

## **Federal Technology Transfer and the Federal Laboratory Consortium:**

**“Identifying and accessing U.S. federal lab  
technologies available for partnering”**

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Business Opportunity Session

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## **Overview**

- Overview of U.S. Federal Technology Transfer
- Role of the Federal Lab Consortium for Tech Transfer (FLC)
- Identifying Potential U.S. Federal Lab Partners
- Selected Examples of Tech Transfer

## Federal Technology Transfer Defined

Technology transfer is the process by which technology or knowledge developed in one place or for one purpose is applied and exploited in another place or for another purpose --- it can occur:

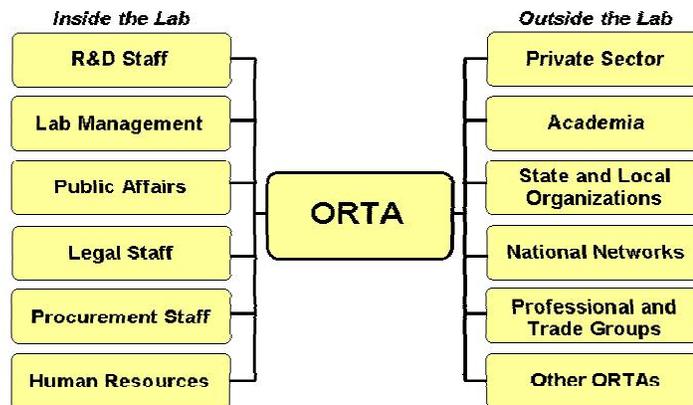
- **Between the government and non-government entities**
- Between government entities (labs/agencies)

.... and designed to:

- enhance **agency mission** capabilities
- increase **return on R&D** investment
- support **economic growth** and **development**
- enhance **U.S. competitiveness**

## Office of Research Technology Applications

(Focal Point For Technology Transfer)



## Results of Legislative History

(Current Tech Transfer Environment)

- Technology transfer is a mission of the federal government
- ORTAs (Lab T<sup>2</sup> Offices) established and funded
- Small businesses, universities and not-for-profits keep title to inventions made with federal funds
- Federal agencies receive greater, more flexible, patent and licensing authority
- Mechanisms and incentives to implement technology transfer, including CRADAs, etc.

## Common Tech Transfer Mechanisms

- Patent License Agreement
- Cooperative Research and Development Agreement (CRADA)
- Work for Others – Work for Private Parties
- Collegial exchange
- Educational Partnership Agreement
- Use of Facilities Agreement
- Cooperative Agreement
- Commercial Test Agreement
- Material Transfer Agreement
- Partnership Intermediary Agreement
- Commercial Service Agreement
- Personnel Exchange

## CRADA "Considerations" (Focus on Small Business and US Manufacture)

The lab director in deciding what CRADA agreements to enter into shall –

- Give **special consideration to small business firms**, and consortia involving small business firms; and
- Give **preference** to business units located in the US which agree that products embodying such inventions ... will be **manufactured substantially in the US**

## Recent Statements (on Collaboration with Federal Labs)

### House S&T Committee (111<sup>th</sup> Cong. legislative agenda) (Jan 2009)

- "... work to develop updated policies **for encouraging Federally-supported research at labs and universities to be brought into the marketplace**"

### OMB Memo re S&T Priorities in FY11 budget (Aug 2009)

- "Agency budget submissions should also explain how the agency plans **to take advantage of today's open innovation model** ...."

### A Strategy for American Innovation (Sept 2009)

- "The Federal government should **take advantage of the expertise and insight of people both inside and outside the Federal government ... and form high-impact collaborations with researchers, the private sector, and civil society** ..."

### DOC Office of Innovation and Entrepreneurship (Oct 2009)

- "The office will focus on the following areas:  
\* **Accelerating Tech Commercialization of Fed R&D**

## What is the FLC

### The FLC:

- Formally created by Congress under the Federal Technology Transfer Act (Public Law 99-502)
- Composed of tech transfer professionals from the federal laboratories, their respective agencies, and affiliated organizations
- The only government-wide forum for technology transfer

### Membership reflects:

- 18 federal departments and agencies
- > Over 250 fed gov't R&D laboratories and centers
- > \$100 billion annual budget
- > 100,000 scientists & engineers

## Accessing Federal Technology/Capabilities (Entry Points)

- **FLC** (e.g., **Technology Locator Service**)
- **Agency** (e.g., T<sup>2</sup> Office; Partnership Intermediaries)
- **Laboratory/Institute** (Lab T<sup>2</sup> Office -- ORTA)
- **Individual Scientists & Engineers**

## FLC Tech Locator Service Example (Ras Labs, LLC)



### Interest

Looking for federal lab work on electro-responsive smart materials (to improve its own technology).

“Ras Labs and Princeton Plasma Physics Lab recently formed a CRADA and are actively conducting research with various metals and plasmas to improve the interface between the embedded electrodes and the electro-responsive material of these actuators, which should lead to superior electro-responsive actuators.”

Lenore Rasmussen, Ras Labs, LLC

## Select Examples of Federal Tech Transfer

## Hybrid Solar Lighting: (DOE: Oak Ridge National Lab)



- A roof-mounted collector concentrates sunlight into a bundle of plastic optical fibers which are routed to multiple “hybrid” luminaires that blend natural light with artificial light, maintaining a constant level of lighting.
- ORNL **patented** the technology in 2003 and **licensed** it in 2005 to Sunlight Direct, LLC, a local startup company that emerged from ORNL. The principal was granted part-time **entrepreneurial leave** status by UT-Battelle, LLC, the management and operating contractor for ORNL under contract to DOE.
- The developers at ORNL won a R&D 100 Award in 2006 for the hybrid solar lighting system

## High-Temp Superconducting Wire: (DOE: Los Alamos National Lab)



- Second-Generation (2G) High Temperature Superconducting (HTS) wire is a revolution in the electric power industry – it can carry 200 times more current than traditional copper wires.
- The technology uses a **patented** deposition method developed at Los Alamos National Laboratory in collaboration with industry partner SuperPower Inc. The two began collaborating in 2000 when the first **cooperative research and development agreement** (with SuperPower's parent firm) was executed. That **CRADA** is still an ongoing collaboration, with multiple modifications, and is now focused on lowering the cost of 2G HTS wire and simplifying the wire architecture.

## Qwiklite 200™: (DOD-Navy: Space and Naval Warfare Systems Center)



- Qwiklite is a field-deployable bioluminescent bioassay system for measuring water toxicity – based on plankton's bioluminescence characteristics being affected measurably by exposure to toxins.
- **Invented** by the Navy, the technology was **licensed** to Assure Controls, Inc., in 2005, with commercialization support from the Center for Commercialization of Advanced Technology, two **cooperative research and development agreements** and four more **patents**; marketed as QwikLite 200 TM.
- Less costly and faster than traditional assays -- it could save billions of gallons of water in every part of the world through simple, affordable regular testing.

## Vascular Viewer™ (DOD-Air Force: Air Force Research Lab)



- Vascular Viewer™ reveals blood vessels in the body under a broad range of lighting conditions, allowing medical personnel to access blood vessels more quickly and accurately, even in extreme conditions such as on the battlefield or during trauma care.
- A team from the Air Force Research Laboratory's Materials and Manufacturing Directorate (AFRL/ML) **developed and patented** the unique imaging technology for Vascular Viewer™
- The Air Force awarded **an exclusive license to a spinoff company** to develop and market the technology, InfraRed Imaging Systems (IRIS) of Columbus, Ohio.

advancing federal research and technology

## 2010 FLC National Meeting (Albuquerque, NM; April 26–29, 2010)

### The Technology Transfer Event of the Year

Technology Transfer Training  
Technology Transfer Awards  
Technology Transfer Town Hall Meeting  
Science and Technology Policy  
Industry Perspectives  
Energy and Technology Transfer  
Agency Meetings  
The FLC Tech Fair

Exhibit &  
Supporter  
Opportunities!

*the national meeting of the federal laboratory consortium for technology transfer*

The 2010 FLC National Conference

# The Sky's the Limit

April 26-29, 2010 Albuquerque, New Mexico



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[www.federallabs.org/meeting](http://www.federallabs.org/meeting)

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