

72ND ANNUAL



NOVEMBER 2020



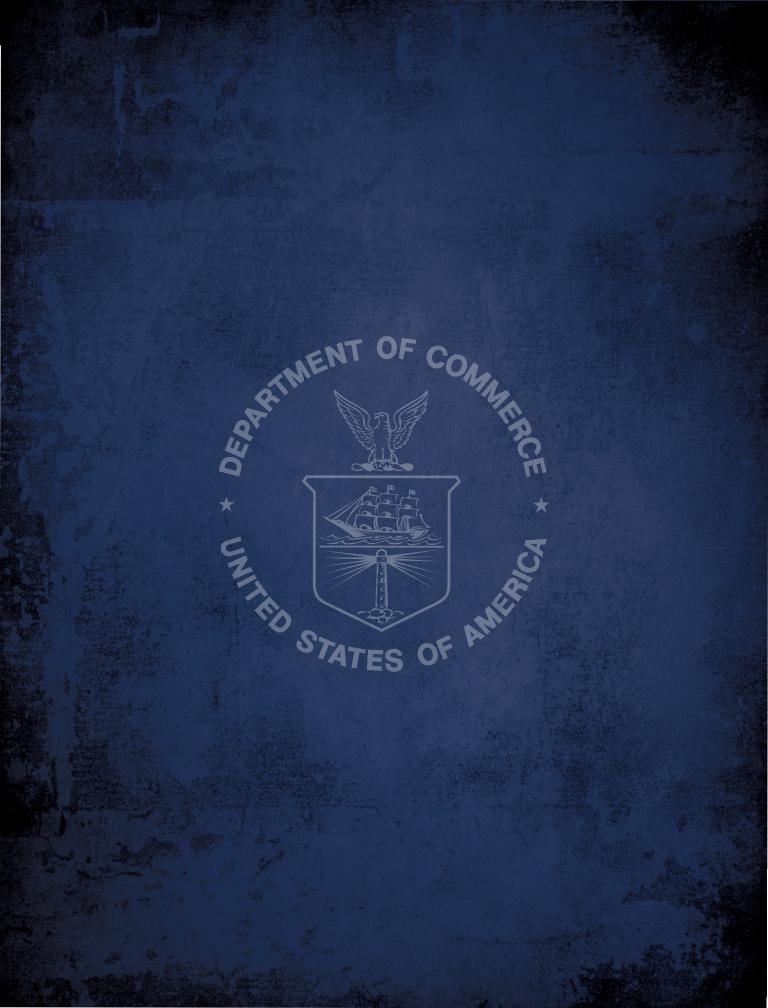
72ND HONOR AWARDS PROGRAM

THE HERBERT C. HOOVER BUILDING 1401 Constitution Avenue, NW

Washington, D.C.

November 2020

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MESSAGE FROM THE SECRETARY

Welcome to our 72nd Annual Honor Awards Program.

When the U.S. Department of Commerce was established more than 117 years ago, it was given a critical mission: to foster the development and growth of our Nation's companies and competitiveness. The success of this mission is key to new job creation, innovative U.S. industries, and America's prosperity and security.

Over the decades, our Department's programs and agencies have adjusted as we moved from lighthouses to laser beams. What has not changed is the dedication, sacrifice, and commitment to the highest standards of public service by our honorees that is reflected in their outstanding accomplishments for the American people.

By opening new markets, promoting American innovation and entrepreneurship, compiling crucial data, safeguarding sensitive technologies, fostering cutting-edge science and research, and monitoring our oceans and atmosphere, the talented men and women we are honoring today have contributed to our Nation's economic and national security.

On the front lines of America's continued leadership in the global economy, they have delivered exceptional results, demonstrated positive role models, and created new opportunities for American families, workers, and businesses.

It is with great pride and pleasure that I congratulate each of our 2020 Gold and Silver Honor Awards recipients.

Willow (Zun

Secretary Wilbur Ross U.S. Secretary of Commerce



This award, the highest honorary award given by the Department, is granted by the Secretary for distinguished performance characterized by extraordinary, notable, or prestigious contributions that impact the mission of the Department and/or one or more operating units.



This award, the second highest honorary award given by the Department, is granted by the Secretary for exceptional performance characterized by noteworthy or superlative contributions that have a direct and lasting impact within the Department.

To warrant a Gold or Silver Medal, a contribution must focus on qualitative and quantitative performance measures reflected in the Department's Strategic Plan and be identified in one of the following areas:

> Leadership Personal and Professional Excellence Scientific/Engineering Achievement Organizational Development Customer Service Administrative/Technical Support Heroism

BUREAU OF INDUSTRY AND SECURITY



GOLD MEDAL

PERSONAL AND PROFESSIONAL EXCELLENCE

Geoffrey Flowers

Office of the Assistant Secretary for Export Enforcement Bureau of Industry and Security

Special Agent Flowers is honored for work on a complex investigation involving Chinese theft of trade secrets having to do with exportcontrolled syntactic foam. A Chinese company, as part of a Chinese national initiative to develop syntactic foam and related marine technologies, created a U.S.-based company that hired U.S. marine engineers, and induced them to steal export-controlled intellectual property. This information ultimately made its way back to China for civil and military uses. The investigation led to six arrests and eight indictments, and dissolved the U.S.-based scheme.



Gold Medal

PERSONAL AND PROFESSIONAL EXCELLENCE

Erin Zaborowski Richard Fitzpatrick Patrick Tinling

Office of the Assistant Secretary for Export Enforcement Bureau of Industry and Security

The group is honored for work on a 3-year investigation that resulted in the indictment, arrest and extradition of Valery Kosmachov, an Estonian national. Mr. Kosmachov and a co-conspirator operated Estonia-based companies as procurement 'fronts' to obtain U.S.-origin microelectronics, and smuggle them from the United States into the Russian Federation. The components included dualuse programmable computer chips capable of operating in austere environments, making them useful in both civilian and military applications.

BUREAU OF INDUSTRY AND SECURITY



GOLD MEDAL

PERSONAL AND PROFESSIONAL EXCELLENCE

Ron Kruger Bryan Pabin Deniz Muslu Jonathan Carson Thomas Smith Elizabeth Blanch Gregory Dunlap

Office of the Assistant Secretary for Export Enforcement Bureau of Industry and Security

Adam Roth

Global Markets International Trade Administration

The group is honored for their outstanding investigative work into several transnational procurement networks seeking to obtain sensitive U.S.-origin components in support of Iran's nuclear program, its development of high-speed missile attack boats for the Iranian Navy, and oilfield operations in Iran. The group also disrupted a sophisticated arms trafficking network dedicated to terrorist activities that was conspiring to transfer and use surface-to-air missiles against U.S. aircraft. These investigations led to 14 arrests, 13 convictions, and the dismantling of the networks.



GOLD MEDAL

LEADERSHIP

Stephen Buckner Zachary Schwartz Jennifer Shopkorn **Kristin Galemore** Lorena Molina-Irizarry

Economics and Statistics Administration U.S. Census Bureau

The group is honored for launching the Trust & Safety team, the first of its kind in a Federal agency, dedicated to protecting the 2020 Census from misinformation and disinformation. This cross-functional network of experts was created ahead of the 2020 Census to combat the increased reach of misleading and false information threatening the count. The group conducts 24x7 social media monitoring, and influenced updates to policies for social media platforms to mitigate the spread of false information that could hinder the public's participation and decrease its trust in the Census Bureau.



GOLD MEDAL

LEADERSHIP

Michael Berning Epa Uwimana Adam Galemore **Denise Flanagan Doyle** Damon Smith **David Sheppard** Diane Cronkite Jessica Majercik Lori Fox Katherine Reeves

Economics and Statistics Administration U.S. Census Bureau

Honored for their leadership and innovation in response to Executive Order 13880 - to build a capacity to acquire and process administrative records data to determine citizenship status for each respondent to the 2020 Census. The group acquired and/or obtained authority to use data from 15 Federal data sources representing 9 agencies. Additionally, though the Executive order did not mandate state-level cooperation, the team contacted each of the 50 states and District of Columbia seeking data for the project.



Mary Catherine Potter Melissa Scopilliti Jill Harbison Alessandro Rebaudengo Theresa Maroudas Lewis Brian Harrigan Maria Iseman Monica Noble Julie Watt

Economics and Statistics Administration U.S. Census Bureau

The group is honored for enterprise-wide leadership, innovative solutions, and resilience in successfully redesigning and implementing security screening to enable 2020 Census operations. The group rapidly redesigned the structure, processes, and procedures involved in completing background checks for applicants, including adapting policies and adjusting systems to deal with the massive influx of security screening required for the 2020 Census. Their leadership enabled timely hiring of more than 800,000 temporary employees.



GOLD MEDAL PERSONAL AND

PERSONAL AND PROFESSIONAL EXCELLENCE

Jerry Ray Collins Benny R. Alvey Adam G. Eckstein Greg E. Ruetten Edward Lewis Frazier Julie K. Bibb Logan T. Walsh Calvin C. McFarland Kristin Farnham-Brown Rose E. Quintel

Economics and Statistics Administration U.S. Census Bureau

The group is honored for its demonstrated creativity, flexibility, resilience, motivation, strategic thinking, and extraordinary leadership in the development, planning, collaboration, and implementation of the 2020 Decennial Census Logistics program, which delivered 1,191,703 kits to 6 Regional Census Centers, 248 Area Census Offices, and 1,272 Census Partners. The group accomplished this major feat on schedule and within targeted quality levels despite the doubling of the original kit production projection, without increasing staffing or warehousing space.



GOLD MEDAL

PERSONAL AND PROFESSIONAL EXCELLENCE

David G. Johnston Thu Q. Dang Honghai V. Nguyen Christina M. Stoehr Bryant Turner Laura K. Yax Lori Carrig Zachary Henry Schwartz Lisa Wolfish Terry Keyfauver

Economics and Statistics Administration U.S. Census Bureau

The team worked in the areas of content creation, movement of content between the on-premise data center to the cloud while simultaneously planning for the 2020 Census and conducting rigorous and effective deployment of content and infrastructure integration before the start of the 2020 Census. The dedicated and professional leaders and staff worked together and successfully accomplished these goals, while the team achieved initial operation capability on March 1, 2019, with complete, full operational capability on January 28, 2020. Dynamic and professional leadership and diligent efforts resulted in a cohesive team.



Gold Medal

CUSTOMER SERVICE

Gwendolyn Williams Jovon Drone Estefania Rivera Sarabeth Rodriguez Linda Jaramillo Takesha McDaniel Elimar Medina Figueroa

Economics and Statistics Administration U.S. Census Bureau

Honored for their unwavering heroic support to the workforce of Puerto Rico during a tremendous period of devastation that occurred at the peak time of Decennial operations during an active natural disaster. This group consist of EAP professionals and bilingual support staff that ventured to Puerto Rico to address the socio-emotional impacts of high magnitude earthquakes and devastation on the workforce both personally and professionally. The group provided on-site EAP services, clinical care, and recovery resources allowing for continuity in 2020 operations and service delivery.



SILVER MEDAL

Gregory Hanks Monique Eleby Brian Timko Laura Waggoner Michael Ratcliffe Andrea Johnson

Economics and Statistics Administration U.S. Census Bureau

The group is honored for outstanding leadership in developing the 2020 Census address list and geospatial data. Using innovative tools and methods, the group designed operations that enabled in-office update and validation of the Census Bureau's address list and maps. Their leadership resulted in successful completion of the first key innovation area for the 2020 Census – Reengineering Address Canvassing. The result was an avoidance of more than \$185 million in costs for the 2020 Census.



SILVER MEDAL

Amanda M. Burns Eric M. Gray Latonia Y. Ollyhill Sheila Gividen

Economics and Statistics Administration U.S. Census Bureau

Recognized for exceptional leadership in establishing, maintaining, and developing a workforce of 500+ employees to accomplish two major 2020 Census operations. Together they built a team to process UnGeocoded Records and NonID cases. This effort was accomplished during a challenging period of low unemployment rates resulting in a shallow applicant pool. As staff were hired and trained, opportunities in the National Processing Center resulted in advancement of staff and a need for frequent backfills and retraining of staff. Despite many challenges, they maintained a team of 500+ strong.



SILVER MEDAL

LEADERSHIP

Zachary Whitman Robert Chestnut Liang-Chi (Ritchie) Wang Shawna Orzechowski

Economics and Statistics Administration U.S. Census Bureau

The group is honored for conceptualizing and delivering an enterprise dissemination platform (data.census.gov) that very substantially improves and increases the public's engagement with Census Bureau data. The team implemented a consolidated data platform responsive to the end-users' needs, while also establishing a simplified pipeline for fulfilling the Census Bureau's data dissemination requirements. The effort produced major improvements in the discovery, access, and consumption of Census Bureau data while also enhancing efficiencies across the organization.



SILVER MEDAL

PERSONAL AND PROFESSIONAL EXCELLENCE

Jesenko Kostic Dawn Mumford Marc Hayden Cynthia Luttrell Raymond Nally Laura Clary Karl Krider Gloria Wales Jennifer Simpson Hai Nguyen

Economics and Statistics Administration U.S. Census Bureau

The group is honored for successfully performing substantially expanded duties involving new infrastructure creation, operational planning, application programming, database maintenance, and system support necessitated by the addition of 2020 Census activities to National Processing Center main campus operations, while still supporting more than 70 current surveys and existing infrastructure. Their efforts ensured that 10 unique applications were production ready and secure for data collection; program goals were met; and applications were supported nationwide, including the Island Areas.



SILVER MEDAL

PERSONAL AND PROFESSIONAL EXCELLENCE

Sneha Desai LaShonda Simmons Alessandro Rebaudengo Christopher R. Bitzer

Economics and Statistics Administration U.S. Census Bureau

The group is honored for their unique collaboration with departmental resources and government agencies to identify and procure a solution to ensure Census and Department of Commerce compliance with Affordable Care Act filings. This also protects the Federal Employee Health Benefits rights for the 2020 Census workforce, estimated to be up to 500,000. The group mastered the complexities and risks of the ACA, and established a first-ofits-kind annual filing infrastructure that no other government agency has embarked on by using a non-Federal entity to meet the compliance requirement.



SILVER MEDAL SCIENTIFIC/ENGINEERING ACHIEVEMENT

Jennifer Ortman David Raglin Elizabeth Poehler Tavia Simmons Daphney Dupervil Dameka Reese George Brian Wilson Ceci Villa Ross Gail Denby Michael Coan

Economics and Statistics Administration U.S. Census Bureau

The group is honored for successful execution of the 2019 Census Test, a nationally representative self-response test to measure the operational effect of including a citizenship question on the 2020 Census Questionnaire. The group was instrumental in implementing all required operations in just 7 months and publishing results 6 months later. The test results informed numerous aspects of 2020 Census operations, proved the viability of the ACS program infrastructure for decennial census testing, and the findings will inform operational decisions for future censuses and surveys.



SILVER MEDAL

ORGANIZATIONAL DEVELOPMENT

Joy Choudhury David Whittington Lawrence Malakhoff David Peters Terry Keyfauver Michael Castro Daniel Lewis Zachary Schwartz Beverly Harris Michael Thieme

Economics and Statistics Administration U.S. Census Bureau

The Section 508 Program Office is honored for their impact on leading the Census Bureau and its staff to meet accessibility of Information and Communications Technology (ICT) and providing a path forward for ICT to become Section 508 certified, which is unique within the Federal and private domain. The Program Office has certified 30 applications including 25 Decennial applications, which include Internet Self Response (ISR) while establishing a multi-level service offering to Census divisions to meet accessibility. This is a great achievement in mitigating legal risk while improving accessibility, inclusion, and diversity in the Census Bureau.



SILVER MEDAL

CUSTOMER SERVICE

Rebecca Hutchinson Javier Miranda John Haltwanger Emin Dinlersoz Jeff McHugh Aidan Smith Mason Herman Erin Wrona Nicole Davis

Economics and Statistics Administration U.S. Census Bureau

Honored for filling a significant gap in the measurement of the U.S. economy. The U.S. Census Bureau (USCB) created the Business Formation Statistics (BFS) to give a near real-time read on the status of business applications, and updated projections for business formations at the state and national levels. The USCB collaborated with public and private sectors to develop and gain support for the product, and obtained professional insights from a multitude of experts from across the country. From research to release, the team improved processing time by 62 percent, reaching a wider range of data users.

ECONOMIC DEVELOPMENT ADMINISTRATION



SILVER MEDAL

LEADERSHIP

Tracey Rowan

Philadelphia Regional Office Economic Development Administration

Ms. Rowan is recognized for leadership in coordinating with two West Virginia state agencies to create an interim financing facility to support highly distressed communities seeking EDA financial assistance. The facility allows grant recipients to access interim project financing without needing to increase utility rates, as would otherwise be required under state regulations. The EDA expects that this facility will increase the pool of applicants for EDA funds, and will allow the EDA to serve some of the country's most economically distressed communities.



SILVER MEDAL

ADMINISTRATIVE/TECHNICAL SUPPORT

Jeffrey Burton Jodi Duncan Stacey Webb Jane Reimer

Denver Regional Office Capacity Building Team Economic Development Administration

The Denver Regional Office (DRO) Capacity Building Team is honored for work in streamlining processing, realigning peer reviews, consolidating reporting, enhancing internal and external accountability, and augmenting capacity for districts. Changes resulted in a 40 percent reduction in administration for districts, and a 30 percent reduction for government staff. In addition, the DRO has enhanced internal and external accountability by developing a web-based tracking and management tool, empowered the elimination of a 160-day backlog in the Comprehensive Economic Development Strategy (CEDS) reviews and reduced extensions issued to grantees by 70 percent. Lastly, the DRO doubled the size of its Volunteers in Service to America/ Corporation for National & Community Service (VISTA/CNCS) program, delivering 20,800 man-hours of capacity to districts.



GOLD MEDAL PERSONAL AND PROFESSIONAL EXCELLENCE

Office of Operations Support Office of Policy and Negotiations

Enforcement and Compliance International Trade Administration

Office of the Chief Counsel for Trade Enforcement and Compliance

Office of the General Counsel

The Tomatoes Team in Enforcement and Compliance is recognized for exceptional work in completing the antidumping investigation of tomatoes from Mexico in record time while simultaneously negotiating a new suspension agreement. The signing of the suspension agreement removed a significant obstacle to the successful conclusion of the U.S.-Mexico-Canada Agreement (USMCA). The team not only demonstrated outstanding dedication, professionalism, and teamwork in vigorously enforcing the U.S. trade laws, but also delivered strong results under intense scrutiny and short deadlines.



Gold Medal

PERSONAL AND PROFESSIONAL EXCELLENCE

Industry and Analysis

International Trade Administration

Executive Administration

Technology Services and Innovation International Trade Administration

Office of the Chief Counsel for International Commerce

Office of the General Counsel

The team is honored for its exceptional performance in the 2019 Miscellaneous Tariff Bill (MTB) cycle. The team reviewed an unprecedented 3,500 product petitions for duty suspension, an increase of nearly 40 percent over the last cycle, within an extremely short 90-day period. The team analyzed voluminous data, and identified for each product whether there are U.S. producers who could be harmed by the proposed MTB tariff cuts. The team successfully delivered a 682-page report on time and under budget. The report informed which suspensions would be included in legislation.



GOLD MEDAL PERSONAL AND PROFESSIONAL EXCELLENCE

Trade Policy and Analysis Unit

Industry and Analysis International Trade Administration

Trade Policy & Analysis is honored for outstanding analysis in supporting key Administration trade priorities. The unit established a methodology on downstream study to identify products derived from imports subject to Section 232 duties. TP&A's study identified 13 products that the President added to the duty order. The analysis of an unprecedented number and scope of Section 301 cases has allowed the Administration to use Section 301 duties as leverage in key trade negotiations.



GOLD MEDAL PERSONAL AND

PROFESSIONAL EXCELLENCE

Department of Commerce

Global Markets International Trade Administration

The U.S.-Mexico-Canada Agreement (USMCA) team's exceptional efforts were critical in ratifying the agreement, which serves as a model for future U.S. free trade agreements. The team reviewed and analyzed industry input to ensure its views were taken into consideration. It provided critical data, as well as technical, policy, and legal expertise during negotiations. The team also conducted outreach across the U.S. to educate stakeholders on the benefits of the agreement, ensuring the USMCA's passage in the United States.



GOLD MEDAL PERSONAL AND PROFESSIONAL EXCELLENCE

Office of Policy and International Affairs

International Trade Administration

Office of Standards and Intellectual Property

U.S. Patent and Trademark Office

The Department's World Intellectual Property Organization (WIPO) election team is honored for coordinating successful advocacy by the Secretary, Deputy Secretary, Under Secretaries and other senior officials from multiple bureaus and across dozens of geographic regions to ensure the 2020 election of a WIPO Director General committed to protecting intellectual property (IP) worldwide. The team synchronized efforts of headquarters and field staff to identify and prioritize outreach opportunities. It convened calls with high-level officials, prepared briefing materials, and informed next steps by reporting on results internally as well as to outside agencies.



SILVER MEDAL

PERSONAL AND PROFESSIONAL EXCELLENCE

Padraic Sweeney Natalie Soroka

Industry and Analysis International Trade Administration

The group is honored for its work to expand U.S. exports of mining, agricultural, and construction (MAC) equipment. Mr. Sweeney and Ms. Soroka played an essential role in defining the scope of the MAC Protocol to the Cape Town Convention on International Interests in Mobile Equipment, analyzing the Protocol's likely economic impact, negotiating its text, and liaising with U.S. and international stakeholders and organizations. As a result of their efforts, U.S. exports of MAC equipment are expected to grow by as much as \$100 million per year.



SILVER MEDAL

PERSONAL AND PROFESSIONAL EXCELLENCE

CS India Mid-Atlantic Network Office of South Asia

Global Markets International Trade Administration

This team is honored for its delivery of Trade Winds Indo-Pacific, created for U.S. clients to establish and grow their foothold in the region. The team, consisting of the Mid-Atlantic Network, Office of South Asia, and CS India, shaped a program spanning three challenging markets in the Indian subcontinent to connect U.S. businesses and key international contacts through strategic meetings and educational sessions. The program provided a platform for high-level trade policy meetings between the U.S. Government and the Government of India, and nearly 1,000 business meetings for U.S. companies.



SILVER MEDAL

ADMINISTRATIVE/TECHNICAL SUPPORT

Joan Morgan Leandro Solorzano Joshua Kaplan Colleen Fisher Tatyana Aguirre Sandra Collazo Caroline Chung Michael Mia

Global Markets International Trade Administration

The group is honored for its diligence and hard work in developing the first roadshow series of Asian Development Bank Business Opportunities Seminars in January 2020. The event was unique in its depth of information (featuring three ADB leading experts), but also in coverage, reaching three large metropolitan areas in the United States. The roadshow was created to drive recruitment for the Tradewinds conference, the DOC's largest international event. The three events were attended by more than 200 potential ADB suppliers, and helped identify many new projects where U.S. firms are actively competing for ADB work.

MINORITY BUSINESS DEVELOPMENT AGENCY



Gabriela Morales-Richards

Minority Business Development Agency

Ms. Morales-Richards is recognized for execution of MBDA's "Scale Up Exports" initiative designed to increase U.S. minorityowned firms' participation in the global exports market. Ms. Morales-Richards collaborated with numerous trade partners, agencies, and stakeholders to identify more than \$200 billion in export opportunities for minority-owned firms. Ms. Morales-Richards' efforts contributed to an overall increase to U.S. exports, and expanded the number of minority-owned firms exposed to the global trade market.



GOLD MEDAL

Jacob Taylor

Physical Measurement Laboratory National Institute of Standards and Technology

Dr. Taylor is honored for spearheading the efforts of the Office of Science and Technology Policy to expand and coordinate U.S. Government efforts in quantum information science to ensure continued U.S. global leadership in the fiercely competitive fields of quantum computing, technologies, and communication. Dr. Taylor coordinated with several Federal agencies to craft a comprehensive U.S. policy in quantum science, organized the U.S. stakeholder community, and worked closely with policy teams inside and outside the White House to integrate Administration approaches with legislative efforts.



GOLD MEDAL SCIENTIFIC/ENGINEERING ACHIEVEMENT

Steven Emmerich Daniel Greb Andrew Persily Brian Polidoro Stephen Zimmerman

Engineering Laboratory National Institute of Standards and Technology

The group is recognized for an exceptional research program to elucidate CO emissions from portable emergency generators as a function of generator design, operation, and outdoor weather via laboratory experiments and computer simulations in realistic residential settings. This body of work provided technical leadership to manufacturers and government agencies in direct support of safer generator use, specifically the development of CO emission limits, new generator designs with reduced emissions based on those limits, and industry consensus standards on generator design and use.



GOLD MEDAL SCIENTIFIC/ENGINEERING ACHIEVEMENT

Keith Stouffer Suzanne Lightman Victoria Pillitteri

Engineering Laboratory National Institute of Standards and Technology

The group is honored for outstanding technical leadership in the development and dissemination of industrial control system cybersecurity guidelines and tools that safeguard U.S. and international critical infrastructure and critical industrial processes. These innovative and comprehensive cybersecurity guidelines and tools have stimulated adoption and enabled effective use of cutting-edge cybersecurity methods and technologies in industrial environments, leading to critical infrastructure systems that offer security, reliability, resiliency, and continuity in the face of disruptive incidents.



GOLD MEDAL SCIENTIFIC/ENGINEERING ACHIEVEMENT

Patrick Grother Carina Hahn Kayee Hanaoka Mei Lee Ngan P. Jonathon Phillips Amy Yates

Information Technology Laboratory National Institute of Standards and Technology

The group is recognized for excellence in catalyzing continuous dramatic improvement in face recognition technology through measurement and standards. NIST's Face Recognition program has consistently provided groundbreaking and objective measurements of both the capabilities and the limitations of face recognition technology. Industry has relied on these measurements to guide its technological advancements. Government depends upon these measurements to underpin sound Federal policy.



GOLD MEDAL SCIENTIFIC/ENGINEERING ACHIEVEMENT

Nancy Lin Sandra Da Silva James Filliben Lindsay Harris Zvi Kelman Steven Lund Nathanael Olson Jennifer Verkouteren

Material Measurement Laboratory National Institute of Standards and Technology

The group is recognized for developing standards to improve the decision-making process and response to biological threat agents by first responders. The suite of standards includes standard methods for powder collection, operational guidelines for first responders, and the first NIST live cell reference material. The suite of standards has been refined in field and interlaboratory studies with professional rescue personnel. These efforts have strengthened the national biothreat response and increased quality of results used to support high-stakes public safety decision-making.



GOLD MEDAL SCIENTIFIC/ENGINEERING ACHIEVEMENT

John Barker Jean Philippe Chabot Steven Kline Nicholas Maliszewskyj Andrew Malone James Moyer Douglas Ogg Daniel Ogg Stephen Pheiffer Thuan Thai

NIST Center for Neutron Research National Institute of Standards and Technology

The team is honored for the design, construction, and deployment of the first instrument in the United States for very small angle neutron scattering measurements, an exceptional new tool for characterizing the structure of materials from the nanoscale into the mesoscale. This instrument is yielding new insights into a wide range of technologies including biopharmaceuticals, drug delivery systems, personal care products, advanced polymers, materials for energy conversion and storage, chemical production and separation, advanced data storage systems, and materials for quantum information applications.



Gold Medal

SCIENTIFIC/ENGINEERING ACHIEVEMENT

Ian Coddington Kevin Cossel Nathan Newbury William Swann Eleanor Waxman

Physical Measurement Laboratory National Institute of Standards and Technology

Recognized for pioneering work in dual frequency-comb spectroscopy, and using it to create and translate a revolutionary new approach to methane leak detection and other atmospheric gas sensing with broad applications in defense, agriculture, atmospheric science, and the oil/gas industry. The group transformed a lab experiment to a robust field instrument that can detect gases with 10-100x higher precision and 10-100x longer air paths than existing open-air multi-gas sensors – sensitive enough to detect methane leaks as small as ¼ of a human breath at miles of distance.



GOLD MEDAL SCIENTIFIC/ENGINEERING ACHIEVEMENT

Scott Glancy Emanuel Knill Dietrich Leibfried Andrew Wilson

Physical Measurement Laboratory National Institute of Standards and Technology

The team is honored for breakthrough results at the forefront of quantum computation, a field expected to bring sweeping changes to cryptography, drug discovery, and the modeling of complex systems. Their world's first demonstration of deterministic quantum gate teleportation between physically separated trapped ions, first proposed 20 years ago, represents a critical building block in creating practical quantum computers based on trapped ions, where thousands or millions of quantum bits will need to interact. Their results were highlighted in the May 31, 2019 issue of Science.



GOLD MEDAL SCIENTIFIC/ENGINEERING ACHIEVEMENT

Megan Cleveland Lindsay Harris Hari Iyer Jennifer McDaniel Nathanael Olson Daniel Samarov Peter Vallone Justin Wagner Justin Zook

Material Measurement Laboratory National Institute of Standards and Technology

The group is recognized for developing five human genome reference materials (RMs), associated reference data, and best practices to assess DNA sequencing accuracy, along with establishing the Genome in a Bottle Consortium for stakeholder input. The RMs are the world's most highly characterized DNA materials, with over 2.5 billion measured DNA bases. These metrology tools have greatly accelerated biosciences and biotechnology R&D to translation, such as clinical diagnostics via state-ofthe-art DNA sequencing and personalized treatment of intractable medical conditions such as cancer.



SCIENTIFIC/ENGINEERING ACHIEVEMENT

Linhua Tian Paul DeRose Lili Wang

Material Measurement Laboratory National Institute of Standards and Technology

Recognized for establishing the measurement infrastructure and services for flow cytometry to become a quantitative and trusted measurement technology. Their biometrology outputs included a new measurement unit traceable to SI units and innovative strategies to instill confidence in measurement results, culminating in a NIST measurement service for instrument manufacturers worldwide. This body of work enabled standardization and comparability of data across instruments and laboratories necessary for clinical diagnostics and for accelerating biotechnology development.



SILVER MEDAL

SCIENTIFIC/ENGINEERING ACHIEVEMENT

John Jendzurski

Material Measurement Laboratory National Institute of Standards and Technology

Mr. Jendzurski is recognized for pioneering research and development of test procedures and apparati to measure the performance of traffic-speed-enforcement radar, a universal law-enforcement tool, and for initiating, writing, and shepherding a new documentary standard that includes baseline performance specifications and associated test methods. This new standard is now the basis for measuring and comparing the performance of traffic-enforcement-radar, which is the predominant (> 85 percent use case) traffic-speed measurement tool.



SILVER MEDAL

SCIENTIFIC/ENGINEERING ACHIEVEMENT

Justin Hudson Daniel Keyser Samuel MacDavid Andrew Main Anthony Norbedo Dagistan Sahin Brian Wright

NIST Center for Neutron Research National Institute of Standards and Technology

The group is recognized for successfully designing and implementing a complete and major replacement of obsolete safety relays at the NCNR nuclear reactor, thus averting the possibility of an extended reactor shutdown that would have resulted in the loss of a world-class national resource for neutron research. The redesign required years of planning, assembly, and analysis to ensure improved safety, reliability, and regulatory compliance. This was followed by meticulous scheduling and near flawless execution of the installation of the new circuits during an intense 3-week period in 2019.



SILVER MEDAL

SCIENTIFIC/ENGINEERING ACHIEVEMENT

Elias Baltic Daniel Hussey David Jacobson Jacob LaManna

Physical Measurement Laboratory National Institute of Standards and Technology

The group is recognized for developing a novel imaging system—NeXT—that is the first to combine the power of both neutron imaging and x-ray 3-D tomography into a powerful, single-pass probe for materials structure and composition analysis. This novel technology provides an entirely new approach to resolving longstanding problems in materials science—in particular concrete degradation—and for advancing the state of the art of energy technologies, including fuel cells, lithium batteries, and unconventional shale and gas reservoir geologies.



SILVER MEDAL SCIENTIFIC/ENGINEERING

ACHIEVEMENT

Douglas Bennett James Cline Lawrence Hudson John Mates Marcus Mendenhall Galen O'Neil Daniel Schmidt Daniel Swetz Joel Ullom Leila Vale

Physical Measurement Laboratory National Institute of Standards and Technology

Recognized for innovations transforming the readout of cryogenic sensors and producing best-in-the-world x-ray reference data. The group created a unique system that improves the signal extraction rate from sensor arrays by 400-fold, and pioneered measurement techniques that yield accurate absolute energy measurements with much higher precision over broader ranges than previously possible. These achievements accelerate the impact of x-ray metrology in materials analysis for industrial applications and in nuclear security and astrophysics.



GOLD MEDAL

LEADERSHIP

Ronald Smilek Gregory Johnson Vanessa Griffin Mark S. Paese Jennifer Clapp

National Environmental Satellite, Data, and Information Service National Oceanic and Atmospheric Administration

CAPT Todd A. Bridgeman

Office of Marine and Aviation Operations National Oceanic and Atmospheric Administration

John Leslie

Office of Communications National Oceanic and Atmospheric Administration

The group created and led a program to transfer the NOAA GOES-13 satellite and two antennas to the United States Air Force, and established the infrastructure to operate the satellite. The USAF approached NOAA for support in mitigating a critical gap in their environmental reconnaissance over the Indian Ocean to support various national security initiatives. The group overcame bureaucratic, technical, process, and political challenges to ensure successful transfer of GOES-13 and creation of the infrastructure. This work allows the USAF to better meet national security mission requirements.



Gold Medal

PERSONAL AND PROFESSIONAL EXCELLENCE

P3 Hurricane Hunter Aircrew

Office of Marine and Aviation Operations National Oceanic and Atmospheric Administration

The aircrews are honored for courage, dedication, and heroism during the search and rescue efforts for the marine vessel *Bourbon Rhode* and crew. *Bourbon Rhode* was lost at sea in Hurricane Lorenzo, and the crew abandoned ship in the Atlantic Ocean. The crews of N42RF and N43RF diverted from their missions to conduct and coordinate critical search and rescue operations. The immediate response of these aircrews minimized the growth of the search area, and provided critical coordination between responding surface assets, resulting in the rescue or recovery of seven members of the crew.



GOLD MEDAL PERSONAL AND

PROFESSIONAL EXCELLENCE

Troy Audyatis Shawn Eusebio Todd Nickerson Tom Gaffney Chad Demarest Michael Henry Sarah Heil

National Marine Fisheries Service National Oceanic and Atmospheric Administration

Joseph Heckwolf Charles Green

Office of the General Counsel National Oceanic and Atmospheric Administration

The group is honored for their relentless investigative pursuit of Carlos Rafael, a New England fishing mogul, who illegally misreported approximately 782,812 pounds of fish, telling NOAA that the fish was haddock, or some other abundant species subject to high quotas, when in fact the fish was a species subject to strict quotas. As a result of the investigation, Mr. Rafael was sentenced to 48 months of incarceration, required to forfeit four fishing vessels, pay a \$3 million fine, and completely divest from the commercial fishing industry.



GOLD MEDAL

PERSONAL AND PROFESSIONAL EXCELLENCE

Sean Hastings Todd Jacobs Michael Murray Chris Mobley Claire Fackler Julie Bursek

National Ocean Service National Oceanic and Atmospheric Administration

LT Kristin Raja

Office of Marine and Aviation Operations National Oceanic and Atmospheric Administration

The group is honored for responding effectively and courageously to the deadly fire aboard the dive vessel *Conception* within Channel Islands National Marine Sanctuary (CINMS). Tragically, 34 individuals perished in one of the worst U.S. maritime disasters in modern history. Shock reverberated throughout the CINMS community, calling on the strength and courage of the group to take decisive action with emergency response, salvage, and cleanup activities, while comforting others.



Gold Medal

SCIENTIFIC/ENGINEERING ACHIEVEMENT

H. James Silva Joseph Philip Green Robert Redmon Banghua Yan Changyong Cao Xiangqian Wu R. Renee Smith Dearring Donna McNamara Dejiang Han

National Environmental Satellite, Data, and Information Service National Oceanic and Atmospheric Administration

The NESDIS team is honored for their innovative risk-informed testing to prove instrument flight worthiness. After NOAA's N-Prime satellite was dropped and severely damaged by a NASA vendor, the instruments were left for use on Metop-C. Traditional mission assurance experts recommended costly teardown and refurbishment. The program's alternative assured quality while controlling cost. The tests were creatively designed specifically to rule out hidden faults. Results verification required painstaking research and care. On orbit, the U.S. instruments have already demonstrated forecast improvement.



GOLD MEDAL SCIENTIFIC/ENGINEERING ACHIEVEMENT

Stephen A. Montzka Robert W. Portman Bradley D. Hall James W. Elkins John S. Daniel

Office of Oceanic and Atmospheric Research National Oceanic and Atmospheric Administration

The CFC-11 team is honored for discovering a major violation of the Montreal Protocol, the most successful international environmental agreement. Left unchecked, the violation would have led to substantial delays in ozonelayer recovery. Through creative detective work, the group identified the problem and attributed it in part to Eastern Asia. This challenge to the Protocol has been taken up by the United Nations Ozone Secretariat, and China has announced a comprehensive multipoint mitigation plan. Updated results from the group suggest that these prompt actions are having a beneficial effect.



GOLD MEDAL SCIENTIFIC/ENGINEERING ACHIEVEMENT

Frederick W. Goetz Adam Luckenbach William Fairgrieve Ken Massee Courtney Jensen Matthew Cook Jonathan Lee

National Marine Fisheries Service National Oceanic and Atmospheric Administration

This group is honored for a decade of research leading to commercialization of sablefish aquaculture in the United States. Technology was developed to reduce reliance on wild fish for fingerling production, reliably produce high quality gametes for animal breeding, reduce costs of fry production, and generate all female fish that naturally have enhanced growth compared to males. These efforts overcame major barriers and enhanced profitability of this nascent industry. The broad applicability of these technologies will facilitate development of other marine fish for aquaculture.



GOLD MEDAL SCIENTIFIC/ENGINEERING ACHIEVEMENT

NWS Aviation and Space Weather Services Branch The Space Weather Prediction Center

National Weather Service National Oceanic and Atmospheric Administration

The group is honored for their focus and dedication in quickly analyzing new requirements for space weather services to support the international aviation community. With a November 7, 2019, deadline for operations of these new services looming large, employees of the Space Weather Prediction Center and the Aviation and Space Weather Services Branch came together to define a plan for success. Work included incorporation of prediction models, forecaster applications, training and techniques, and product dissemination.



GOLD MEDAL

SCIENTIFIC/ENGINEERING ACHIEVEMENT

Noah Lawrence-Slavas Adrienne Sutton Stacy Maenner Jones Randy Bott Christian Meinig

Office of Oceanic and Atmospheric Research National Oceanic and Atmospheric Administration

The group is honored for the landmark 13,670-mile mission around Antarctica using an Autonomous Surface Vehicle (Saildrone). The group developed sensors that allowed collection of ocean carbon dioxide flux measurements in areas of the Southern Ocean not observed before, and providing a new capability for monitoring changes in harsh ocean regions critical to global weather and climate. The mission provided novel information about the role of the Southern Ocean in the global carbon budget.



Gold Medal

SCIENTIFIC/ENGINEERING ACHIEVEMENT

Alan Leonardi Margot Bohan

National Weather Service National Oceanic and Atmospheric Administration

Eric Kihn Jennifer Jencks Kelly Stroker Robin Warnken

National Environmental Satellite, Data, and Information Service National Oceanic and Atmospheric Administration

Andy Armstrong Meredith Westington

National Ocean Service National Oceanic and Atmospheric Administration

RDML Shepard Smith John McDonough

Office of Marine and Aviation Operations National Oceanic and Atmospheric Administration

Recognized for leadership and outstanding contributions to a significant cross-agency U.S. marine mapping effort. Achievements include new open-access datasets and high-resolution maps showing unknown or poorly known seafloor, which are key to economic, strategic, and environmental value of the areas, shaping U.S. efforts to establish the full extent of its continental shelf beyond the current exclusive economic zone limits.



GOLD MEDAL SCIENTIFIC/ENGINEERING ACHIEVEMENT

Vijay Tallapragada Fanglin Yang Russ Treadon Jun Wang Geoff Manikin Steven Earle Carissa Klemmer

National Weather Service National Oceanic and Atmospheric Administration

Rusty Benson Lucas Harris Jeffrey Whitaker

Office of Oceanic and Atmospheric Research National Oceanic and Atmospheric Administration

The group is recognized for development and accelerated implementation of a new FV3 dynamic core based state-of-the-art Global Forecast System (GFS) v15.1 in June 2019, replacing a 38-year old spectral model based legacy operational GFS. A modeling system implementation like this typically takes 5–10 years, and the group accomplished it in less than 3 years after the selection of FV3 dynamic core by the Next Generation Global Prediction System (NGGPS) Program. This advancement initiated NOAA's community-based Unified Forecast System for operations and research, and is the cornerstone of the National Centers for Environmental Prediction's production suite for numerical guidance.



GOLD MEDAL CUSTOMER SERVICE

Lower Mississippi River Forecast Center Weather Service Office Vicksburg, Mississippi

National Weather Service National Oceanic and Atmospheric Administration

The organizations are honored for outstanding forecast and decision support services during the historic 2019 lower Mississippi River flood event that was unparalleled in terms of flood extent, flood duration, and level. These conditions created a series of factors contributing to significant economic impacts to navigation, ports, ecosystems, commercial aquaculture, and communities. For 292 days, the NWS provided enhanced forecast and decision support services to the NWS, National Ocean Service, Tennessee Valley Authority, U.S. Coast Guard, U.S. Army Corps of Engineers, U.S. Geological Survey, and regional and state offices for a flood event that surpassed the 1927 and 1973 Mississippi River flood events.



GOLD MEDAL

CUSTOMER SERVICE

Missouri Basin River Forecast Center Weather Forecast Office Hastings, Nebraska Weather Forecast Office Omaha, Nebraska

National Weather Service National Oceanic and Atmospheric Administration

These NOAA/NWS offices are honored for their commitment to lifesaving customer service and forecast performance during Nebraska's worst flood disaster in recorded history, from March 9 to July 14, 2019. These offices provided a seamless, uninterrupted continuity of operations through distributed decisionsupport services, flood forecasts, warnings, and emergencies for numerous local, state, and Federal agencies during 127 days of historic flooding and inundation, which included an unprecedented 8-day emergency evacuation of WFO Omaha.



GOLD MEDAL

ENS Andie Cuiffo

Office of Marine and Aviation Operations National Oceanic and Atmospheric Administration

ENS Cuiffo is honored for exceptional heroism and quick action attending to victims of a serious motor vehicle accident. ENS Cuiffo is a trained EMT (emergency medical technician) and was the first person to render aid after arriving on the scene. ENS Cuffio triaged and treated two semiconscious and bleeding occupants of an SUV after a collision with a semi-tractor-trailer. Using a personal Advanced Life Support trauma kit, ENS Cuffio controlled bleeding and prepped the victims for intravenous insertion while stabilizing a victim's neck. ENS Cuffio updated and assisted emergency medical services until all patients were transported from the scene.



SILVER MEDAL

Barry Thom Michael Tehan Katherine Cheney Patricia Dornbusch Heidi Lovett

National Marine Fisheries Service National Oceanic and Atmospheric Administration

The team is honored for successfully leading a diverse group of states, tribes, and environmental, fishing, and other stakeholders to unprecedented consensus on a shared vision and goals for Columbia Basin salmon and steelhead listed under the Endangered Species Act. This work has laid the foundation for resolving decades-old conflicts and potentially saving millions of dollars spent on litigation that has had limited progress in achieving species recovery.



SILVER MEDAL

PERSONAL AND PROFESSIONAL EXCELLENCE

Michael T. Williams Thomas S. Gelatt Devin S. Johnson Jonathan M. Kurland Rolf R. Ream Rodney G. Towell

National Marine Fisheries Service National Oceanic and Atmospheric Administration

Maura B. Sullivan Molly E. Watson

Office of the General Counsel National Oceanic and Atmospheric Administration

The group is recognized for modernizing the rules for co-management of subsistence use of northern fur seals by NOAA and the tribal governments of St. George and St. Paul Islands. Through diligent scientific and regulatory analyses, the team persevered in changing a regulatory framework that unnecessarily constrained the taking of fur seals for subsistence food and handicrafts. Their work ensures conservation of depleted fur seals while increasing the availability of fresh seal meat for Alaska Natives and legalizing specific subsistence use opportunities that were banned for more than 120 years.

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION



SILVER MEDAL

SCIENTIFIC/ENGINEERING ACHIEVEMENT

Adam Smith Jesse G. Enloe Derek Arndt

National Environmental Satellite, Data, and Information Service National Oceanic and Atmospheric Administration

The group is honored for innovating the partnerships, science, and technology needed to develop and operationalize NOAA's Billion-Dollar Disasters Product platform (www.ncdc.noaa.gov/billions), which is widely used by the public and private sectors. Notably, it is referenced by NOAA and NWS Leadership and the NOAA Chief Economist, the National Hurricane Center's official hurricane cost analysis, the National Climate Assessments, State of the Climate reports, and as the first official U.S. Global Change Research Program (USGCRP) indicator that is both socio-economic and interdisciplinary.



SILVER MEDAL

SCIENTIFIC/ENGINEERING ACHIEVEMENT

Scott Rudlosky

National Environmental Satellite, Data, and Information Service National Oceanic and Atmospheric Administration

Dr. Rudlosky is honored for scientific innovation and leadership in developing the first-ever NOAA satellite-based lightning products. The GLM sensor (Geostationary Lightning Mapper) was first placed into operations on the GOES-16 satellite in late 2016. Considerable technological obstacles were overcome to transform the raw, GLM measurements into useful products. Dr. Rudlosky worked closely with various government agencies, NOAA offices, aerospace contractors, and academic researchers to transform the data into AWIPS (Advanced Weather Interactive Processing System) products that are now an integral part of NWS forecasts.

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION



SILVER MEDAL

SCIENTIFIC/ENGINEERING ACHIEVEMENT

Jeffrey S. Whitaker

Office of Oceanic and Atmospheric Research National Oceanic and Atmospheric Administration

Dr. Whitaker is honored for innovative work on the 200-year Historic Reanalysis project. Dr. Whitaker developed and applied a pioneering method to combine surface pressure observations and numerical weather prediction forecasts to produce historical global weather maps (winds, temperature, and precipitation) from the Earth's surface to the jet stream. As the first 200-year reanalysis that also included uncertainty estimates, the dataset has led to new predictive understanding of weather extremes and changes in climate, including U.S. floods, droughts, blizzards, heat waves, and hurricanes.

NATIONAL TELECOMMUNICATIONS AND INFORMATION ADMINISTRATION



Gold Medal

SCIENTIFIC/ENGINEERING ACHIEVEMENT

Stephen Voran

Institute for Telecommunication Sciences National Telecommunications and Information Administration

Mr. Voran is being honored for leading the creation of WAWEnets, a breakthrough in objective measurement of speech quality and intelligibility. WAWEnets do not need the original speech signal and thus can measure telecommunications systems while they are in use. They remove the constraint of only being able to measure speech quality in a lab or when equipment is out of service, enabling formerly impossible testing – that is, when devices attempt to remove noise (or otherwise enhance speech signals) and no original speech-only signal exists, so testing of the transmitted result is the only viable option.



SILVER MEDAL

LEADERSHIP

Allan Friedman Megan Doscher Travis Hall

Office of Policy Analysis and Development National Telecommunications and Information Administration

The group is recognized for foundationally changing the cybersecurity landscape by leading a first-of-its-kind process to develop a list of ingredients for software, a Software Bill of Materials (SBOM). By knowing the components in software, we can better secure the Internet ecosystem by automating vulnerability detection and patching processes, and taking early action to mitigate risks before wide-scale economic impacts occur. Several Fortune 500 corporations have already adopted NTIA stakeholder-driven guidance on SBOM, including the health-care sector. An ecosystem-wide SBOM is a critical step in securing our national systems against supply chain threats, and securing our next generation 5G infrastructure for advanced virtualized, software-driven environments.

NATIONAL TELECOMMUNICATIONS AND INFORMATION ADMINISTRATION



SILVER MEDAL

PERSONAL AND PROFESSIONAL EXCELLENCE

Jeremy Zollo Brian Hobson Charles Shaughnessy Carlos L'Abbate Christopher Algiere Ryan Oremland April Ward Kristein Finney

First Responder Network Authority National Telecommunications and Information Administration

The group is honored for analysis of communication needs and feedback gathered through hundreds of individual workshops, engagements, and summits with the public safety, industry, government, and academic communities to develop prioritized technology areas for the FirstNet Authority Roadmap, which details and prioritizes the FirstNet Authority's program, activities, and investments in network improvements to ensure the public safety community has the communications tools it needs to save lives and protect communities.

OFFICE OF THE GENERAL COUNSEL



SILVER MEDAL

PERSONAL AND PROFESSIONAL EXCELLENCE

Office of Special Projects Office of the Assistant General Counsel for Employment, Litigation, and Information Office of the Chief Counsel for Economic Affairs

Office of the General Counsel

These organizations are recognized for exceptional performance of their duties and combining their legal talents to defend the Department and the Census Bureau in two simultaneous lawsuits, the Center for Public Democracy et al., v. Census et al.; and NAACP v. Census, et al. In both cases and within weeks of each other, the Government was able to obtain judgments denying preliminary injunction motions that allowed the Census Bureau to proceed in executing the 2020 Decennial Census and implementing its plans without oversight from a United States District Court or an outside entity.

UNITED STATES PATENT AND TRADEMARK OFFICE



GOLD MEDAL

PERSONAL AND PROFESSIONAL EXCELLENCE

Faisal I. Arain John A. Brown Yimin Lu Janardan S. Sapre Al Teymourlouei Paul Zeno

Office of the Chief Information Officer U.S. Patent and Trademark Office

Richard L. Ellis Laura A. Grier Yangmi (Amy) Kim Lisa Stevens

Office of the Commissioner for Patents U.S. Patent and Trademark Office

The group is being honored for exceptional efforts incorporating modern technology and standards to a legacy system, IFW, that was the backbone of patents, managing millions of patent documents for the USPTO. The group designed and implemented a state-of-the-art system involving 1,000+ hours of testing, delivering modern, high availability/disaster recovery, cloud-based storage support to more than 25 patents' systems. This modern implementation resulted in a reduction in annual storage costs of more than \$1.2 million, and provided a high performance, resilient document management system.



Gold Medal

ADMINISTRATIVE/TECHNICAL SUPPORT

Antonio Brown Kenneth Ogden

Chief Information Officer U.S. Patent and Trademark Office

Mr. Brown and Mr. Ogden are honored for exceptional leadership, technical competence, and extraordinary commitment in increasing the stability and availability of USPTO's mission-critical PALM application. The nominees exemplified visionary leadership to deploy state-of-the-art technology ultimately improving speed, efficiency, and reliability of service. Their exhaustive efforts were pivotal to the success of the on-time, under budget project.

UNITED STATES PATENT AND TRADEMARK OFFICE



SILVER MEDAL

PERSONAL AND PROFESSIONAL EXCELLENCE

Charles W. Hunt

Chief Information Officer U.S. Patent and Trademark Office

Mr. Hunt is honored for unique vision and execution in bringing stability to a missioncritical system (X-Search). Mr. Hunt not only envisioned the solution, but was also pivotal in bringing together relevant experts, and leading the team in challenging conventional thinking of aged systems while leveraging tools, analytics, automation, and data to find a solution requiring minimal investment, and saving more than \$1 million in lost quarterly productivity.

RON BROWN EXCELLENCE IN INNOVATION AWARD



Noah Lawrence-Slavas Adrienne Sutton Stacy Maenner Jones Randy Bott Christian Meinig

Office of Oceanic and Atmospheric Research National Oceanic and Atmospheric Administration

The group created a robust, reliable Autonomous Surface Vehicle CO2 sensor system (ASVCO2) for long-term deployments, capable of surviving the forces of 50-foot waves, 80 mph winds, and collisions with icebergs in the Southern Ocean. NOAA's PMEL (Pacific Marine Environmental Laboratory) worked with Saildrone Inc. through a cooperative research and development agreement (CRADA) over several years to test and modify the platform, and develop the ASVCO2 so it could collect robust measurements while the Saildrone reached peak speeds of 8 knots in high-wind conditions.

The Saildrone and ASVCO2 system completed the first autonomous circumnavigation of Antarctica. It collected more than 4,750 air and seawater CO2 measurements over 8 months (including the Southern winter), when ship-based measurements that inform our understanding of Southern Ocean CO2 uptake are severely limited. This mission provided information that alters our understanding of the Southern Ocean as both a source and a sink for atmospheric CO2.

The mission successfully deployed an uncrewed surface vehicle (USV) around Antarctica in both summer and winter conditions. This technological first provides previously uncollectable data for inclusion in models of the global carbon cycle, and a fundamental change in our understanding of the ocean's role in climate change.

The landmark accomplishment will ultimately increase observations and understanding of weather, climate, and ecosystem processes in remote, harsh, and rapidly changing oceanic regions. Preliminary results suggest that there is strong outgassing of CO2 in the austral winter; this finding upends our understanding of the Southern Ocean as a sink for atmospheric carbon. This public-private partnership demonstrated the deep scientific reach of a Federal research lab, and the ability of American industry to manufacture, test, and pilot world-class USVs.

This remarkable achievement truly embodies the spirit and standards held up by Ron Brown.

ACKNOWLEDGEMENTS

Many thanks to those individuals who contributed to the Honor Awards Program:

Department's Incentive Awards Program Manager

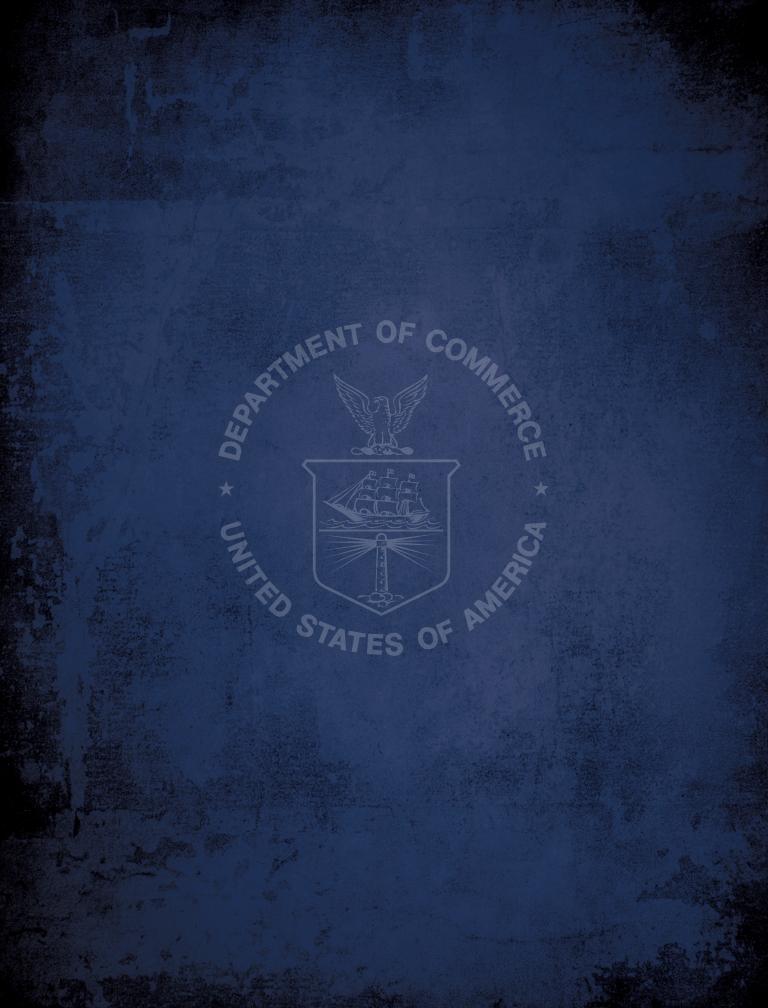
David A. Logan

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Special thanks to:

Mary O'Connor, Human Resources Specialist Richard Houston, Writer/Editor Samantha Murray-Thompson, Visual Information Specialist Mail and Multimedia Division Armed Forces Color Guard





UNITED STATES DEPARTMENT OF COMMERCE