretary of Defense (Advanced Systems & Concepts)  
Office of Technology Transition

The graphic for TechTRANSIT shows a stylized landscape with a laptop, a person, and a globe, with the Department of Defense seal overlaid.

**Promote partnering opportunities between the private sector and defense labs and improved accessibility of technology transfer information and activities.**

**Six specific areas of focus:**

- 1. Patent/Royalties/CRADAS**
- 2. Conference and Tradeshow**
- 3. Technical assistance provided to local and small business**
- 4. Independent Research and Development (IR&D) to find partners for R&D efforts.**
- 5. TechLink & other Partnerships Intermediaries under 15 USC 3715**
- 6. Transferring technology in support of Homeland Security needs.**



# Number of PLA and Royalty Income

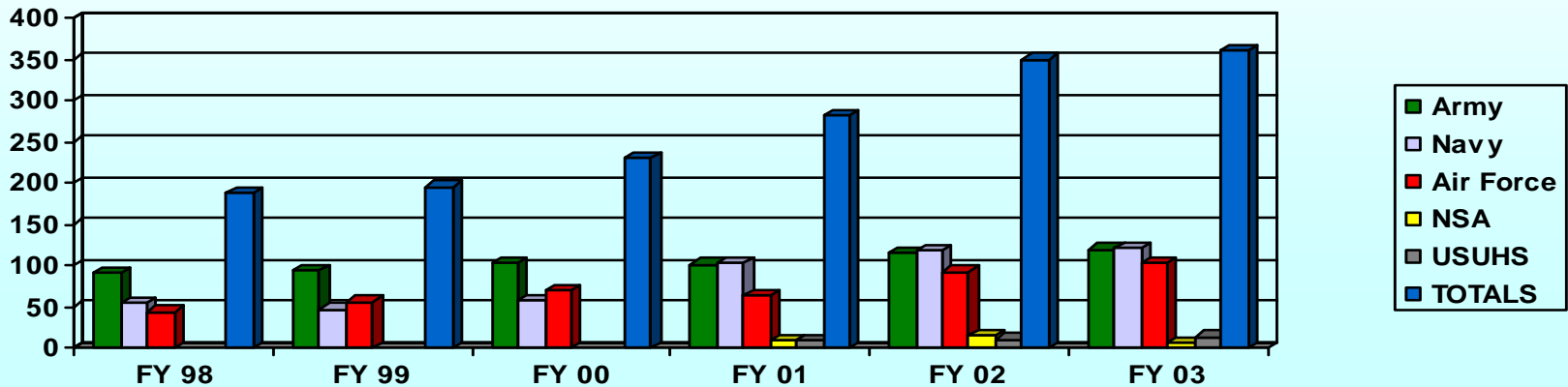


Chart 1: Number of PLA by Military Service/Defense Agency

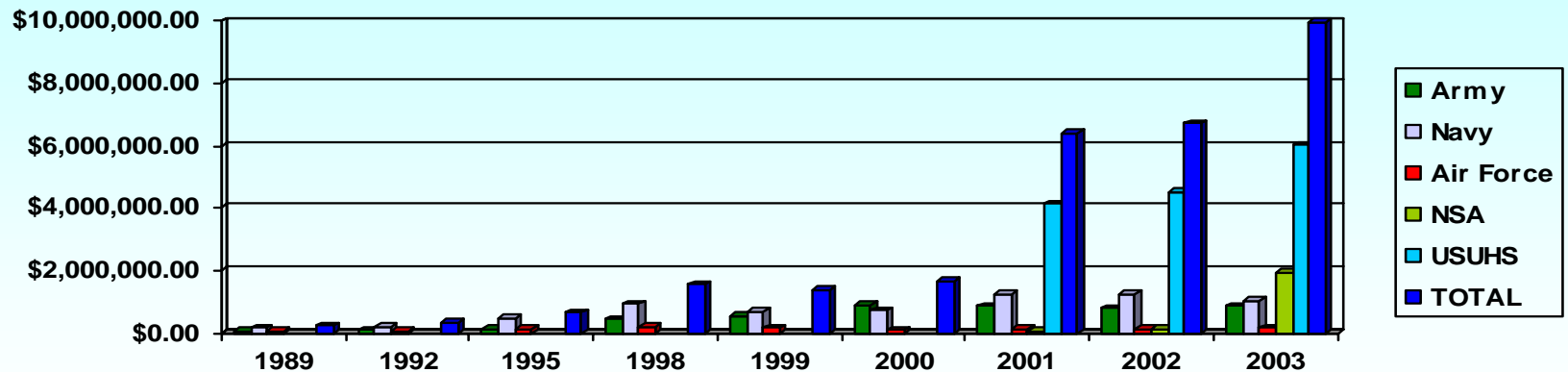


Chart 2: Royalty Income Fiscal Years 1989, 1992, 1995, 1998, 2000, 2001, 2002, 2003



# Active CRADAs and Funds-in

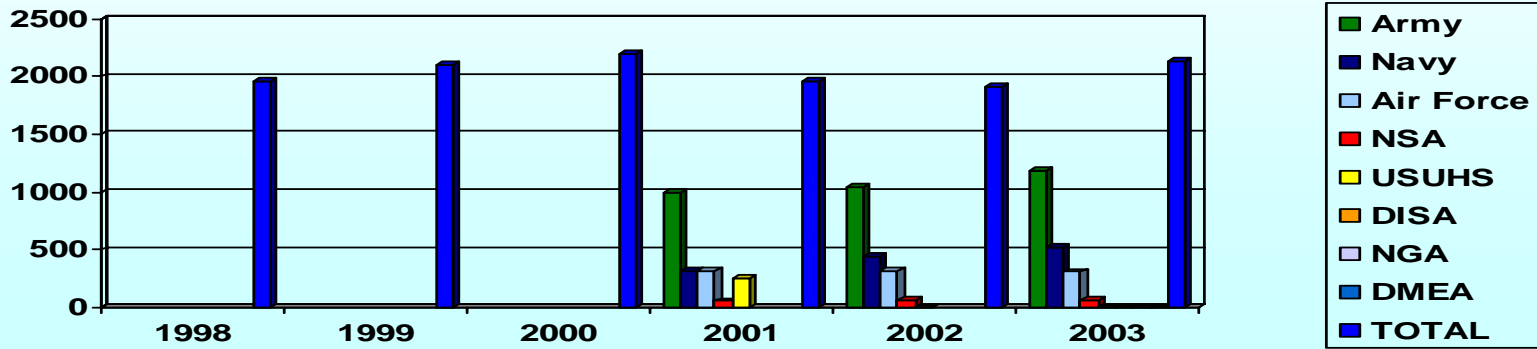


Chart 3: Number of Active CRADAs by Fiscal Years

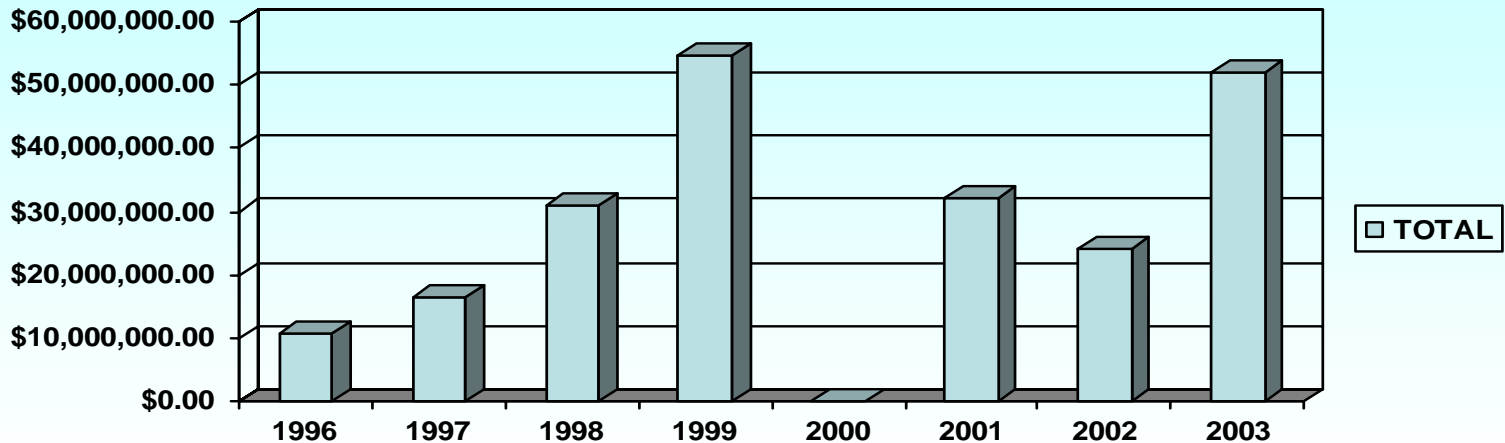


Chart 4: Revenue from Partners for Joint Development under CRADAs



# Highlights of the DoD Technology Transfer Program

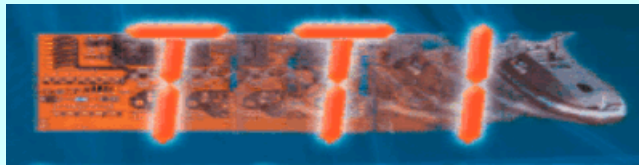


DoD Manufacturing Technology Program

Welcome to the DOD IR&D Program Web Site



Independent Research & Development



Technology Transition Initiative



Defense Production Act Title III



North American Technology and Industrial Base Organization (NATIBO)



# Transferring Technology in Support of the Warfighter

## Engineers Develop First Response Expeditionary (FRE) Fire Vehicle

The First Response Expeditionary (FRE) Fire Vehicle during the Operation Iraqi Freedom deployed and developed to bridge the gap between flight line fire extinguishers and full-sized crash rescue trucks for small aircraft and helicopter.

**U.S. Air force Research Lab Materials and Manufacturing Directorate**



## Aircraft Snow Removal

To date, 128 military de-icing vehicles have been delivered to the Air Force, and 40 commercial vehicles have been delivered by Global to the airline industry by sublicenses, Global Support, LLC and FMC Airport Systems, Inc.

## New Environmental Control Unit (ECU)

The new ECU field-deployable tent cooler designed to heat or cool military tents under the most extreme conditions. The unit was successfully test at Fort Drum, New York, during the Patriot Exercise in June 2003. It is currently used to support the troops in the Operation Iraqi Freedom.



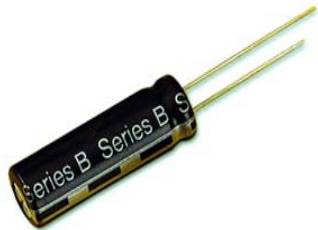


# Transferring Technology in Support of Homeland Security Needs

## Biological Sampling Kit (BiSKit) & Quicksilver Analytics, Inc (QS)

The QS team has produced several prototype BiSKits and is currently in full-scale manufacturing to provide 3,000 kits for Homeland Security in response to anthrax contamination.

**U.S. Army, Edgewood Chemical Biological Center APG, MD**  
**NEW CAPABILITY THAT SAVES LIVES**



## PowerStor Aerogel Capacitor

This offers big electrical storage capabilities in a small package, and the device has high energy density (100 times greater than electrolytic capacitors) and high power (10 to 100 times greater than conventional lithium batteries). **LLNL originally developed the technology and Cooper Electronic Technologies is currently selling these device.**

## Primary/Secondary Containment System Combination System is a

The Chemical Biological Explosives Containment System Workshelter combination is designed for chemical explosive terrorist devices or small munitions. A Kevlar tent with a filling sock for aqueous foam. It is approximately 7ft in diameter at the base and tapers to about 4 ft in diameter at the top. The secondary containment shelter is also airframe and it is approximately 13-feet wide, 10 feet long and has a height of 8 feet. **ECBC entered into a patent licensing agreement (PLA) with ZUMRO, Inc.**





# *Partnership Intermediaries Using 15 U.S.C. 3715*

**TechLink**

- **DoD**
  - TechLink -- Montana State University
  - Tech Transfer & Commercialization Center for First Responder Technologies – University of Pittsburgh’s Institute for Entrepreneurial Excellence
- **Air Force**
  - GCATT - Gulf Coast Alliance for Technology Transfer
  - NYSTEC - New York State Technology Enterprise Corporation
  - New Mexico Tech
- **Navy**
  - Maryland’s Technology Development Corporation
  - Municipality of Indian Head, MD
- **Defense Microelectronics Activity**
  - The Federal Technology Center, Sacramento, CA
- **Others?**



## Tech Link News



### The Hearing Pill™



In 2003, American Bio Health Group (ABG) licensed breakthrough technology promising hearing loss restoration and protection. Developed by the Naval Medical Center-San Diego for the prevention and treatment of hearing loss resulting from noise. For more information, visit the website at: [www.thehearingpill.com](http://www.thehearingpill.com)

**NOTE:** *In support of Operation Iraq Freedom, four cases of The Hearing Pill™ were sent to Iraq for troops experiencing blast injury. As a results, troops are experiencing positive improvement from taking The Hearing Pill.™ DoD spends -- \$1.3B per year treating noise-induced hearing loss.*



# ***DoD George Linsteadt Technology Transfer Achievement Award***



**Ms. Sue Payton, Deputy Under the Secretary of Defense (Advanced Systems and Concepts) established the Department of Defense George Linsteadt Technology Transfer Achievement Award named in honor of Mr. George F. Linsteadt, the father of the FLC and co-founder of the original DoD Laboratory Consortium in 1971. A pioneer who worked at the Naval Air Systems Command (NAVAIR) China Lake Weapons Division and a promoter of technology transfer for laboratories in seventeen Federal Departments and Agencies. This award recognizes Technology transfer professional who, through notable contributions, have performed extraordinary efforts to transfer technology developed in the Federal laboratories from/to partners in the public and private sectors, in support of the DoD Technology Transfer Program.**



# ***DoD George Linstead Technology Transfer Achievement Award***

## **Who can apply?**

- **An individual or a team**
- **Commercial entity**
- **Non-Profit entity**
- **College or University**
- **State or local government entity**
- **Federal Agencies or departments**
- **Other DoD components**



# ***DoD George Linstead Technology Transfer Achievement Award***

## **Evaluation:**

- Personal involvement and impact on the Laboratory or component in support of technology transfer = 30 points**
- Personal involvement and support of technology transfer and impact on industry = 30 points**
- The best example of technology transfer = 30 points**
- A PowerPoint presentation describing innovation or creativity = 10 points**



# ***THE FUTURE***

## **PARTNERSHIP INTERMEDIARIES**

**HOMELAND DEFENSE -- SUPPORT TO FIRST  
RESPONDERS**

**TRANSFERRING TECHNOLOGY FOR COMMERCIAL USE  
WHERE DOD IS A BENEFICIARY**



# ***OUR MISSION AND GOAL***

**To provide technical capabilities for the warfighter—the ultimate customer of DoD’s technology investments.**



***BACK UP SLIDES***



# OBJECTIVE

The DoD Office of Technology Transition purpose is:

## **DoD Technology Transfer Program**

- Identifies, monitors, and coordinates R&D activities, and actively facilitate the transfer of intellectual properties with both the public and private sector and direct efforts with Secretary of Defense, Department of Commerce and Department of Energy.

## **Independent Research and Development Program**

- Develops a database which is accessible to DoD users to improve the way technology is communicated to the industry.

## **DoD Manufacturing Technology Program**

- Focuses on production and development efforts in the design phase—an critical needs to ensure DoD weapons are affordable and deployable.

## **Title III of the Defense Production Act**

- Provides a cost-effective method to develop and implement technology service on demand for the Warfighters.



# Independent Research and Development (IR&D) to find partners for R&D efforts

Welcome to the DOD IR&D Program Web Site



The use of IRD database will identify defense needs, and will avoid duplication of contractor IR&D activities funded directly by DoD. Some of the technology efforts are:

1. RDECOM CERDEC and General Dynamics to work science and technology initiatives weekly with meetings between engineers. RDECOM CERDEC have conducted 17 technical interchange meeting with the private industry.
2. The U.S. Army's Benet Labs/Watervliet Arsenal in New York and Picatinny Arsenal in New Jersey and the Naval Air Warfare Center Aircraft Division Lakehurst work with local community to establish business and technology Centers on site.
3. For additional information, visit the website at: [www.dtic.mil/ird](http://www.dtic.mil/ird)



# DoD Manufacturing Technology Program



Develop factory-ready advanced manufacturing processes to enable production and deployment of military systems.

FY2002: \$185M invested, \$2.2B cost avoidance for 81 weapon systems across 107 prime defense contractors and suppliers.

Three major areas:

1. Processing and Fabrication activities
2. Advanced Manufacturing Enterprise
3. Sustainment
4. For more information, visit website at: [www.dodmantech.com](http://www.dodmantech.com)



# ***Title III Defense Production Act***



**Title III accelerates the transition of advanced technologies through the establishment of initial production capacity.**

**Current projects include a \$167M project to support advanced technologies needed for national security.**

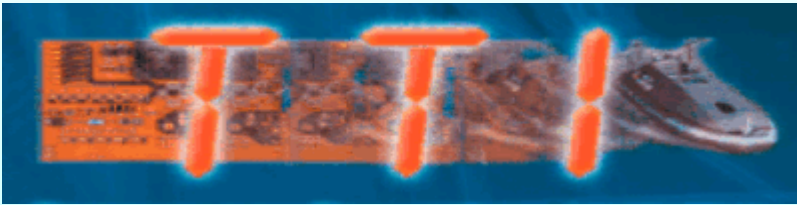
**For more information, visit website at:  
[www.dtic.mil/dpatitle3](http://www.dtic.mil/dpatitle3)**

**Eight project underway:**

- 1. Radiation Hardened Microelectronic Capital Expansion (CAPEX)**
- 2. Radiation Harden Microprocessors**
- 3. Silicon Carbide (SiC) Substrates**
- 4. Laser Eye Protection (LEP)**
- 5. Microwave Power Tube Materials and Components**
- 6. Yttrium Barium Copper Oxide (YBCO) High-temperature Superconducting coated Conductors**
- 7. Wireless Vibration Sensors**
- 8. Rigid-Rod Polymeric Materials**



# Technology Transition Initiative



*Accelerating delivery of mature technology to the Warfighter*

- Once a decision is made to move a technology from the S&T program into acquisition, it often takes 2-3 years to obtain procurement funding to buy the product. During that time, many technology projects either become obsolete or are cancelled due to a lack of funding.
- To help address this need, Congress established the Technology Transition Initiative (TTI) in 2002 to bridge the gap between demonstration and production of Science and Technology (S&T) funded technology. (10 U.S.C. 2359a)
- For more details, visit the website at: [www.acq.osd.mil/iti/about.html](http://www.acq.osd.mil/iti/about.html)



# ***North American Technology and Industrial Base Organization NATIBO***



**Effectively leverage dollars and resources to reduce redundant efforts through bilateral cooperation on studies and projects relating to the defense technology and industrial base of the U.S. and Canada.**

- The NATIBO focus is on technology insertion into current developmental projects.**
- Currently 12 studies and 3 insertion projects have been completed between the U.S. and Canada under the auspices of the NATIBO.**
- For more information, visit the website at: [www.dtic.mil/natibo](http://www.dtic.mil/natibo)**