



AWARDS



NATIONAL MEETING 2023

March 28-30 | Cleveland, OH

innovating to a brand new beat

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Get social with the 2023 FLC National Meeting Award Winners and post their success.

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Welcome

to the 2023 FLC Awards

After three long years of living virtually, this year's FLC Award winners will once again receive the honors they deserve with an in-person ceremony. I am so excited that all the National Meeting attendees can congratulate our winners face to face.

The quality of submissions for the FLC Awards increases every year, and 2023 was no exception—which says so much about the excellent work being done in federal technology transfer (T2). What makes this year's Awards class even more special is the range of labs and agencies represented in the list of winners.

We all know outstanding tech transfer is being done throughout the federal lab community, not just in a few select organizations. That's why I'm thrilled to see that the 2023 winners represent 10 federal agencies, which is a new record, and the list includes several labs that have never won at the national level before. We'd also like to acknowledge our regional winners and their special achievements.

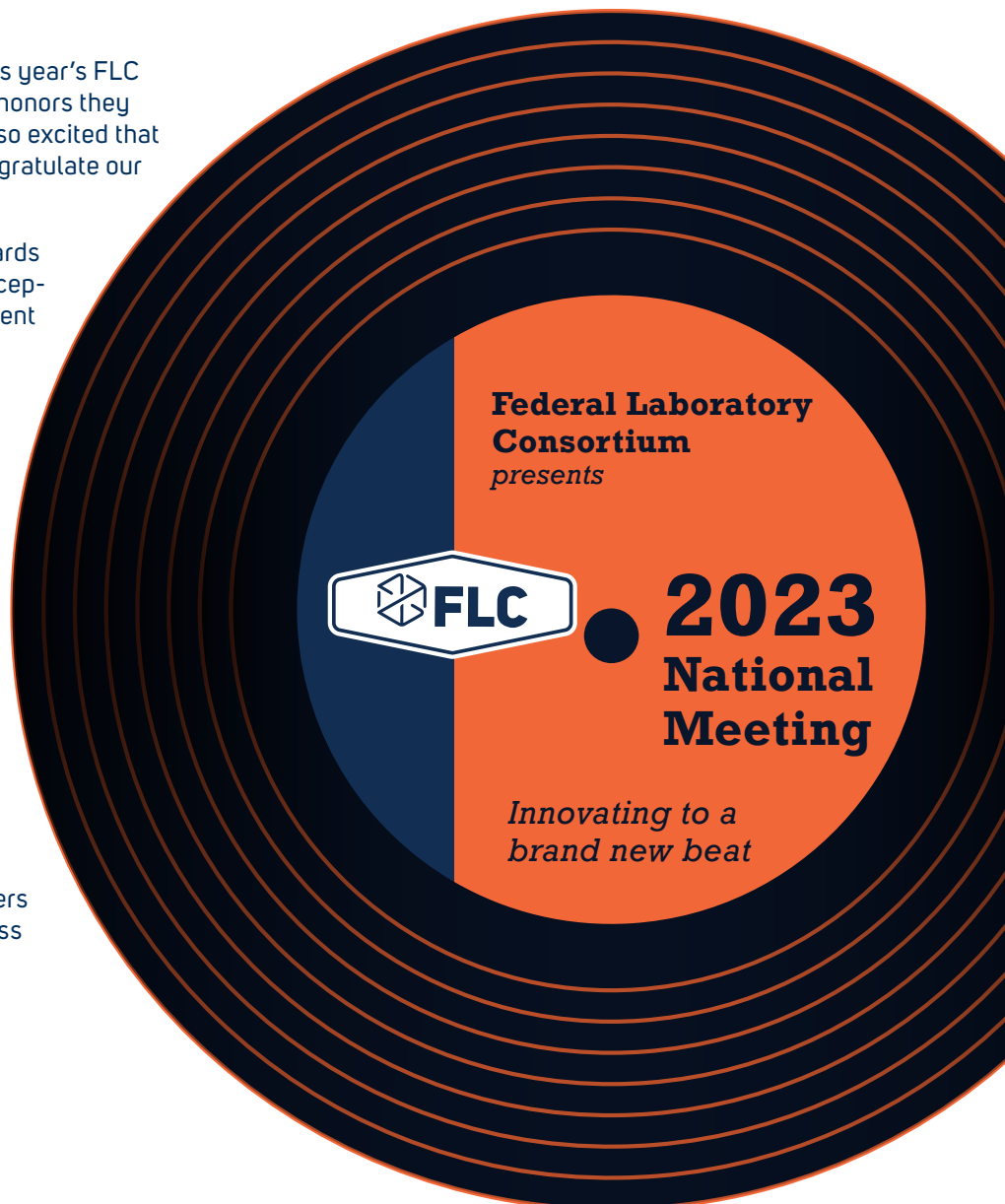
Please join me in welcoming our new winners and congratulating the very impressive class of 2023 T2 experts.

Best Regards,

Lisa Marianni

Lisa Marianni, CDC

FLC Awards Subcommittee Chair



2023 Awards by the Numbers

AWARDS SUMMARY

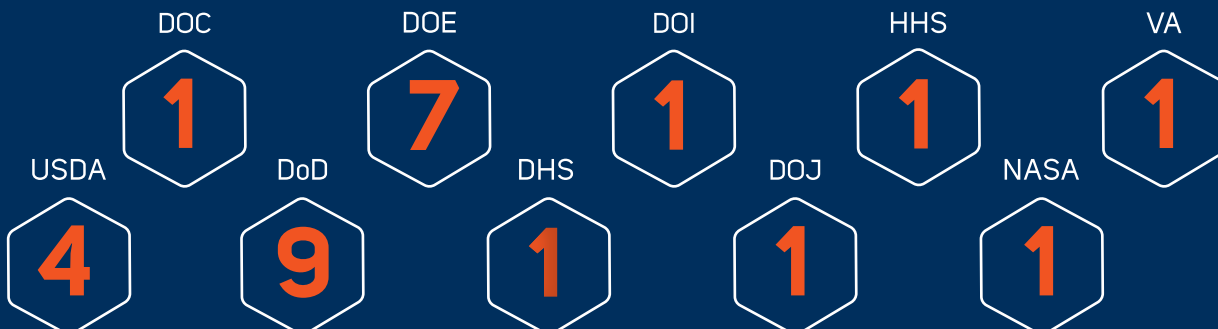


WINNERS BY REGION



**Some categories include multiple agencies and regions, so the total will not match the number of winning nominations.*


WINNERS BY AGENCY





EXCELLENCE IN TECHNOLOGY TRANSFER

**Recognizes employees of FLC
member laboratories and non-
laboratory staff who have
accomplished outstanding work in
the process of transferring federally
developed technology.**



Video Analysis Tool from MIT-LL Accelerates Forensics for Homeland and Commercial Security

THE PROBLEM BEING SOLVED: Security in public and commercial spaces relies heavily on large-scale closed-circuit television (CCTV) systems. Because these systems can include thousands of cameras, searching the footage manually during an investigation can take hours or even days to complete—time that can be critical for minimizing threats. Commercial products with more efficient forensic review features often are hard to integrate with video surveillance systems, require dedicated computer hardware or generate search results that are not immediately useful in an investigation.

THE TECHNOLOGY SOLUTION: MIT Lincoln Laboratory's Forensic Video Exploitation and Analysis (FOVEA) tool suite, developed under sponsorship from the U.S. Department of Homeland Security, allows investigators to quickly analyze video footage from surveillance systems and track incidents or people of interest. FOVEA integrates directly with existing CCTV systems, chronologically combines snippets from multiple cameras into one composite video for analysis and does not involve transmitting data to the cloud (an important privacy requirement for some organizations).

THE TECH TRANSFER MECHANISMS: While prototypes of FOVEA were being tested by three mass transit facilities, a team from the Lincoln Laboratory Spark (LL Spark) program—which provides entrepreneurial training for inventors—identified Doradus Labs as an ideal licensee. Doradus negotiated a six-month trial license with MIT-LL's Technology Licensing Office in 2019 to test-drive FOVEA and ask technical questions of the lab researchers. A commercial license agreement was signed in September 2020, which was amended in 2021 to reflect updates made to the technology.

THE TECH TRANSFER EXCELLENCE: The forward-thinking software design positioned FOVEA as a product that could support a wide range of government and commercial applications, making the technology attractive to potential licensees. MIT-LL's early interactions with Doradus, starting with the LL Spark program, established a strong working relationship and foundation for more formal collaboration. The trial licensing option, in which all source code was provided to Doradus for evaluation, increased the company's trust in the technology and in MIT-LL as a partner.

THE OUTCOMES: In addition to the three mass transit facilities that have been using FOVEA since the prototype stage, the technology has successfully been deployed in two Colorado-based casinos that are Doradus' customers. Investigations involving security video were already 25% faster at the time of this award submission, and the casinos believe they can be even more efficient as they become more familiar with the technology's capabilities. Building on these positive experiences, Doradus plans to introduce FOVEA to its customers in the education and transportation industries. Potential commercial applications for the technology also include entertainment and sports arenas, shopping centers and places of worship. ☞



THE LAB:

MIT Lincoln Laboratory,
Department of Defense

THE PARTNER:

Doradus Labs, a Colorado-based small business focused on software development and technical support

THE TEAM:

Jesslyn Alekseyev, Louis Bellaire, Kimberlee Chang, Dan Dardani, Marianne DeAngelus, Ronald Duarte, Zach Elko, Heather Griffin, Drinalda Kume, Brett Levasseur, Natalya Luciw, Sanjeev Mohindra, Christine Russ, Tyler Schube, Jayme Sellinger, Diane Staheli, Zach Sweet, Jason Thornton, Marc Valliant, Aaron Yahr

Photo Caption: The FOVEA technology was deployed to the Washington Metro Area Transportation Authority Transit Police Video Evidence Unit to enhance subway station surveillance capabilities.



MIT-LL's Security Verification Software Gives Cloud Users Extra Protection for Sensitive Data

Keylime



Bootstrap & Maintain Trust on the Edge / Cloud and IoT

[GITHUB](#)[DOCS](#)

THE PROBLEM BEING SOLVED: Cloud computing services allow organizations to rent computing resources from a cloud provider, who manages the security of those rented machines. But cloud tenants (the systems administrators for the renter organizations) have no way to verify the cloud's security for themselves. As a result, many organizations with sensitive data, such as financial institutions and the federal government, are reluctant to consider cloud services despite the benefits of flexibility and low costs. The security chips typically used to protect data outside the cloud, called Trusted Platform Modules (TPM), have long been incompatible with cloud technology.

THE TECHNOLOGY SOLUTION: Free, open-source Keylime software, developed at MIT Lincoln Laboratory, is an intermediary that gives users the security benefits of a TPM without having to make all of their software compatible with it. Keylime continuously verifies the integrity of the tenant's cloud machine and allows users to upload sensitive data without divulging their secrets to the cloud provider. If Keylime's cloud verifier detects anything unexpected, it notifies the tenant and can automatically respond to the threat and limit the damage in just a few seconds.

THE TECH TRANSFER MECHANISMS: In 2015, collaborative agreements with Boston University and Northeastern University allowed MIT-LL to test and further develop the Keylime technology for the Massachusetts Open Cloud (MOC) project. This opportunity facilitated peer-reviewed research and real-world experience validating Keylime's protocols, and it gave the software valuable exposure to MOC stakeholders like Red Hat and Intel. The Department of Homeland Security's Transition to Practice program (now the Commercialization Accelerator Program) helped fund a 2018 pilot program with Red Hat, building on discussions that started with the MOC project.

THE TECH TRANSFER EXCELLENCE: This transition effort went beyond the release of an open-source software product: It cultivated a community to help achieve the goals of many organizations. Collaborations with the MOC and Red Hat generated opportunities that might not have been possible had the product's distribution been limited to a commercial partner or government sponsor. Building up a large community of developers around the world, a difficult feat in itself, means that Keylime no longer relies on any single entity to continue feature additions, maintenance and improvements.

THE OUTCOMES: The Red Hat partnership facilitated Keylime's acceptance in 2019 as a sandbox technology for the Linux Foundation's Cloud Native Computing Foundation; with 43% of the global share of computer operating systems worldwide, Linux is a major player in the cloud open-source community. Keylime has now been integrated into Fedora Linux, IBM's cloud fleet, and Red Hat's Enterprise Linux operating system—a rare achievement for an open-source software product. More than 50 open-source developers are contributing to Keylime from around the world. ☼



THE LAB:

MIT Lincoln Laboratory,
Department of Defense

THE PARTNERS:

RedHat, one of the world's largest
open-source software companies

Massachusetts Open Cloud, a
public cloud-based resource
for open-source innovation

THE TEAM:

Gheorghe Almasi
Daniel Dardani
Luke Hinds
Orran Krieger
Charles Munson
Michael Peters
Nabil Schear

Photo Caption: Keylime is enabling organizations to secure their sensitive cloud data. The software is now available open-source and has now been integrated into Red Hat's Fedora Linux and Enterprise Linux operating systems and to IBM's cloud fleet.

Army-Air Force Technology Offers a Fast, Economical and Durable Asphalt Repair Solution

THE PROBLEM BEING SOLVED: Potholes and other types of asphalt damage on military and commercial airport runways can harm aircraft, leading to costly repairs and handicapping airport operations. The pre-existing industry standard methods for repairing this type of asphalt damage, cold mix asphalt (CMA) and hot mix asphalt (HMA), both have significant limitations. CMA patches cannot withstand heavy aircraft loads, so those repairs only provide a temporary fix until an HMA repair can be made. But HMA materials can be difficult to obtain and often cannot be purchased in the relatively small quantities needed for runway patching.

THE TECHNOLOGY SOLUTION: Induction Hot Mix Asphalt (iHMA), developed by researchers from the U.S. Army Corps of Engineers Engineer Research and Development Center (USACE ERDC) and the Air Force Civil Engineering Center, offers an easy, one-step process with the convenience of CMA and the toughness of HMA, saving time and cost. What sets iHMA apart is the use of induction—electromagnetic activation of metallic particles in the asphalt mix—to heat the asphalt, giving it the workability needed for durable repairs. The product is packaged in five-gallon containers, which are heated on demand at the repair site. Once the asphalt material is placed in an induction chamber, the iHMA system heats the mix above 300°F in less than five minutes—90% faster than traditional heating methods.

THE TECH TRANSFER MECHANISMS: A cooperative research and development agreement (CRADA) allowed necoTECH to approach potential commercial partners while the technology was still in development. A non-exclusive license ensured that the technology had every opportunity to become a viable rapid asphalt repair solution for the Air Force and other branches of the military. It also left the door open for other companies to license the technology for different applications.

THE TECH TRANSFER EXCELLENCE: This effort benefited from the strength of the CRADA as a collaborative mechanism to complement the non-exclusive license with necoTECH. In particular, the CRADA's five-year term—requested by the inventor—facilitated improvements to the technology without interrupting the research annually for agreement renewals.

THE OUTCOMES: necoTECH will be commercializing the technology as Hot Patch on Demand (HOTPOT). At the time of this award submission, HOTPOD was scheduled to be implemented by the Air Force and other military branches—a \$26.5-million market—by the end of 2022. The company also anticipates a 2023 commercial rollout of HOTPOD for civilian use in the \$4.8-billion paving contractors' sector. The technology will save billions of dollars on pothole repairs and keep airfields operational for the benefit of consumers and national security. ☞



THE LABS:

U.S. Army Corps of Engineers, Engineer Research and Development Center, Geotechnical and Structures Laboratory, Department of Defense

U.S. Air Force Civil Engineer Center, Department of Defense

THE PARTNER:

necoTECH, an Ohio-based startup with a focus on sustainable infrastructure solutions

THE TEAM:

**Sadie Casillas
Benjamin Cox
Web Floyd
Steve Flaherty
John Rushing
Craig Rutland**

Photo Caption: Once the asphalt material is placed inside of the portable induction heating chamber, the iHMA system brings the mix to greater than 300° Fahrenheit in less than 5 minutes, giving it the strength and durability needed for military applications. (Photo by ERDC)

Transatlantic Partners' Sensor-Based Tech Detects Heat Stress Before Complications Occur



THE PROBLEM BEING SOLVED: Physically intense military exercises are associated with significant risk of exertional heat stress or illness (EHI), which, if left untreated, can lead to heat stroke and death. Non-military populations, including first responders and civilian fitness enthusiasts, face similar risks. Monitoring core body temperature is crucial to preventing EHI, but previous approaches—using a manual thermometer, sensors attached to the skin, or sensors that are swallowed—are cumbersome, expensive, or both.

THE TECHNOLOGY SOLUTION: ECTemp and iHATT are sensor-based technologies that work together to reduce the risk of heat stroke and death in warfighters, first responders and others who work or exercise in hot or humid conditions. By monitoring a person's estimated core body temperature (ECT) over time, ECTemp can identify early signs of exertional heat stress or illness before they worsen. The Individual Heat Acclimatization Training Tool (iHATT) provides personalized training and real-time feedback using data from the ECTemp algorithm and a smartphone app.

THE TECH TRANSFER MECHANISMS: Technology transfer teams from the U.S., U.K. and the Netherlands created a custom agreement that was essentially an end-user license agreement based on a collaborative research and development agreement (CRADA) statutory provision related to licensing "background inventions." The agreement allowed the Dutch military to extend its field work on preventing EHI by embedding the technology into its own smartwatches. The agreement also enabled the U.S. and U.K. militaries to conduct field testing at a significantly larger scale (starting with 1,500 smartwatches) than had been conducted to date by either military.

THE TECH TRANSFER EXCELLENCE: The complex technology transfer process that allowed intellectual property jointly owned by two countries to be deployed to a third country is a testament to the power of creative thinking and collaboration among allies. Officials on both sides of the Atlantic stressed the importance of each party's ability and willingness to work through multiple challenges that arose during the process, such as loading the ECTemp/iHATT software on smartwatches for the Dutch military.

THE OUTCOMES: The technology transfer effort has provided the Dutch military with a new, easier-to-use solution for its ongoing efforts to battle EHI and related complications. This application of the technology also will help facilitate its commercialization within the fitness market. Both the U.S. and U.K. militaries plan further field testing and refinements, and are jointly working on a second application that calculates personalized risk scores for heat injury. ☸



THE LABS:

U.S. Army Research Institute of Environmental Medicine,
Department of Defense

U.S. Army Medical Research & Development Command,
Department of Defense

THE PARTNERS:

U.K. Royal Navy, Institute of Naval Medicine

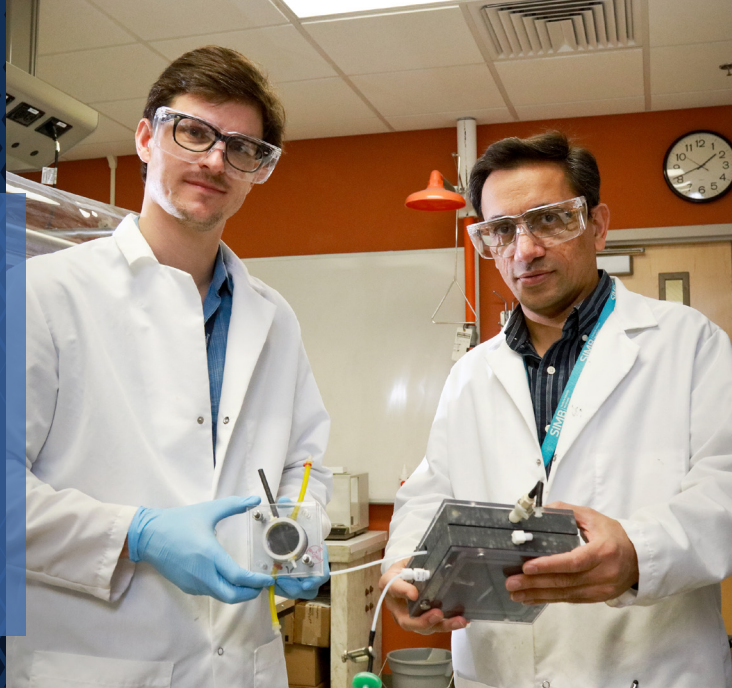
Royal Netherlands Army

THE TEAM:

**Tim Allsop
Mark Buller
Simon Delves
Ellen Fletcher-Goetz
Mark Gostock
C. Blake Sajonia
Mariana Titus**

Photo Caption: When it comes to addressing heat-related health risks, ECTEMP/iHATT, the software resulting from an award-winning collaboration between the U.S. Army and U.K.'s Royal Navy Institute of Naval Medicine, gives the military the capability to monitor Warfighters, guides soldiers on how to acclimatize to hot and humid conditions, works with commercially available smartwatches and smartphones, and has applications for civilian use including first responders, athletes, and outdoor workers. Photo Source: U.S. Army

ORNL Spinoff's Food Waste Conversion Process Has Environmental and Economic Potential



THE PROBLEMS BEING SOLVED: The food waste conversion technology commercialized by Electro-Active Technologies addresses two environmental concerns at the same time. One issue is that an estimated 40% of food produced ends up as waste in landfills, which are a major contributor to greenhouse gas emissions. A second is that clean hydrogen, a completely sustainable energy source that is not associated with greenhouse gases, is costly and complicated to produce using existing technologies that involve water electrolysis (using electricity to split water molecules into hydrogen and oxygen molecules).

THE TECHNOLOGY SOLUTION: Oak Ridge National Laboratory (ORNL) developed a new technology to accelerate a process called microbial electrolysis to create hydrogen from food waste. The process involves tiny organisms called microbes that eat food waste and convert it to energy particles that are then combined to make hydrogen atoms. This process is 50% more efficient and 43% less expensive than the water-splitting method typically used to produce hydrogen. The system is low cost and uses small, modular units that can be stacked to scale up production if needed.

THE TECH TRANSFER MECHANISMS: ORNL signed a Cooperative Research and Development Agreement (CRADA) with Electro-Active in 2019. In 2018, ORNL issued a field-of-use limited exclusive R&D license with a commercial license option; that license was amended twice as the technology's commercialization potential evolved. In 2021, through a licensing program for companies that participated in the Innovation Crossroads fellowship program, ORNL granted Electro-Active a field-of-use limited exclusive commercial license.

THE TECH TRANSFER EXCELLENCE: ORNL leveraged multiple tools in its arsenal—the Bredesen Center (a program that promotes graduate research collaborations between ORNL and the University of Tennessee), Innovation Crossroads, multiple licensing vehicles and a CRADA—to help an energetic early-career entrepreneur and a research scientist commercialize an innovative technology. The partners coupled strong technical advances in clean energy with an entrepreneurial research team that enabled the technology to be a lab spin-out. This approach allowed the team to focus on specific IP to help Electro-Active pursue a scalable, cost-effective solution for producing green hydrogen fuel.

THE OUTCOMES: The credibility associated with licensing the ORNL technology has helped Electro-Active raise \$3.1 million in funding, primarily from private investors. The licensing also was key to two strategic follow-on projects with major utility providers in Georgia and California, both of which launched in late summer 2022. The spin-out of Electro-Active from ORNL promises to boost job growth in East Tennessee and possibly beyond once the company begins production. Its headquarters in Oak Ridge, Tennessee, enhances the region's reputation as a hub for clean energy startups. Electro-Active currently employs six staffers and provides University of Tennessee students with work experience in the company's lab. The company plans to double its technical headcount in the next year as its technology evolves toward commercialization and generates additional funding. ☞



THE LAB:

Oak Ridge National Laboratory,
Department of Energy

THE PARTNER:

Electro-Active Technologies,
an East Tennessee clean
hydrogen company formed in
2017 as a spin-out of ORNL and
the University of Tennessee

THE TEAM:

Abhijeet Borole, Jennifer
Caldwell, Edna Gergel,
Alex Lewis, Dan Miller,
Kelly Wampler

Photo Caption: Electro-Active Technologies' co-founders Alex Lewis (left) and Abhijeet Borole. Image credit: Jason Richards/ORNL, U.S. Dept. of Energy August 16, 2019.

EXCELLENCE IN TECHNOLOGY TRANSFER

Advanced Communications Network from ORNL Expands Utility of Remote-Controlled Drones



THE PROBLEM BEING SOLVED: Drones and other uncrewed vehicles are often used to supplement human skills for potentially dangerous conditions and scenarios, such as structural assessment of buildings or search-and-rescue operations. Existing commercial technologies often require one or more dedicated pilots to control a single uncrewed device via direct radio communication while maintaining a clear line of sight between the pilot and the device.

THE TECHNOLOGY SOLUTION: The Multimodal Autonomous Vehicle Network (MAVNet) developed at Oak Ridge National Laboratory (ORNL) uses radio, cellular and satellite communications to enable truly remote control of uncrewed vehicles. The network's cloud-based connectivity and data storage allow multiple people to operate the system simultaneously and one person to control multiple vehicles—making it possible to remotely coordinate groups of uncrewed vehicles. Originally designed for tactical military scenarios, MAVNet also has potential commercial applications, including delivery services, search and rescue, building inspections and security threat detection.

THE TECH TRANSFER MECHANISMS: Because the technology was mature and the infrastructure requirements low, ORNL believed a small startup company would be able to commercialize it. When industry was not yet ready to adopt MAVNet, the ORNL inventors formed Horizon31 and licensed the technology. The startup signed an exclusive patent license agreement with ORNL in May 2020 and an exclusive copyright licensing agreement with UT Battelle (ORNL's managing contractor) in May 2022.

THE TECH TRANSFER EXCELLENCE: Investigator-led startups are rare at national laboratories due to the many legal, administrative and personal challenges involved. ORNL recognized that in this case, the inventors' expertise and experience with the technology made them the best people to commercialize it, and the lab's Technology Transfer Office took proactive and diligent steps to navigate potential issues, including plans for conflict-of-interest management and resolution.

THE OUTCOMES: Horizon31 currently has more than a dozen products for sale, encompassing a range of equipment used to command, control, compute, and communicate with uncrewed vehicles and unattended systems. ORNL researchers are making further developments to the technology specifically to help locate missing people, motivated by a 2018 event in which MAVNet was used across a fleet of drones as part of a search for a lost hiker in Great Smoky Mountains National Park. ORNL scientists pieced together aerial photographs from the drones and assessed the pixels for colors corresponding to the hiker's clothing. The hiker was found too late to be saved, but the technology's potential impact in such situations was clear. ☸



THE LAB:

Oak Ridge National Laboratory,
Department of Energy

THE PARTNER:

Horizon31, a Knoxville startup company formed in January 2020 by the ORNL inventors of the MAVNet technology

THE TEAM:

Eugene Cochran
Andrew Harter
Mike Paulus
Brad Stinson
Steve Ventura

Photo Caption: Award nominee Andrew Harter is a research scientist in ORNL's Nuclear Nonproliferation Division, the co-inventor of MAVNet, and the chief executive officer of Horizon31.

Tracking Technology from PNNL Increases Security of Radioactive Materials While in Transit



THE PROBLEM BEING SOLVED: Hundreds of mobile radioactive materials, or sources, are transported daily for use in numerous industries, including oil and gas drilling and welding. If lost, the materials could inadvertently expose people to radiation; if stolen, they could be used by terrorists to make dirty bombs. No U.S. regulatory requirements currently exist for systematic tracking of radioactive materials during transport, largely because such tracking could not be done using available technology.

THE TECHNOLOGY SOLUTION: The Mobile Source Transit Security (MSTS) system was developed by Pacific Northwest National Laboratory (PNNL) with the support of the National Nuclear Security Administration's Office of Radiological Security (NNSA ORS). MSTS is an electronic, autonomous system that can travel in a vehicle or as an attachment embedded with the sources. Radiation detection devices, radiofrequency identification tags, software and communications devices provide MSTS users with real-time information about the material's location and condition. If tampering is detected, the system alerts authorized responders with information about the threat and the material's location.

THE TECH TRANSFER MECHANISMS: Using a hybrid, geographically exclusive licensing model in 2019, PNNL's Commercialization Office drew on the strengths of each industry partner and its geographical presence. GSS has an exclusive license to commercialize the system in Latin America, while EIS has an exclusive license to commercialize it in Europe. In addition, both companies have non-exclusive licensing rights covering the United States and Canada.

THE TECH TRANSFER EXCELLENCE: Proactive steps taken by PNNL led to the successful commercialization of the MSTS system. PNNL's research team developed all components needed for the successful deployment of the MSTS, aiming to commercialize the system from the beginning. The team worked with industry stakeholders to understand operational concepts and the environments in which the technology would be deployed. Involving NNSA ORS as a government sponsor also has been essential to the maturation and long-term success of MSTS.

THE OUTCOMES: The commercialization of MSTS brought to market a device that meets the industry's need to directly track mobile radiological sources, enhancing public safety and security. Commercialization of this technology also will help facilitate regulatory oversight of transported radioactive materials by providing a way for companies to track and document the security of the materials during transit. ☞



THE LAB:

Pacific Northwest National Laboratory, Department of Energy

THE PARTNERS:

Golden Security Services, a Florida-based company focused on physical protection of radioactive materials.

Eagle Integrated Services, a Maryland small business specializing in security for information technology systems.

THE TEAM:

Brion Burghard
Kurt Silvers
Kannan Krishnaswami
Tonya Roush
Angelica Abide
Ann Archer
Andrei Valsan
Bruce Lawler
Emiliano Santiago-Rojas
Franco Santiago

Photo Caption: The MSTS well logging solution starts with the PNNL-developed RFID tag, known as an eTag, which uniquely identifies and tracks a radiological source by attaching to its shielding container. This tag is designed to withstand the hazardous environment of well logging.

EXCELLENCE IN TECHNOLOGY TRANSFER

New USGS Method of Treating Ballast Water on Ships Can Reduce Spread of Invasive Species



THE PROBLEM BEING SOLVED: Tanks of ballast water on a cargo ship provide stability and maneuverability for vessels carrying relatively light loads. Often, after stopping at a port to deliver goods, a ship will take on ballast water that is released at the ship's next stop when it takes on more cargo. This process is a major contributor to the spread of invasive aquatic species, which compete with native species for resources and disrupt the shipping industry by clogging pipes and waterways. The usual method of disinfecting ballast water involves pumping all of the water out of the tank, treating it and then pumping it back in—an inefficient and expensive procedure.

THE TECHNOLOGY SOLUTION: An innovative treatment system developed by the U.S. Geological Survey allows ballast water to be disinfected without being removed from the ballast tank. Nozzles positioned strategically within the tank circulate a chemical solution that treats the water, followed by a neutralizing solution that ensures any residual chemicals are environmentally friendly. This process allows ships to treat their tanks on their own schedules while in transit, avoiding the expense and delays associated with pumping ballast water at busy ports.

THE TECH TRANSFER MECHANISMS: USGS and Glosten, a company with experience adopting shore-based technologies for shipboard use, signed a Cooperative Research and Development Agreement (CRADA) in 2012 focused on making commercially relevant improvements to the USGS nozzle mixing technology. USGS licensed the technology to Glosten in 2015. The license was amended the following year to allow the company to take on partners in the commercialization effort. With USGS approval, in 2021 Glosten, the developer of oneTank mobile, partnered with Scienco/FAST, the developer of inTANK, and ERMA FIRST, the developer and parent company of oneTANK.

THE TECH TRANSFER EXCELLENCE: Faced with pandemic-related challenges that included changing market conditions and the loss of key collaborators, the USGS technology transfer office customized and modified its licensing terms, including an innovative conversion and breach clause that created checks and balances to ensure that all parties worked together. These efforts expanded the technology's potential reach by including a leading global manufacturer, while still ensuring involvement by a U.S. company to strengthen the national supply chain.

THE OUTCOMES: The technology is now available under oneTank mobile or Ballast Responder, oneTANK and inTANK brands in three markets: (1) emergency response and mobile treatment needs related to ballast water treatment, (2) small ships and workboats and (3) large ocean-going ships. These systems can potentially save the shipping industry millions of dollars by reducing the disruptions caused by invasive species and helping companies meet strict regulatory standards for ballast water that will go into effect in 2024 to control the spread of those organisms. ☞



THE LABS:

U.S. Geological Survey Eastern Ecological Science Center,
Department of the Interior

U.S. Geological Survey Western Fisheries Research Center,
Department of the Interior

THE PARTNERS:

ERMA FIRST, a sales and marine environment protection equipment manufacturer based in Greece

Glosten, a marine engineering firm based in Seattle, Washington

Scienco/FAST, a sewage, ballast and water treatment equipment manufacturer based in Missouri

THE TEAM:

Noah Adams
Richard Miller
James Mitchell
Barnaby Watten

Photo Caption: Ship check in Seattle following initial meeting between USGS and Glosten. Grain ship Rainbow in background.

Wand-Based Camera from VA Helps Patients Find Problem Skin Areas Before They Worsen

THE PROBLEM BEING SOLVED: For people with spinal cord injuries and other conditions, such as peripheral neuropathy and skin cancer, daily inspections of the skin are recommended to identify early-stage wounds or lesions. Visualization of early-stage wounds and lesions may be challenging particularly if on the back side of the body, or bottom of the feet. If not detected early, the wound or lesion can lead to complications, amputation, or even death. Despite the known benefits of daily skin inspection, many people forego or are unable to perform these checks because of limitations with current technologies.

THE TECHNOLOGY SOLUTION: The Habit Camera is a handheld high-definition digital camera, which wirelessly links and displays real time images to the user's personal cellphone or tablet. A telescoping handle enables quicker self-inspection and a flexible goose-neck and LED light allow independent and private viewing of even the most difficult to see and reach skin locations. When concerning spots are identified, a closeup view can be obtained by zooming in on the area of interest, and an image can be captured using voice commands. If skin changes are detected during self-inspection, images or video can be shared with caregivers via secure website, email, or text.

THE TECH TRANSFER MECHANISMS: Capt. Derek Herrera, a U.S. Marine Corps Veteran and entrepreneur who experienced a spinal cord injury in 2012 while serving in Afghanistan, became interested in partnering with VA after meeting the MADE developers at a medical conference. After learning more about the commercialization potential for the technology, Herrera worked directly with the VA Technology Transfer Program (TTP) and partnership intermediary Techlink to define the precise scope of patent rights needed to achieve his business plan, in a way that can easily be modified in the future, as necessary. The parties negotiated mutually beneficial and commercially reasonable financial terms for an exclusive license agreement, executed in 2020.

THE TECH TRANSFER EXCELLENCE: The Habit Camera story is a powerful example of how a technology transfer office can put VA-developed medical solutions into the hands of the patients who need them while also helping to create business opportunities for entrepreneurs, like Herrera. The VA TTP is continuing to assist Herrera beyond the licensing process. TTP has supported additional pilot studies within VA to iterate on the final product design and is helping the company navigate the VA's clinical care network as a vendor.

THE OUTCOMES: The first commercially manufactured Habit Camera devices were sold in January 2021, and the first VA purchase was made on April 18, 2022. The Habit Camera is available for purchase by patients with mobility issues may order the product directly through the company's website. In addition, at the time of this award submission, at least five VA facilities have already purchased the devices, and TTP is working with VA's Strategic Acquisition Center to confirm that the Habit Camera is a viable product for adoption throughout the VA and will be available to all VA clinicians to order for any VA patients under their care whom they think the device would help with performing daily skin inspections. ☺



THE LAB:

Minneapolis Adaptive Design & Engineering Program,
Department of Veterans Affairs

THE PARTNER:

Habit Camera, a Veteran-owned medical device startup based in San Clemente, California

THE TEAM:


Gary Bloomer, Alexandra Soleil Bornstein, Ryan Davis, Clifford Dellamano, Stuart Fairhurst, John Ferguson, Gary Goldish, Andrew Hansen, Derek Herrera, Sara Kemmer, Jennifer Leestma, Eric Nickel, Christine Olney, Anna Toth, Gregory Voss

Photo Caption: The Habit Camera is a wireless camera that connects to the Habit App for smartphones and tablets. It transmits video to the mobile app in real-time using a WiFi connection. It has a telescoping handle and flexible gooseneck that enables users to comfortably view their skin in high-definition.



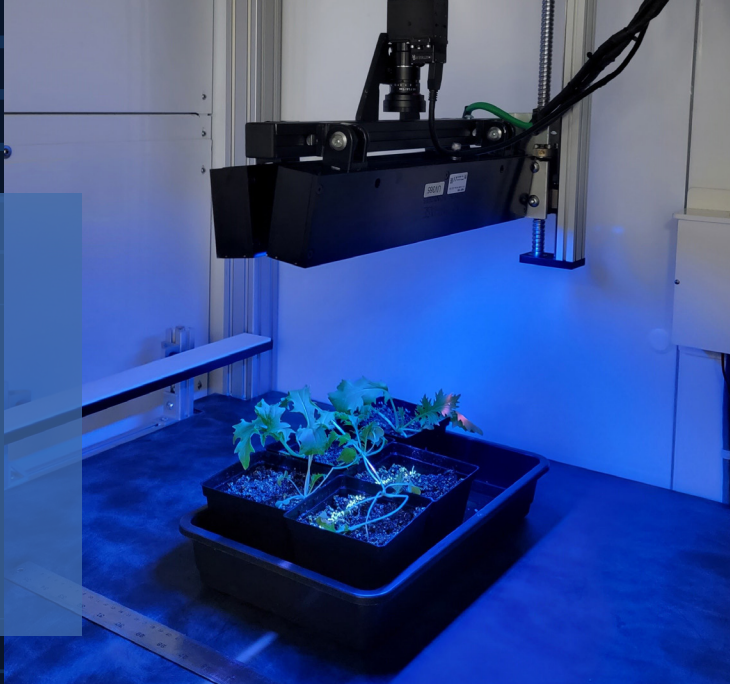
INTERAGENCY PARTNERSHIP

Recognizes agency and/or laboratory employees from at least two different agencies who have collaboratively accomplished outstanding work in transferring a technology.



INTERAGENCY PARTNERSHIP

USDA-NASA Tech for Monitoring Crops in Space Could Also Benefit Agriculture on Earth

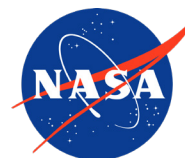


THE PROBLEM BEING SOLVED: The ability to grow fresh food in space can greatly enhance an astronaut's health and quality of life. Protecting crops in space from stresses (such as overwatering) or diseases is essential for maintaining this nutritional resource, but these threats often are not always visible to the human eye, and astronauts' busy schedules may not allow time for crop monitoring. Automated monitoring systems would address these issues, but the technologies used on Earth are too large and too heavy to be useful on a space mission.

THE TECHNOLOGY SOLUTION: The new compact, automated sensing technology designed for use in a controlled-environment agriculture setting reflects the scientific expertise of two agencies: sensing technology development expertise from the USDA Agricultural Research Service (ARS) and controlled-environment Space Crop production expertise from NASA's Kennedy Space Center (KSC). The current imaging system moves a camera back and forth along the length of a controlled-environment growth chamber, collecting images of salad crops (such as lettuce) under visible, near-infrared and ultraviolet light. How the plants look when exposed to these light sources can tell scientists how healthy they are with the added potential to provide insights regarding the nutritional content, food safety, and other aspects of plant physiology. In experiments, when some of the plants were subjected to drought and other stressful conditions, the system successfully detected early signs of stress on the plants' leaves.

THE TECH TRANSFER MECHANISMS: In 2019, a three-year interagency agreement was established between ARS and KSC for the creation of compact technologies for automated sensing in controlled-environment Space Crop production. In July 2022, that agreement was extended for two more years. A joint patent application is now being considered for the new compact multimodal 4D imaging technology (to include hyperspectral, fluorescence, LIDAR and thermal imaging) developed jointly by the same two partners. In addition, ARS has expanded a Collaborative Research and Development Agreement (CRADA) with an industry partner to cover the development of monitoring technologies for space agriculture; these efforts will include collaboration with KSC.

THE OUTCOMES: The successful demonstration of new technologies for early detection of problems affecting plant health and food safety as part of controlled-environment crop production systems will minimize NASA's crop losses on the International Space Station and ensure the provision of safe and nutritious fresh food for future space missions. These technologies will also be useful for earthbound applications in controlled-environment agriculture. At the time of this award submission, the research had produced one peer-reviewed journal publication and two conference presentations, which will increase awareness of the technologies and the interagency collaboration. ☞



THE LABS:

**Agricultural Research Service,
Environmental Microbial & Food
Safety Laboratory**
U.S. Department of Agriculture

**Kennedy Space Center,
National Aeronautics and
Space Administration**

THE TEAM:

**Insuck Baek
Diane Chan
Blake Costine
Ralph Fritsche
Mary Hummerick
Moon Kim
Lawrence Koss
Oscar Monje
Jianwei Qin
Aubrie O'Rourke
Lashelle Spencer
Kristine Wilson**

Photo Caption: Automated multimodal sensing for space crop production plant health monitoring.

INTERAGENCY PARTNERSHIP

NIST-NIH Collaboration Streamlines the Transition and Updating of the iEdison Compliance System



THE PROBLEM BEING SOLVED: The Bayh-Dole Act requires recipients of federal funds to report subject inventions, patenting decisions, and specific commercialization activity. iEdison, the online system developed to facilitate compliance with these reporting obligations, has been used by hundreds of contractors and other awardees to report thousands of federally funded inventions and patents. iEdison was initially launched by the National Institutes of Health (NIH) in 1995. In 2018, it was recommended that the system be transferred to the National Institute of Standards and Technology (NIST).

THE TECHNOLOGY SOLUTION: The transfer of iEdison to NIST involved a system update based on NIH's original structure. Improvements and enhancements include a modern user interface that lets awardees indicate whether an invention falls under the original regulatory requirements or the 2018 updated requirements, centralizes the process for submitting requests, and streamlines communication between federal agencies and awardees to ensure accurate records. NIH shut down its iEdison system on August 2, 2022, and the transfer was completed one week later when NIST's iEdison system launched on August 9, 2022.

THE TECH TRANSFER MECHANISMS: The launch of the new iEdison platform was made possible because of the cooperation of the NIST and NIH teams, which worked seamlessly to develop the new system, maintain the integrity and consistency of user data, and ensure a smooth transition for both active users and those whose participation had lapsed. NIST's development team had the support of their NIH counterparts as they programmed and built the new system. Bethany Loftin of the NIST Technology Partnerships Office managed the transition's Bayh-Dole regulatory requirements and customer support aspects, working with NIH's Division of Extramural Inventions and Technology Resources team and the NIH communications team. Before joining the new iEdison, every participating agency had to execute a Memorandum of Understanding (MOU) with NIST. NIST sent out the first MOUs to participating agencies at the end of March 2022 and continues to receive them as more agencies become active in the new iEdison system.

THE OUTCOMES: At the time of this award submission, increased traffic flow to the new site following the launch of the updated system was a positive early outcome that suggests future improved compliance. Within the first four days after the launch was announced, more than 1,000 users logged into the system, and many who had not used the system in years contacted the iEdison help desk with questions about how to update their records. This impact is expected to grow over time. ☞



THE LABS:

National Institute of Standards and Technology,
Department of Commerce

National Institutes of Health,
Department of Health
and Human Services

THE TEAM:

Scott Cooper,
Mary Frances Deutsch,
Vadim Drabovsky,
Michael Goodman, John Kang,
Joe (Sujen) Kau, Slava Keyzman,
Hicham Laoudi, Bethany H. Loftin,
Carolyn Mosby, Helen G. Nelson,
Jason T. Poffenberger,
Elizabeth Reinhart, John Salzman,
Sean K. Sell, Joel Snyderman,
Manju Subramanya, Lei G. Tong,
Aiping L. Zhang, Dana Zhang

Photo Caption: iEdison logo

INTERAGENCY PARTNERSHIP

Partnerships with Army, Navy Help Scale Hypersonic Weapons Tech Developed by Sandia



THE PROBLEM BEING SOLVED: The development of hypersonic weapons technology, which launches explosive devices five times faster than the speed of sound, is a priority for the Department of Defense (DoD). In 2018, a new technology with these capabilities was developed by Sandia National Laboratories and fast-tracked by the DoD to be combat-ready in 2023.

THE TECHNOLOGY SOLUTION: The Common-Hypersonic Glide Body (C-HGB) technology designed at Sandia is a key component of a system that launches an explosive device. The glide body itself is a conical structure that sits on top of a missile until it reaches optimal speed, then detaches and continues toward its target. The C-HGB system will help to ensure the military has the latest, most effective weapons for use in defending the United States. Hypersonic weapons can operate at varying altitudes, which gives soldiers and sailors the ability to launch from land or sea and strike targets from great distances away very quickly.

THE TECH TRANSFER MECHANISMS: Sandia was not equipped to produce the C-HGB on a large scale, so a key aspect of the partnership involved access to industry contractors for the Army and Navy. A Government Use License and a Strategic Partnership Agreement allowed Sandia experts to conduct hands-on training and share knowledge with those contractors related to designing and building the C-HGB technology. The Sandia team also created an Industry Partner Program and Visiting Worker Agreement to allow 138 visitors associated with the project (including engineers, technologists, and document control staff) into Sandia Labs, using Sandia's equipment and learning directly from Sandia engineers. During the COVID-19 pandemic, safety was a top priority, so specific cautions such as plexiglass barriers and specialized face masks were used to maximize safety for all individuals involved during side-by-side training.

THE OUTCOMES: At the time of this award submission, the C-HGB weapons system was being mass-produced so that soldiers and sailors could use it to defend the nation starting in 2023, as planned—despite the challenges created by the COVID-19 pandemic. Sandia will work on upgrades for the C-HGB technology to add state of the art capabilities and ensure reliability, which will be transferred to the military's industry partners as the development of the weapons system evolves. ☸



THE LABS:

Sandia National Laboratories,
Department of Energy

**Army Rapid Capabilities and
Critical Technologies Office,**
Department of Defense

**Naval Sea Systems Command
and Strategic Systems Programs,**
Department of Defense

THE TEAM:


**Steve Chisgar, Milesha Grier,
Lisa Holden, Ryan Johnson,
James Mills, Scott Nance, Heather
Sandoval, Patrick Shaffer, Bob
Tuller, Brian Weaver,
Raymond Wesley**

Photo Caption: A common-hypersonic glide body (C-HGB) launches from Pacific Missile Range Facility during a Defense Department flight experiment in Kauai, Hawaii, on March 19, 2020.



STATE & LOCAL ECONOMIC DEVELOPMENT

**Recognizes successful initiatives
that involve partnership between
state or local economic development
groups and federal laboratories for
economic benefit.**



Technology Accelerator Helps Identify Local Industry Partners to Meet NGA's Unique Needs



THE PROBLEM BEING SOLVED: The National Geospatial-Intelligence Agency (NGA) serves both the Department of Defense and the federal intelligence community, providing decision makers, military service members and first responders with images and information related to the topography, elevation, terrain, land cover and locational coordinates of a geographical area. Because of NGA's unique mission set, identifying prospective industry partners through conventional channels can be challenging, so the agency is looking to broaden the pool of potential collaborators to include small, early-stage companies who may be unfamiliar with working for the federal government.

THE TECHNOLOGY SOLUTION: The NGA and Missouri Technology Corporation (MTC) partnered to host a technology accelerator to identify commercial geospatial technologies with dual-use potential from early-stage companies and educate those companies on collaboration with the federal government. NGA's innovation center, Moonshot Labs, provided the platform for accelerator activities. Between February 2021 and July 2022, the NGA Accelerator hosted three cohorts, each focused on technology related to a different aspect of NGA. Each cohort, with the support of subject matter experts from NGA and industry, had 13 weeks to develop proposals and presentations for their technology solutions.

THE TECHNOLOGY TRANSFER MECHANISM: NGA established a Partnership Intermediary Agreement (PIA) with MTC in 2019 to influence the growing technology sector in St. Louis. The relationship with MTC allows NGA to access companies that might not have known about or considered working with the agency. In addition, the PIA contributes to MTC's role in growing and strengthening the regional economy by creating federal partnership opportunities for businesses and universities.

THE IMPACT: Of the 24 companies that participated in the first three cohorts, NGA had interest in continuing discussions with eight (33%), including five of the participants (63%) in the most recent cohort. A 2022 survey of the 16 participants from the first two cohorts indicated that:

- five had signed contracts or agreements with the federal government;
- more than half had raised at least \$500K in venture capital (including three that had raised more than \$5M);
- the participating companies, on average, each added 3 new full-time employees;
- all participants were moderately or actively engaged with NGA and had at least occasional contact with the defense community;
- two thirds were moderately or actively engaged with the St. Louis geospatial ecosystem; and
- all remained focused on addressing issues relevant to NGA. ☞



THE LAB:

National Geospatial-Intelligence Agency, Department of Defense

THE PARTNER:

Missouri Technology Corporation, a public-private partnership that promotes entrepreneurship and fosters the growth of new and emerging tech companies in St. Louis

THE KEY TEAM:

Michael Fitzpatrick
Nathan Kwiatek
Jack Scatizzi
Christine Woodard

Note: A cross-functional team including participants from legal, contracts, and NGA components (Analysis, Source, Research, Digital Innovation) collaborated on this initiative.

Photo Credit: Adobe Stock 96507153

STATE AND LOCAL ECONOMIC DEVELOPMENT

Campaigning by ORNL and Collaborators Brings Over \$8 Billion to Tennessee for EV Battery Production



THE PROBLEM BEING SOLVED: In the 1990s, the U.S. Department of Energy (DOE) and the Oak Ridge community in Tennessee came together to launch the Heritage Center and the Horizon Center. These two modern industrial parks reside on the former site of the Manhattan Project's nuclear complex. Where the focus had once been on developing nuclear weapons, now there is the opportunity to develop the economy and support the use of nuclear energy, a proven technology that provides one-tenth of global electricity without producing carbon emissions. Because traditional nuclear power plants are very costly to build and frequently overshoot budget and scheduling expectations, an opportunity exists for nuclear industry innovators to create alternative approaches that are safer and more economical.

THE TECHNOLOGY SOLUTION: A regional partnership that includes Oak Ridge National Laboratory, the Tennessee Valley Authority, the Tennessee Department of Economic and Community Development, and the Community Reuse Organization of East Tennessee began outreach in 2018 to re-envision Oak Ridge as a global designation for nuclear innovation. As a result of the team's teamwork and diligence, four companies have committed to establish their innovative nuclear operations in East Tennessee: General Fusion, Ultra Safe Nuclear Corporation (USNC), Kairos Power, and TRISO-X, a subsidiary of X-energy.

THE TECHNOLOGY TRANSFER MECHANISM: ORNL negotiated an exclusive licensing agreement with USNC for inventions resulting from DOE's Transformational Challenge Reactor Program—a 3D-printing technology and an advanced nuclear fuel technology—to be part of a new method for refractory heat exchange that greatly improves thermal efficiency in reactors. ORNL also facilitated an entrepreneurial leave process for some of the technology's inventors, so they could temporarily join USNC to lead the commercialization effort.

THE IMPACT: Collectively, the four companies will add more than \$400 million into the local economy and create nearly 550 highly skilled jobs. USNC, which opened its Pilot Fuel Manufacturing Operation in Oak Ridge in summer 2022, has hired 30 employees. General Fusion, which made Oak Ridge the site of its U.S. headquarters in November 2021, plans to hire up to 50 technical staff. Kairos Power will invest \$100 million and create 55 jobs to deploy its low-power Hermes demonstration reactor, scheduled to be operational in 2026. And TRISO-X, slated to debut a reactor fuel fabrication facility in 2025, is bringing 400 jobs and \$300 million to Oak Ridge. Access to ORNL, the Y-12 National Security Complex, and a skilled talent pool have supported this accelerated growth. ☸



THE LAB:

Oak Ridge National Laboratory,
Department of Energy

THE PARTNERS:

Tennessee Valley Authority

Tennessee Department of
Economic and Community
Development

Community Reuse Organization
of East Tennessee

THE TEAM:


Eugene Cochran
Derrick Collins
Teresa Frady
Gary Human
Jesse Smith

Photo Caption: Land that was previously owned by DOE and served as Oak Ridge's epicenter for the Manhattan Project is finding new life as a nuclear clean energy innovation hub. Image provided by CROET.

The background features a dark blue field with a pattern of small, light blue hexagons. On the right side, there are several concentric orange circles. A horizontal line of orange hexagons is positioned above the title.

IMPACT AWARD

Honors employees of FLC member laboratories and non-laboratory staff whose technology transfer efforts have made a tangible and lasting impact on the populace or marketplace ranging from a local to global scale.

A horizontal line of orange hexagons is located at the bottom left of the page.

IMPACT AWARD

Development of Disease-Resistant Tilapia by USDA-Led Team Boosts Aquaculture Profits



THE PROBLEM BEING SOLVED: Aquaculture-raised (or “farmed”) tilapia is an industry valued at more than \$11 billion worldwide. Diseases are the largest source of financial losses for fish farmers, and three major bacterial diseases affecting tilapia account for more than \$1 billion in losses globally. Methods used historically to prevent and control these diseases have limitations. Vaccines are expensive and often difficult to administer to young fish; antibiotics are also costly and must be carefully used due to the potential for contributing to antimicrobial resistance.

THE TECHNOLOGY SOLUTION: Since 2014, scientists from the U.S. Department of Agriculture’s Aquatic Animal Health Research Unit have worked with industry partners Spring Genetics and Benchmark Genetics Norway to collect data on tilapia, including which fish survive and survival time, in studying genetic variability in disease resistance and how it is passed on to future generations. The work has also involved the search for informative genetic markers associated with disease resistance traits. The knowledge generated from this research is being used to implement a selective breeding strategy in which the best-performing tilapia are mated to produce disease-resistant offspring. The findings also have contributed to the development of Benchmark’s Spring Tilapia® strain, which is much less likely than conventional tilapia to become infected. Furthermore, a genetic marker associated with resistance to one of the diseases investigated was identified, facilitating genetic selection without the need to infect fish with the bacteria.

THE TECH TRANSFER MECHANISMS: In September 2014, a one-year Material Transfer Agreement (MTA) was executed with the two industry partners to begin discussions about a selective breeding project, followed by a five-year MTA-Cooperative Research and Development Agreement (MTA-CRADA) in 2015. In 2021, a Material Transfer Research Agreement expanded the initiative for three years, including research on specific mechanisms that contribute to disease resistance in the selected fish.

THE IMPACT: Spring Tilapia® are being produced and sold on four continents and account for about 30% of the tilapia produced in the U.S. Assuming that switching to the new strain results in 5% more fish surviving until harvest (a conservative estimate), calculations show that for a farm with an annual production of 5,000 tons, this may generate up to \$120 additional revenue per ton produced. Spring Tilapia® farmers may also save substantial costs related to use of antibiotics. The new strain will improve food security, particularly in developing countries, and create job opportunities. By reducing the occurrence of disease and the need for antibiotics, Spring Tilapia are contributing to a more sustainable and environmentally friendly industry. ☸



THE LAB:

**Agricultural Research Service,
Aquatic Animal Health Research
Unit, U.S. Department of Agriculture**

THE PARTNERS:

**Spring Genetics (formerly
Benchmark Genetics USA
Inc), a Florida-based company
with expertise in tilapia
breeding and production**

**Benchmark Genetics Norway,
a Norwegian company that
specializes in aquaculture
genetics and breeding**

THE TEAM:

**Benjamin Beck, Benjamin LaFrentz,
Carlos Lozano, Jose Ospina-Arango
Morten Rye, Craig Shoemaker,
Sergio Vela**

*Photo Caption: Dr. Benjamin LaFrentz
and Paige Mumma scanning tags
of tilapia into computer software and
experimentally infecting Spring Genetics
tilapia with Streptococcus iniae.*

IMPACT AWARD

USDA-ISU partnership Enhances Soil Drainage Process to Reduce Risk of Aquatic 'Dead Zones'



THE PROBLEM BEING SOLVED: In agricultural areas, poor drainage can cause soil to become waterlogged, leading to poor growth of crops. Drainage pipes (also known as field tiles) are effective for keeping soil from becoming waterlogged, but nitrogen in the water removed from the soil in this way often ends up accumulating at harmful levels in nearby streams, rivers and lakes—eventually creating “dead zones” where fish and other species cannot survive. This phenomenon is estimated to cost the U.S. seafood and tourism industries \$82 million per year in losses.

THE TECHNOLOGY SOLUTION: An experimental saturated buffer, jointly developed by researchers from the U.S. Department of Agriculture (USDA) Agricultural Research Service (ARS) and Iowa State University, intercepts a field tile where it crosses a buffer area—land adjacent to a ditch, stream or river populated by trees or other perennial plants. Some of the drainage water is diverted into a perforated pipe that slowly distributes it through the soil in the buffer area. This creates favorable conditions for nitrogen in the water to be removed by the perennial plants and microbes within the soil. Saturated buffers require little maintenance and do not decrease the amount of land available for farming or the productivity of those croplands.

THE TECH TRANSFER MECHANISMS: To promote awareness of the saturated buffer technology within the agricultural community, researchers from ARS and ISU collaborated on 12 peer-reviewed journal articles, 75 professional or outreach presentations, training materials and videos, and more than 100 field tours. Project partners have visited numerous locations with to assess a site’s potential for saturated buffer use and to discuss the technology with local, state and federal practitioners, engineers and landowners. These efforts have been crucial to the initial and ongoing adoption of the practice.

THE IMPACT: At a network of demonstration sites, saturated buffers removed an average of 42% of the harmful nitrates from tile drainage water. Since then, the technology is quickly becoming accepted across the Midwest. A Saturated Buffer Conservation Practice Standard, developed with the USDA Natural Resources Conservation Service, was implemented in 2016 and the practice was incorporated into the Conservation Reserve Program as part of the Clean Lakes, Estuaries and Rivers Initiative. The USDA also developed a tool to identify the sites where saturated buffers will have the greatest impact on water quality, then partnered with multiple state and local organizations on a project. In all, 48 saturated buffers were installed in two Iowa counties in 2021. The developers estimate the technology’s use could grow to 100 locations per year in Iowa, and surrounding states are implementing similar programs. ☘



THE LAB:

Agricultural Research
Service, Midwest Area, U.S.
Department of Agriculture

THE PARTNERS:

Iowa State University
USDA Natural Resources
Conservation Service

THE TEAM:

Kevin Cole
Kent Heikens
Thomas Isenhardt
Dan Jaynes
Rob Malone
Amy Morrow
Natalia Rogovska

Photo Caption: Installation of a saturated buffer on a farm in Story County, Iowa. Dr. Dan Jaynes of USDA-ARS inserts panels into a water control structure. Photo Credit: Lynn Betts, USDA/NRCS.

Public-Private Collaboration Helps Convert Harmful Algal Blooms into Valuable Resources



THE PROBLEM BEING SOLVED: Harmful algal blooms (HABs, which are overgrowths of algae in water) are a widespread environmental threat with an economic impact of more than \$2 billion per year. HABs reduce oxygen levels in water and block sunlight below the surface, which affects the plants and animals that live in the water and other animals that depend on those species for food. Some HABs also release toxins. HABs are challenging to address because they can span hundreds of square miles, and when HABs are removed physically the resulting algal mass becomes waste that is difficult to manage.

THE TECHNOLOGY SOLUTION: The U.S. Army Corps of Engineers, Engineer Research and Development Center (USACE ERDC) developed the Harmful Algal Bloom Interception, Treatment and Transformation System (HABITATS) in collaboration with several partners. HABITATS collects and removes HABs using a fence-like skimmer, cleans and adds oxygen to the water, and converts the waste into products like biocrude oil and fertilizer. The conversion process involves hydrothermal liquefaction (HTL), which uses high temperatures and pressures to break down algae, toxins and other organic waste.

THE TECH TRANSFER MECHANISMS: Early development and testing of HABITATS in 2019 were assisted by an Interagency Agreement with Pacific Northwest National Laboratory and engineering firm AECOM's response to a Broad Agency Announcement. A 2020 Cooperative Research Agreement (CRA) with the University of Illinois at Urbana-Champaign helped ERDC scale the technology using a trailer-mounted HTL conversion system developed by the university. In 2021, ERDC acquired a shipboard environmental remediation platform from Elastec through an equipment contract and adapted it to create a floating HABITATS module for open-water use.

THE IMPACT: HABITATS is currently in pilot testing; modules are expected to be available for stakeholders in September 2023. In a five-day test in 2020, HABITATS cleaned more than 200,000 gallons of water, yielding 700 gallons of algae paste that was converted into 20 quarts of biofuel. At full scale, a single module of HABITATS is expected to be able to treat two million gallons of contaminated water per day—meaning that a contained body of water like a marina could be cleaned within a week. More extensive waterways could be treated in months using multiple modules. Turning the byproducts of the process into renewable, secure fuel will add to the technology's positive environmental impacts. 🌱

Photo Caption: ERDC's Dr. Martin Page directs the lead boats during preliminary flow testing of a floating version of HABITATS in Chautauqua Lake, N.Y. (Photo by Andrew Byrne.)



THE LABS:

U.S. Army Corps of Engineers, Engineer Research and Development Center, Construction Engineering Research Laboratory and Environmental Laboratory, Department of Defense

Pacific Northwest National Laboratory, Department of Energy

THE PARTNERS:

AECOM, an infrastructure consulting firm based in Dallas, Texas

Illinois Sustainable Technology Center, University of Illinois at Urbana-Champaign (UIUC)

Elastec, an Illinois-based manufacturer of cleanup equipment for oil spills and surface water pollution

TEAM LEADS:

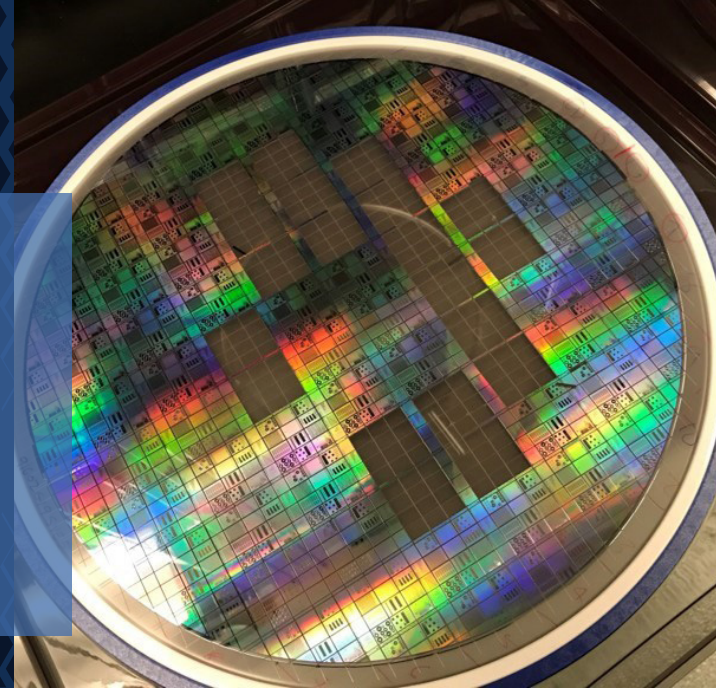
Dan Levy, Shon Mosier, Martin Page, Jim Riley, Lance Schideman, Andy Schmidt, Yuanhui Zhang

The background features a dark blue field with a pattern of lighter blue hexagons. On the right side, there are several concentric orange circles. A horizontal line of orange hexagons is positioned above the title, and another similar line is at the bottom left.

TECHNOLOGY TRANSFER INNOVATION

Recognizes federal laboratories that successfully implemented innovative or unconventional technology transfer approaches that resulted in a significant increase in technology transfer activities.

Navy Creates Licensing Program for Intellectual Property Protected Under Trade Secret Law



THE PROBLEM BEING SOLVED: Historically, federal agencies have relied on the patent system to protect their inventions. But patenting has some downsides. It can cost thousands or tens of thousands of dollars to prepare, prosecute and maintain a single patent. And getting a patent is a slow process, taking an average of two years from filing to issuance. Patents must also be available to the public which is a concern for some federal agencies because our adversaries could gain access to details about the technology, allowing them to make and use the invention themselves. Trade secret law offers a less expensive, more efficient and more secure alternative to patent protection, but has not been commonly used by the government other than for software.

THE SOLUTION: An in-depth analysis by legal experts from the Naval Research Laboratory and the Office of Naval Research concluded that federal laboratories are authorized under existing law (35 USC 207) to use trade secret protection for government inventions beyond those involving software and still be compliant with the mandates for technology transfer. NRL technology transfer experts then worked with the legal team to build a trade secret licensing program and developed mechanisms to ensure the program's sustainability. NRL created a "Notice of Trade Secret Status" form to be signed by anyone with access to the trade secret, including prospective licensees, to show that NRL had taken reasonable measures to maintain secrecy. The lab also reworked the standard Navy license agreement template to specifically address trade secret considerations—balancing the need for intellectual property protection against the need to attract collaborators for commercialization.

THE IMPACT: The first NRL invention to be designated as a trade secret under 35 USC 207 was also the focus of its first trade secret license, which was executed in December 2021 with the State University of New York Research Foundation. The organization licensed the technology to support its efforts to improve domestic production of photonic integrated circuits (microchip-based circuits that use light to transmit information), which currently must be sourced from overseas. NRL's technology involved optical components—tiny structures that are not apparent to someone using the larger product, which makes them ideal for trade secret protection. The licensing effort encompassed 27 different inventions, for which patent protection could have cost as much as \$540,000 if separate applications had been required for each one—money that would have been difficult for the lab to recover through licensing revenues.

NRL's trade secret licensing program is a potential model for other federal technology transfer offices; at the time of this award submission, the lab had shared its findings and approach with labs from the Department of Veterans Affairs, the National Aeronautics and Space Administration, and multiple agencies in the intelligence community. The approach offers a path by which federal technology can become part of the national economy more efficiently, while saving the government money and protecting sensitive innovations from adversaries. ☞



THE LAB:

Naval Research Laboratory,
Department of Defense

THE TEAM:

Kerry Broome
Stephen Deese
Josie Dristy
John Forrest
Amanda Horansky-McKinney
Charlie Steenbuck
Sean Walsh

Photo Caption: NRL's first trade secret license, which was executed with the State University of New York Research Foundation, involved domestic production of photonic integrated circuits like the one shown in the photo, which was fabricated by AIM Photonics using NRL technology. (Photo provided by U.S. Naval Research Laboratory Optical Sciences Division)

Science and Technology Innovation Center Tests and Transitions Tech for Coast Guard Use

THE PROBLEM BEING SOLVED: The Department of Homeland Security's (DHS) Science and Technology Directorate (S&T) and DHS U.S. Coast Guard (USCG) identified the need for collaboration that would draw on the strengths of each organization to develop, test and transition technology solutions for a range of USCG operations.

THE SOLUTION: Under a 2015 Memorandum of Understanding, S&T and USCG established a Science & Technology Innovation Center (STIC) to strengthen the bond between DHS entities, share knowledge, create a culture of innovation, and rapidly transition technology to end users. S&T brings funding and expertise in research, development and technology transfer to the collaboration, while USCG provides leadership oversight, project management, personnel, and field-testing capabilities. Both parties collaborate in identifying possible projects for transition to USCG for applications that include communications, intelligence, surveillance, environment, uncrewed devices and modeling and simulation. The USCG also uses CG_Ideas@Work, a crowdsourcing tool, to identify operational gaps and challenges; ideas may come from any active duty, civilian, reservist or auxiliary across the service. STIC executes the new ideas after USCG vets and prioritizes them and S&T funds them.

THE IMPACT: STIC has successfully tested, evaluated, and transitioned eight innovations with high readiness levels to address USCG mission gaps and support operations. These include:

- STIC researched and evaluated a stabilized binocular that minimizes the effects of waves on an operator's ability to view a target when scanning the ocean surface for vessels, objects, and humans. Evaluation feedback from the cutter and boat operators was positive.
- STIC identified a Small Boat Wash System for cleaning debris from ship hulls while complying with California's run-off requirements. The system uses a vacuum excavator to clean and disinfect dirty water before releasing it back into the environment.
- STIC identified, evaluated, and purchased new equipment for USCG's anti-terrorism K9 unit, including a new helmet with integrated ear and eye protection and the ability to attach a 360-degree camera. Another new addition was a harness with a more rigid construction for spinal support, preventing wear on the dogs' spines during hoisting operations.
- STIC-directed user evaluations led to USCG being authorized to procure Low-cost Remotely Operated Vehicles—with miniaturization and more powerful batteries—to increase underwater situational awareness, such as when inspecting ship hulls, docks, or other infrastructure. ☞



**Homeland
Security**
Science and Technology



THE LABS:

DHS Science and Technology Directorate, Department of Homeland Security

U.S. Coast Guard Research & Development Center, Department of Homeland Security

U.S. Coast Guard Research, Development, Test & Evaluation and Innovation Program, Department of Homeland Security

THE KEY TEAM:

Alan Arsenault, Matthew Barger, Curtis Bates, Matthew Burton, Wendy Chaves, Joseph Direnzo, Lauren Eberly, Margaret Exton, Scott Fields, Rebecca Fosha, Theophilos Gemelas, Timothy Hughes, Daniel Keane, Bert Macesker, John McLeod, Scott Nelson, Anderson Ogg, Minh-Thu Phan, Marilyn Rudzinsky, Patrick Ryan, Jason Story

Photo Caption: K9 wearing helmet, goggles, and vest.



Individual Awards



ROOKIE OF THE YEAR

Recognizes the efforts of an FLC laboratory technology transfer professional with three years' experience or less who has demonstrated outstanding work transferring a technology in a manner significantly above and beyond what was called for in the normal course of their work.

LAB DIRECTOR OF THE YEAR


Honors laboratory directors who have made maximum contributions to the overall enhancement of technology transfer for economic development.

REPRESENTATIVE OF THE YEAR

Given to the FLC Representative who has made the most significant contribution to the FLC in the past three years.

HAROLD METCALF AWARD

Recognizes an FLC volunteer who has provided sustained significant service to the FLC as an organization.



ROOKIE OF THE YEAR

Chris Bond: Engaging Researchers to Streamline T2 Processes and Amplify Lab Performance



Many technology transfer professionals see paperwork as a necessary evil. Chris Bond saw it as an opportunity to enhance the commercialization of technologies developed at the National Energy Technology Laboratory (NETL) and improve the experiences of the lab's researchers and administrators.

Within a few short months of joining NETL in 2019 as a technology transfer specialist, Bond applied his personal interest in databases and programming and experience in academic technology transfer to implement a significant overhaul of NETL's set of tech transfer tools.

Bond's efforts have helped fuel notable improvements in lab productivity, including a 27% increase in the number of executed partnership agreements, a quadrupling of expected research expenditures and a sixfold increase in direct "funds-in" to NETL. In addition, he has personally executed, at last count, 52 agreements and amendments with cumulative research expenditures of \$22.6 million, including \$3.9 million funds-in.

One of his most significant contributions was a reimagining of NETL's internal agreement routing documentation, including the creation of a new Agreement Development and Approval Form that helped move existing legacy Word documents into a web-based user interface, decreasing the time an agreement spends "in process." His process revisions cut 31 linear processing steps down to 12, some of which can now be accomplished in parallel (leading to a 61% reduction in granular touch points).

Bond's accomplishments have been driven by his talent for personal communication, particularly for making the tech transfer process—from

Nondisclosure Agreements (NDAs) to Cooperative Research and Development Agreements (CRADAs)—easier for researchers to navigate. He held one-on-one discussions with key NETL research staff to understand bottlenecks and friction points from their perspectives and incorporated their feedback into business process updates.

After working with leadership and legal counsel to secure approvals, Bond then personally educated researchers about the streamlined processes. He explained how the new framework complies with federal legislation, how it enhances due diligence and oversight, and how the updated process would lead to more external tech transfer partnership opportunities.

"NDAs are now very streamlined and only take a few weeks, which allows us to have more in-depth discussions with industry, leading to more CRADA and partnership connections," said NETL researcher Christina Wildfire.

Some of Bond's key contributions are less easily quantified. For example, after identifying a notable gap in NETL's standard CRADA template of site-support contractor language pertaining to intellectual property under the Bayh-Dole Act, Bond took action to eliminate potential barriers to commercialization it may have presented.

Bond also has played an active role in major lab-wide initiatives that complement the overall technology transfer process. These include integration of the U.S. Treasury's new electronic "G-Invoicing" system for interagency work orders and improvement and standardization of project cost estimating templates and processes across the Research Partnerships and Delivery directorate. ☞



National Energy Technology Laboratory (NETL)

Bond's efforts to streamline NETL's tech transfer process have helped fuel notable increases in productivity, including a 27% uptick in the number of executed partnership agreements.

Jonathan Spielman: Networking and Innovating to Build a T2 Program from the Ground Up



Special Advisor Jonathan Spielman took an unconventional path to becoming a technology transfer professional. That's because his agency, the Federal Bureau of Investigation (FBI), didn't have a tech transfer program until Spielman built one.

Historically, research and development activities at the FBI have been decentralized, with issues related to intellectual property (IP) handled in an ad hoc manner. There was confusion within the Bureau about whether innovations could or should be patent protected.

With no previous expertise in the field, Spielman researched IP and federal technology transfer, consulting with legal and innovation experts within the FBI to explore how tech transfer could be implemented. In an internal memorandum, he made the case for a new technology transfer program.

After senior executives approved the concept, Spielman established the program in 2020 by developing its concept of operations, securing program funding, and conducting outreach with FBI researchers. Input from technology transfer professionals within the FLC and at other agencies was also part of the process.

An acute challenge for the fledgling program is that the FBI does not have a dedicated patent attorney to help protect its intellectual property and to advise the program on technology transfer activities. Undeterred, Spielman parlayed his connections within the technology transfer community to come up with a solution involving partnership agreements with two other federal agencies.

The FBI signed a memorandum of understanding (MOU) with one agency to support the FBI in areas related to IP protection and general technology transfer expertise, and an interagency reimbursable agreement established a payment process for services. An MOU with another agency facilitates support for the mutually beneficial transfer and commercialization of FBI technologies.

In the program's first year, the FBI received 13 invention disclosures—a significant increase from the previous years, in which the agency had averaged just two disclosures per year and mostly from FBI's headquarters location. Under the new program the disclosures come from eight field-office inventors based at seven different locations around the United States.

The new program's technology transfer accomplishments included:

- The filing of one patent application and eight provisional patent applications.
- The FBI's first patent license agreement, which makes a public safety bomb technician tool commercially available.
- The FBI's first Cooperative Research and Development Agreement (CRADA) to develop new applications of DNA technology for forensic body fluid identification.
- A second CRADA was in the final stages of review at the time of this award submission.
- The FBI's first royalty revenues.
- An IP management plan for an invention jointly developed by the FBI and a university research facility. ☞



**Federal Bureau of
Investigation (FBI) Office of
Research and Technology
Applications (ORTA)**

During the new technology transfer program's first year, the FBI received 13 invention disclosures. This was a significant increase from the agency's previous average of two disclosures per year.

Dr. Eric Moore: Prioritizing and Promoting Tech Transfer Pays Off for DEVCOM CBC Director



During the COVID-19 pandemic in 2020, the U.S. Army Combat Capabilities Development Command Chemical Biological Center (DEVCOM CBC) played a key role in federal pandemic response efforts, despite not having a mission directly related to public health. Like many of DEVCOM CBC's successes, those contributions to public safety were possible because of Dr. Eric Moore, the laboratory's director, and his commitment to technology transfer (T2).

That commitment has been evident since Moore's appointment as director in 2017. Almost immediately, Moore quickly pushed for a stronger and more proactive T2 culture among the Army laboratory's research and development programs and its 1,400-plus personnel.

"Technology transfer is one of my top priority areas, to the extent that I moved [CBC's Strategic Initiatives Group and Technology Transfer Office] to directly report to me," Moore said. "This is to ensure we really focus our efforts on what we do for technology transfer."

Professional experience in science, technology, research and testing gained during Moore's 30-year federal career has informed his leadership of DEVCOM CBC and his commitment to its technology transfer efforts. But his personal involvement is what sets him apart. Moore promotes tech transfer consistently, through daily conversations, public speaking engagements and internal lab activities. He facilitates T2 discussions by pulling together prospective partners from industry, academic institutions, and other government agencies to meet with him, his science and technology experts, and T2 staff.

Moore fully supports laboratory workforce training programs, such as an in-house series of virtual events called "T2 and You: Supporting Warfighter Wins through the Development of Creative Innovation Partnerships." Topics include training on technology transfer mechanisms, intellectual property, and working with industry and other external stakeholders.

Moore has also had a hands-on role in creating start-up companies to commercialize DEVCOM CBC technologies and in establishing relationships with Minority Serving Institutions and other academic institutions to help build a tech-savvy workforce for the future.

In response to the COVID-19 pandemic, one of Moore's first actions was to designate subject matter experts (SMEs) to work closely with T2 staff in preparation for testing of N95 respirators, surgical masks, and other products and materials.

Within seven months, DEVCOM CBC formed more than 70 technology transfer agreements, about half of which were specifically related to the pandemic. Emergency Use Simple Letter Agreements (EUSLA) for material transfer were used to obtain SARS-CoV-2 virus samples for DEVCOM CBC research use, and a Technology Support Agreement (TSA) with a standardized Statement of Work and cost schedule expedited testing.

Those efforts led to positive outcomes for the economy as well as for public health and safety. Between 2000 and 2021 DEVCOM CBC's total economy-wide impact included more than \$500 million in output, nearly 2000 jobs created and labor income of \$88,000 per job. ☞



U.S. Army Combat Capabilities Development Command Chemical Biological Center

Professional experience in science, technology, research and testing has informed Moore's leadership and his commitment to tech transfer. But his personal involvement is what sets him apart.

Karen Presley: Creating Opportunities to Share Knowledge within the FLC Community and Beyond



Karen Presley's many accomplishments in technology transfer, both at the National Security Agency (NSA) and as a volunteer for the FLC, have a common theme: A passion for sharing knowledge.

Presley, who is the NSA Deputy Director of the Office of Research and Technology Applications, has served as Chair of the FLC Educate Committee since 2020, previously serving as the Co-Chair of the Educate and Training Subcommittee. Her primary objective is to update the way FLC provides training opportunities to the FLC community.

She is working with committee members and FLC staff to create a robust curriculum for all federal T2 professionals and key internal stakeholders, from novice to expert, as well as creating webinars and a learning management system to house all online content. These improvements will allow tech transfer professionals and other stakeholders to continually learn, grow, and obtain value from FLC training events.

A member of the FLC community since 2013 and an FLC Laboratory Representative since 2017, Presley has also demonstrated that she personally has technology transfer knowledge to share. She was a key contributor to NSA projects that earned FLC Excellence in Technology Transfer awards in 2015, 2017 and 2019. She also is a frequent speaker and moderator at the FLC National Meeting.

Presley's interest in sharing knowledge also extends beyond her work as FLC Educate Chair. She has been a resource for other

tech transfer professionals needing guidance and expertise, and has been active in promoting the importance of establishing ORTA offices at laboratories looking to ramp up their tech transfer efforts. She was also part of an NSA team that won the 2020 George F. Linstead Award for Excellence in Technology Transfer for its work with the open-source software community.

The initiative that best exemplifies Presley's efforts to share knowledge with new communities is her work in 2019 to establish a Minority Serving Institutions (MSI) Cooperative Research and Development Agreement (CRADA) program at NSA to enable student research in areas related to NSA mission sets. The CRADA allows NSA to engage with MSIs that are overlooked for research opportunities despite their qualifications.

Since the inaugural MSI CRADA was executed with Morgan State University in December 2019, Presley has worked to grow and evolve the program. At the time of this award submission, she had facilitated partnerships with eight MSIs, with additional institutions pending approval.

The MSI CRADAs have also evolved to include student work on research for actual technologies—building on research and patents already established by NSA experts—instead of hypothetical scenarios. This gives students the ability to take their work and research with them beyond the classroom into the real world. It also benefits the agency to have new talent providing insight into potential improvements to their mission-developed technologies. ☞



National Security Agency

Presley is working with FLC staff and volunteers to help tech transfer professionals and other stakeholders continually learn, grow and obtain value from FLC's educational events.

John Eisemann: Advocating for Inclusivity, Regional Recognition and Connections with Industry



After 25 years working with biologists who study interactions between humans and wildlife, John Eisemann knows something about getting wild and creative about tech transfer—a description that also applies to other federal laboratories. In seven years of service to the Federal Laboratory Consortium (FLC), Eisemann has been a voice for those labs and the regional innovation ecosystems they support.

Since 2013, Eisemann has managed the Technology Transfer Program for the U.S. Department of Agriculture (USDA) National Wildlife Research Center (NWRC) in Fort Collins, Colorado—a small federal laboratory that has achieved tech transfer success through industry and inter-government partnerships. With a staff of only 30 research scientists, NWRC, the research arm of the USDA Animal and Plant Health Inspection Service (APHIS) Wildlife Services, received seven FLC National and Regional awards between 2006 and 2019.

NWRC is part of the FLC's Mid-Continent region. Many of Eisemann's efforts as an FLC volunteer have involved this region, starting in 2016 when he served as a reviewer on the region's awards nomination review committee. He was the region's Deputy Regional Coordinator from 2017 to 2018, Acting Regional Coordinator from 2018 to 2019, and Regional Coordinator from 2019 to 2021.

An important function of the FLC regions is to provide opportunities for labs to establish regional connections with companies, universities, and state and local governments—connections that are especially important for smaller labs. Eisemann has worked to promote inclusivity for all labs at regional events.

He helped to facilitate a transition from regional events that were smaller-scale versions of the FLC National Meeting to the current Industry and Tech Events that are focused on a specific tech sector and have a greater emphasis on networking and public-private collaborations. This involved chairing a Regional Review Committee to evaluate the utility of the regional approach to delivering FLC content and services.

As the FLC Awards program has also evolved, Eisemann has worked with members of the Awards Subcommittee and representatives from other FLC regions to conceptualize a "Best in Region" concept to preserve regional recognition for federal tech transfer successes despite the National and Regional submission and judging processes being consolidated into one system.

After being elected FLC Vice Chair in 2021, Eisemann's role expanded to encompass more national issues, but technology transfer at small labs and inclusivity remained key areas of interest for him. His Executive Board contributions have included helping to create an FLC Diversity, Equity and Inclusivity Policy and developing a BHAG (Big Hairy Audacious Goal) focused on developing metrics to evaluate FLC community participation in volunteer activities and participation in FLC events, with an eye on increasing participation by labs currently underrepresented in FLC program offerings and trainings.

Eisemann's achievements at the national level also have included representing the FLC and Wildlife Services on a USDA Innovation Science Strategy Initiative and on a White House Lab to Market strategy team focused on technology transfer tools and services. ☸



USDA National Wildlife
Research Center

After being elected FLC Vice Chair in 2021, Eisemann's role expanded to encompass more national issues, but technology transfer at small labs and inclusivity remained key areas of interest for him.

AWARDS JUDGES

THE FLC EXPRESSES ITS GRATITUDE TO THE members of the Awards Subcommittee and other volunteer judges for their tireless efforts in making the 2023 Awards program a success.

Lisa Marianni

Centers for Disease
Control and Prevention
(Awards Subcommittee Chair)

Whitney Hastings

National Institutes of Health
(Promote Committee Chair)

Michelle Atchison

University of Texas San Antonio

Sharon Borland

U.S. Geological Survey

Shaniece Bowens

Food and Drug Administration

Amanda (Brock) McCullough

Naval Surface Warfare
Center, Crane Division

Victoria Brun

Frederick National
Laboratory for Cancer Research

Sarah Buttrick

Portsmouth Naval Shipyard

Sabarni Chatterjee

National Institutes of Health

Pattie Cullum

Department of Veterans Affairs

Sevim Erhan

USDA Agricultural Research Service

Hannah Farquar

Lawrence Livermore
National Laboratory

Suzanne Frisbie

National Institutes of Health

Paige George

Naval Surface Warfare Center,
Panama City Division

Fizie Haleem

Montgomery College

Lydia Hierl

National Security Agency

Terri Hunter

Department of Veterans Affairs

Jackie Kerby Moore

Sandia National Laboratories (retired)

David Koegel

Department of Energy

Kerry Leonard

Naval Research Laboratory

Marianne Lynch

Department of Energy

Jason Martinez

Sandia National Laboratories

David McCallum

Argonne National Laboratory

Chris Meyers

Los Alamos National Laboratory

Kimberly Minafra

NASA Ames Research Center

Andy Myers

Honeywell Federal
Manufacturing and Technologies

David Myers

Department of Energy

Amanda Osit

Naval Research Laboratory

Dick Paul

National Advisory Council

Vladimir Popov

Frederick National
Laboratory for Cancer Research

Dan Powers

CO-LABS

David Pronchick

MIT Lincoln Laboratory

Elsie Quaite-Randall

Lawrence Livermore

National Laboratory

Maria Restrepo-Hartwig

USDA Agricultural Research Service

Holly Ricks-Laskoski

Naval Research Laboratory

Eric Rosenberg

U.S. Cyber Command

Emily Rosenthal

Department of Veterans Affairs

Michael Salgaller

National Institutes of Health

Meghan Sheehan

Environmental Protection Agency

Harmen Steele

National Institutes of Health

Wayne Strickland

National Technical Information Service

Rowan Wagner

Department of Veterans Affairs

MAKE PLANS NOW FOR THE 2024 AWARDS

It's time to start thinking about nominations for the 2024 FLC Awards!

Thanks to all who took part in the 2023 Awards cycle, our first under the new streamlined process with just one submission period for both national and regional recognition. We're excited to see the celebrations continue even after the Awards Ceremony is over, as plans are under way for honoring select Awards submissions from each region.

The process for the 2024 cycle will be similar to 2023. **There will be only one submission period and only one judging period for all entries.** That means you can spend less time filling out forms and more time on award-worthy technology transfer.

Once the submissions have been judged and scored, the FLC will announce selections for National Award winners as well as "Best in Region" honorees for select categories. All winners will be recognized at the 2024 FLC National Meeting. The "Best in Region" selections will also be honored separately by their respective regions later in the year.

The Awards categories will include:

- **Excellence in Technology Transfer**
- **Interagency Partnership**
- **State and Local Economic Development**
- **Technology Transfer Innovation**
- **Impact**
- **Rookie of the Year**
- **Outstanding Technology Transfer Professional**
- **Lab Director of the Year**
- **FLC Service**

Remember: **The FLC's next call for award submissions will be the only one** — and it's right around the corner. So now is the time to start thinking about which of your lab's tech transfer successes are the best candidates for either national or regional recognition in 2024. And make sure you're subscribed to the FLC's mailing list to receive all the information you'll need to submit.

Contact **Jessica Znidarsic** at jznidarsic@federallabs.org for more information.

2024 FLC Awards Program Timeline

Summer 2023
Submission period.

Fall 2023
Judging period.

Winter 2023-24
Winners are selected,
notified and announced

Spring 2024
Winners honored at the
FLC National Meeting

THE HITS KEEP ON ROLLING

INNOVATE TO A BRAND NEW BEAT

...through 2023 and beyond with
We can help you **promote** technology transfer (T2) successes, **educate** T2 professionals and **facilitate** T2 through public-private partnerships.

PUBLICIZE T2 SUCCESSES

Awards: Earn prestige and recognition for your lab's T2 excellence

Planner: Visually showcase your technologies

Labs in Action: Share successes with prospective partners

LabTech in Your Life: Claim a spot for your technology on an interactive virtual tour

FLC Website: Find all FLC promotions in this central hub

GAIN AND SHARPEN T2 SKILLS

FLC Learning Center: Expand your T2 skills and track your training

FLC National Meeting: Attend the preeminent annual conference for federal T2

T2 Resources: Learn about tech transfer terminology, policies, mechanisms and more

Careers: Explore educational paths and job lists curated specifically for T2

CONNECT WITH T2 PARTNERS

FLC Business: Highlight your lab's assets in this searchable database

Industry and Tech Events: Focus on a specific tech or industry sector at these FLC-hosted networking opportunities

Engagement Opportunities: Virtually showcase what your lab has to offer

Partnering Events: Make connections with FLC and others at gatherings hosted by our strategic partners

Tech Transfer Services: Choose from the FLEX program, agreement matrix, intent to license notices and more

Learn more at
www.federallabs.org





Federal Laboratory Consortium
for Technology Transfer

@federallabs #FLCawards

