Innovations in Marketing, Licensing, Training, and Promoting DoD T2 Successes

Navy ORTA/Legal Workshop
Naval Postgraduate School / Monterey, CA
6 November 2018

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Major TechLink Initiatives

TECHLINK INITIATIVES

- T2 TRAINING
- T2 TRAINING
- EXPANDED TECHNOLOGY MARKETING
- EXPRESS LICENSING
- (REFERRALS TO MILTECH)
- PROMOTING T2 SUCCESSES

DOD INNOVATION PROCESS

- DOD LAB R&D
- INVENTION DISCLOSURES & PATENTING
- PATENT AND INVENTION LICENSING
- PRODUCT DEV., SALES AND TRANSITION
- ECONOMIC AND MILITARY OUTCOMES
Training
Making Believers of Navy Scientists & Engineers
Background and Tasking

Air Force

- Six Training Modules
  - Important of T2 in achieving the Air Force mission
  - The Critical Importance of Protecting Air Force Intellectual Property
  - Recognizing Inventions
  - Completing Air Force Invention Disclosures
  - Primary Technology Transfer Mechanisms
  - Protecting Intellectual Property: What’s in it for Me, The Air Force S&E?

- In-Person Training Curriculum

Navy

- Single Training Video
  - Introduction
  - T2 Overview and the ORTA
  - S&E Story: Protecting Inventions
  - ORTA Story: Technology Transfer & Transition
  - S&E Story: Value to Industry, Navy, and You
  - Collaboration: CRADAs
  - Collaboration: WWPP/TSA
  - Resources
  - Call to Action
Training Design

• Learning Objectives
  − Grasp the basics of technology transfer
  − Identify the ORTA as the key technology transfer resource and facilitator
  − Understand the importance of proper disclosure and protection of inventions

• Outcomes
  − Increase invention disclosures
  − Increase patent filings
  − Increase engagement in technology transfer activities

• Instructional Strategies
  − Case Study Examples
  − Testimonials
  − WIFM
  − Call to Action
The Long Game

No T2 Knowledge

STRANGERS

Awareness

PROSPECTS

Engagement

CUSTOMERS

Conversion

BELIEVERS
Digital Communications

Telling the Navy Story
Traditional Communications Activities

- Monthly reporting
- FLC and Linsteadt award nominations
- Economic impact studies (T2 & SBIR)
Progressive communications

Improving on our foundation

- Database
  - Patents
  - Tech summaries
- Lifecycle view of news
  - News & Features
  - Podcasts
  - Listicles
  - Weekly Tech Roundups
  - Content marketing
- Social Media
- Earned Media
Army researchers win patent for powerful satcom antenna

Business opportunity for antenna companies

Four Army engineers recently won a patent for their satellite radio antenna that uses a novel cone design and deploys neatly from a spring-loaded gun.

The portable antenna revealed in U.S. Patent 9,929,461 was granted to inventors Amir Zaghloul, William Fraser, Theodore Anthony and Andrew Bayba from the Army Research Laboratory in Adelphi, Maryland, on March 27.

The spiral antenna covers the 200-400 MHz bandwidth used for UHF satcom radios. And to make it easily stowed and deployed on demand, the spiral-shaped satcom antenna is printed on a collapsible fabric with 3D technology.
Biotech startup licenses Air Force neuropeptide Y technology for PTSD, disease treatment

A biochemist's startup company announced Friday that it had secured an exclusive patent license agreement with the Air Force Research Laboratory for a breakthrough technology that could help military veterans suffering from a post-traumatic stress disorder.

Stephanie Davis, chief scientist and founder of the Boston-based Elke Therapeutics, said the agreement allows the company to develop the Air Force's patented neuropeptide Y binder as a stand-alone biomarker product or packaged with its proprietary therapeutic compound that...
Maturing: DoD tech in the wild

Inspired by burn pits, real-time atmospheric monitoring and modeling could save lives

A Vermont company recently licensed Army technology, plans wide-ranging applications for first responders, petroleum industry.

When Scott Vachon thinks about the future of emergency management, he imagines sensors networked facing forward, chemical alarms, and ETL developments with near-instant information on toxic weather conditions.

Vachon is a research meteorologist at the Army Research Laboratory in New Mexico. And he’s the lead inventor of the LiDAR Rapid Evaluation of Atmospheric Pomegranate (LiRAPER) system.

“If there were a cloud and a serious chemical spill...

Businessman deploys Army technology, helps West Fargo manage 30,000-barrel diesel fire

Thousands of gallons of diesel fuel burned in a storage facility in West Fargo on February 16, 2016. The West Fargo Fire Department responded.

WEST FARGO, N.D. – Like thousands of his neighbors, Scott Roller woke up on Sunday morning to an alarming text message.

“Shelter in place,” it read, telling residents the location of an industrial fire in the city and that they should stay where they were.

Just after 3 a.m., about 30,000 barrels of diesel fuel in a large storage tank owned by the Magellan Pipeline Company caught fire. The flames of black smoke swept over homes for the next seven hours.

Roller, vice president of Diamond E Technologies Solutions, ignored the warning and jumped into action.
End state: Success in the marketplace

• $85 million in sales

• $400 million distribution agreement
Video

TechLink Videos
These high-tech companies developed new products in partnership with the Department of Defense.

- Trivalent Chromium Pretreatment (TCP), a Non-Toxic Corrosion Coating
- The SBIR Program is Critical for Success at AEDC
- An Actuator and Valve System for Simulated Missile Plumes
- Enhanced Missile Plume Signature Representation Technologies
- The TDAAS Searchable Data Technology at AEDC
- Aerospace's Fast Pressure Sensitive Paint Technology
- The Inlet Duct Robotic Drilling Cell for F-35 Assembly
- The Optical Projection Technology for F-35 Construction

View All Videos
Ammunition backpack for belt-fed weapons by NSWC-Crane

Invented at the Naval Surface Warfare Center in Crane, Indiana, the patented pending design is available to businesses for development into new products.

TechLink

HIGH SPEED
LOW DRAG

Military technology available for commercial license

Available on iTunes

GET IT ON Google Play
The cost of developing technologies that solve significant maritime problems has led innovative blue water companies to leverage the research and technologies invented inside the Department of Defense.

Dozens of military laboratories produce hundreds of new inventions each year, many with dual-use applications well-suited for maritime purposes.

For example, a patent application published in March revealed that five researchers from the U.S. Navy’s Space and Naval Warfare Systems Command in San Diego had invented a new fuel cell battery for powering long-term, leave-in-place sensors. The battery could extend the life of drifting or moored autonomous instruments and sensor
Weekly Tech Roundup

Weekly tech roundup: heat injury prevention app (2B-Cool), low-cost drone swarm catapult (and more)

TechLink’s mission is to help small businesses and entrepreneurs across America gain access to the innovative technology invented in Department of Defense labs.
Content Marketing

Exclusive or non-exclusive, what’s the right patent license agreement for your business?

By Troy Carter
TechLink Staff Writer

Defense laboratories in the United States have invented and patented thousands of new technologies.

When a business seeks to develop a product or service based on intellectual property invented and owned by a branch of the military, they must often first secure a patent license.

A common question for businesses submitting a patent license application is what degree of exclusivity they should seek from the government.
Social Media Videos

- #TechTuesday
- Features
- Branding
EurekAlert!

• 8 national press releases
  – 16,346 additional pageviews
  – Reaches Google News
  – Emails 16,000+ reporters
Earned media

Variable-Camber Compliant Wing

The airfoil camber morphs in flight without using discrete control surfaces such as flaps.

In the early years of manned flight, wing warping was used for lateral control of an aircraft. This technique consisted of a system of polars and cables used to twist the trailing edge of the wing in opposite directions. Because most wing warping designs involved flaring of armature members, they were difficult to control, and the risk of structural failure was high. An aircraft further developed, wing warping was replaced by multiple, independent, rigid wing control surfaces—such as ailerons, leading edge flaps, and flaps— and while this approach is still in use, it is not without problems.
Expanded Technology Marketing

Reaching More Prospective Partners
The TechLink Process

• Evaluate all intellectual property coming out of DoD laboratories on a biweekly basis

• Select most commercially promising technologies and develop marketing materials for specific market segments / applications

• Extensively market technology licensing opportunities to US industry, small businesses, and entrepreneurs

• Deliver high quality licensing prospects to DoD laboratories

• Work hand-in-hand with labs and prospects to facilitate win-win agreements
Intellectual Property Evaluation

• Patent Review Board
  – Evaluates new IP every two weeks
  – IP scored on reduction to practice and commercial viability
  – Initial marketing strategy determined

• Reload
  – All technology managers (TMs) meet every 6 weeks
  – Review and discuss PRB outcomes
  – Populate individual TM marketing pipelines

• Renewal Reload
  – Review all IP within one year of each maintenance fee
  – Review citation history to identify prospects

- 800 patents per year
- 650 apps per year
- 5X reviews over life
ABSTRACT

Synthetic human blood vessels can be constructed using human brain-derived endothelial cells and incorporated into a tissue model that contains astrocytes and other neurons and microglia. Multi-cell type microvessels incorporate cell types such as astrocytes and pericytes in order to construct a highly representative blood-brain barrier in vitro model with a functional barrier containing brain-derived microvascular endothelial cells and a polymer wall containing human astrocytes and/or pericytes.

While in vivo models are the gold standard for addressing blood-brain barrier (BBB) functionality and drug safety, they suffer from the lack of human complementarity, with an estimated 80 percent of candidate drugs successfully tested in small animals failing in human clinical trials. While such failures are not solely attributable to a lack of adequate BBB models, there is a large need for more relevant models.

The blood–brain barrier is a highly selective semipermeable membrane barrier that separates the circulating blood from the brain and intracellular fluid in the central nervous system. (iStock photo)
Our Approach to Technology Marketing

- Targeted Marketing
- Ecosystem Outreach
- Digital Marketing
Our Approach to Technology Marketing

- Identify and reach the highest quality prospects in specific market segments
- Present technologies to unidentifiable entrepreneurs and small businesses
- Create awareness of the opportunity to license DoD technology and drive traffic to our searchable database

Market technologies of all types to companies of all sizes
Our Approach:

• Dedicated team of experienced marketers generating leads for technology managers

• Through market research, identify businesses which align to the licensing opportunity and specific points of contact within the business

• Engage licensing prospects via direct contact – email marketing, social media outreach, cold calling

• Cultivate leads through multiple engagements, working towards a closed deal

Targeted Marketing

25 techs
20+ prospects per month

6,000+
quality prospects per year

600+
warm leads passed to TMs per year
Ecosystem Outreach

Our approach:

• **Dedicated industry liaison** performing **direct outreach** to startup communities and industry associations

• **Form partnerships** and **share custom content** through monthly newsletters to association memberships

• **Facilitate webinars** on how to collaborate with DoD laboratories through technology transfer

• **Potential to reach tens of thousands** of entrepreneurs and businesses unidentifiable by other means
Ecosystem Outreach Example
Ecosystem Outreach Example

The Maritime Alliance
Promoting BlueTech and Blue Jobs®

21 technologies waiting for maritime uses

Contact TechLink to learn how businesses can turn these technologies into new products and services.

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For example, a patent application published in March revealed that five researchers from the U.S. Navy’s Space and Naval Warfare Systems Command in San Diego had invented a new fuel cell battery for powering long-term, leave-in-place sensors. The battery could extend the life of drifting or moored autonomous instruments and sensor systems.

The novel battery and the technologies listed below are readily available to companies through license agreements and TechLink offers interested parties expert guidance at no cost.
Digital Marketing

Our approach:

• Dedicated team focused on digital marketing & content development

• Create awareness of the opportunity

• Communicate who we are and how we can help

• Tell licensing success stories

• Market individual technology opportunities
Content Marketing

Queries

- patent license agreement
- patent licensing agreement
- simple patent license agreement
- non exclusive patent license agreement template
- patent license
- patent agreement
- exclusive patent license agreement
Biotech startup licenses Air Force neuropeptide Y technology for PTSD, disease treatment

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Social Media Marketing
Technology Marketing

6,000+ targeted high quality prospects

100’s of 1,000’s of entrepreneurs & businesses

Digital Marketing

Ecosystem Outreach

10’s of 1,000’s of entrepreneurs & businesses
TechLinkCenter.org by the numbers - FY18

- 144 assets published
  - 65 news & feature stories
  - 12 (of 24) podcasts
  - 35 Weekly Tech Roundups
  - 19 list articles (listicles)
  - 13 content marketing (how to…)
- 8 national press releases
- 44 marketing videos
- 249 newsletter subscriptions

• TMs report major increase in leads
  - 4X visitors per month
  - 110,000 visitors per year
  - 250,000 unique page views
100+ License Agreements Completed

Patent License Completed in 13 Business Days
Create additional value from DoD technologies by increasing the volume and efficiency of licensing and other technology transfer activities.
Making Connections
Reducing Barriers
EXPRESS LICENSING IS...

...A MARKETING TOOL

• Online
• 24/7/365
• Digital “fulfillment package”
EXPRESS LICENSING IS…

…A STREAMLINED COLLABORATION PLATFORM

- Pre-negotiated terms
- Pre-approved agreements
- Accurate and efficient modern online business system
EXPRESS LICENSING IS NOT...

• ...a new type of license
• ...a cheap/unsophisticated metric instantly granted to unqualified licensees
  - Thorough TechLink curation
    o Applicant vetting
    o Commercialization plan preparation assistance
  - Lab review and approval of each license
  - Fully compliant with applicable statutes and regulations
ORTA Considerations

EXPRESS LICENSING REQUIREMENTS

1) Intellectual property
2) Pre-negotiated terms (variable by technology)
3) Pre-approved license templates
Express Licensing Status
PARTICIPATING LABS

**ARMY**  
- 2 -  
• Army Research Laboratory  
• Natick Soldier Research, Development and Engineering Center

**NAVY**  
- 5 + 4 -  
• Naval Air Warfare Center Aircraft Division  
• Naval Air Warfare Center Weapons Division  
• NSWC Crane  
• NAVFAC EXWC  
• NPS  
Onboarding:  
• NUWC Newport  
• NSWC Dahlgren  
• Naval Research Laboratory  
• SSC Pacific

**AIR FORCE**  
- 3 + 1 -  
• AFRL/711th Human Performance Wing  
• AFRL Materials and Manufacturing Directorate  
• AFRL Aerospace Systems  
Onboarding:  
• AFRL Sensors
Express Licensing Status

TECHNOLOGIES AND OUTCOMES

- Technologies

325

54

181

90

ATAK Invention Licenses

100

Patent License Agreements

16

Patent License Agreements Pending

7

Commercial Evaluation Licenses

2

CRADA

1
Summary

• Training to create believers of Navy S&Es
• Digital Communications as a powerful platform for T2 and an effective means to tell the Navy story
• Enhanced marketing capabilities to reach more prospective Navy partners
• Express licensing to reduce the barriers to partnering with the Navy