



DEPARTMENT OF DEFENSE

Department of the Navy

**Notice of Availability of Government-Owned Inventions;
Available for Licensing**

AGENCY: Department of the Navy, DoD.

ACTION: Notice.

SUMMARY: The Department of the Navy (DoN) announces the availability of the inventions listed below, assigned to the United States Government, as represented by the Secretary of the Navy, for domestic and foreign licensing by the Department of the Navy.

SUPPLEMENTARY INFORMATION: The inventions listed below are available for licensing: U.S. Patent Number 6,664,915 entitled "Identification Friend or Foe System Including Short Range UV Shield" issued on December 16, 2003; U.S. Patent Number 7,661,271 entitled "Integrated Electric Gas Turbine" issued on February 16, 2010; U.S. Patent Number 6,600,694 entitled "Digital Signal Processor Based Torpedo Counter-measure" issued on July 29, 2003; U.S. Patent Number 6,820,025 entitled "Method and Apparatus for Motion Tracking of an Articulated Rigid Body" issued on November 16, 2004; U.S. Patent Number 6,717,525 entitled "Tactical

Vectoring Equipment (TVE)" issued on April 6, 2004; U.S. Patent Number 6,624,780 entitled "False Target Radar Image Generator for Countering Wideband Imaging Radars" issued on September 23, 2003; U.S. Patent Number 7,725,595 entitled "Embedded Communications System and Method" issued on May 25, 2010; U.S. Patent Number 8,443,101 entitled "Method for Identifying and Blocking Embedded Communications" issued on May 14, 2013; U.S. Patent Number 7,675,198 entitled "Inductive Pulse Forming Network for High-current, High-power Applications" issued on March 9, 2010; U.S. Patent Number 8,018,096 entitled "Inductive Pulse Forming Network for High-current, High-power Applications" issued September 13, 2011; U.S. Patent Number 7,089,148 entitled "Method and Apparatus for Motion Tracking of an Articulated Rigid Body" issued August 8, 2006; U.S. Patent Number 8,085,817 entitled "Automatic Clock Synchronization and Distribution Circuit for Counter Clock Flow Pipelined Systems" issued December 27, 2011; U.S. Patent Number 8,019,090 entitled "Active Feedforward Noise Vibration Control System" issued September 13, 2011; U.S. Patent Number 8,064,541 entitled "Hyperphase Shift Keying" issued November 22, 2011; U.S. Patent Number 8,050,849 entitled "Method to Reduce Fuel Consumption by Naval Vessels that

Operate in Mixed Propulsion Modes" issued November 1, 2011; U.S. Patent Number 8,006,937 entitled "Spacecraft Docking Interface Mechanism" issued August 30, 2011; U.S. Patent Number 7,811,918 entitled "Electric Current Induced Liquid Metal Flow and Metallic Conformal Coating of Conductive Templates" issued on October 12, 2010; U.S. Patent Number 8,467,548 entitled "Miniature Directional Sound Sensor Using Micro-Electro-Mechanical-System (MEMS)" issued on June 18, 2013; U.S. Patent Number 8,579,535 entitled "Micro-coupling Active Release Mechanism" issued on November 12, 2013; U.S. Patent Number 9,003,627 entitled "Micro-coupling Active Release Mechanism" issued on April 14, 2015; U.S. Patent Number 8,654,672 entitled "Method for Optimal Transmitter Placement in Wireless Mesh Networks" issued on February 18, 2014; U.S. Patent Number 8,473,826 entitled "Hybrid Soft Decision Hard Decision Reed-Solomon Decoding" issued June 25, 2013; U.S. Patent Number 8,433,959 entitled "Method for Determining Hard Drive Contents Through Statistical Drive Sampling" issued on April 30, 2013; U.S. Patent Number 8,446,096 entitled "Terahertz (THz) Reverse Micromagnetron" issued on May 21, 2013; U.S. Patent Number 8,624,497 entitled "Terahertz (THz) Reverse Micromagnetron" issued on January 7, 2014;

U.S. Patent Number 8,724,598 entitled "Method for Energy-efficient, Traffic-adaptive, Flow-specific Medium Access For Wireless Networks" issued on May 13, 2014; U.S. Patent Number 8,269,658 entitled "Photonic Analog-to-Digital Conversion Using the Robust Symmetrical Number System" issued on September 18, 2012; U.S. Patent Number 9,194,379 entitled "Field Ionization Based Electrical Space Ion Thruster Using A Permeable Substrate" issued on November 24, 2015; U.S. Patent Number 8,800,930 entitled "Aerial Delivery System with High Accuracy Touchdown" issued on August 12, 2014; U.S. Patent Number 8,730,098 entitled "Method for Radar Detection of Persons Wearing Wires" issued on May 20, 2014; U.S. Patent Number 8,525,393 entitled "Bimaterial Microelectromechanical System (MEMS) Solar Power Generator" issued on September 3, 2013; U.S. Patent Number 8,526,746 entitled "Near Lossless Data Compression Method Using Nonuniform Sampling" issued on September 3, 2013; U.S. Patent Number 8,489,256 entitled "Automatic Parafoil Turn Calculation Method and Apparatus" issued on July 16, 2013; U.S. Patent Number 8,437,891 entitled "Method And Apparatus for Parafoil Guidance That Accounts For Ground Winds" issued on May 7, 2013; U.S. Patent Number 8,818,581 entitled "Parafoil Electronic

Control Unit Having Wireless Connectivity" issued on August 26, 2014; U.S. Patent Number 9,331,773 entitled "Instantaneous Wireless Network Established By Simultaneously Descending Parafoils" issued on May 3, 2016; U.S. Patent Number 8,483,891 entitled "Automatically Guided Parafoil Directed to Land on a Moving Target" issued on July 9, 2013; U.S. Patent Number 8,693,365 entitled "Method and Apparatus for State-Based Channel Selection Method in Multi-Channel Wireless Communications Networks" issued on April 8, 2014; U.S. Patent Number 8,810,121 entitled "Method and Device to Produce Hot, Dense, Long-lived Plasmas" issued on August 19, 2014; U.S. Patent Number 8,746,120 entitled "Boosted Electromagnetic Device and Method to Accelerate Solid Metal Slugs to High Speeds" issued on June 10, 2014; U.S. Patent Number 8,878,742 entitled "Dipole with an Unbalanced Microstrip Feed" issued on November 4, 2014; U.S. Patent Number 9,038,958 entitled "Method And Apparatus For Contingency Guidance Of A CMG-Actuated Spacecraft" issued on May 26, 2015; U.S. Patent Number 8,880,246 entitled "Method and Apparatus for Determining Spacecraft Maneuvers" issued on November 4, 2014; U.S. Patent Number 9,248,501 entitled "Method for Additive Manufacturing Using pH and Potential Controlled

Powder Solidification" issued on February 2, 2016; U.S. Patent Number 9,234,732 entitled "Explosives Storage System" issued on January 12, 2016; U.S. Patent Number 9,417,044 entitled "Explosives Storage System" issued on August 16, 2016; U.S. Patent Number 9,419,920 entitled "Gateway Router and Method for Application-Aware Automatic Network Selection" issued on August 16, 2016; U.S. Patent Number 9,321,529 entitled "Hybrid Mobile Buoy for Persistent Surface and Underwater Exploration" issued on April 26, 2016; U.S. Patent Number 9,418,080 entitled "Method and System for Mobile Structured Collection of Data and Images" issued on August 16, 2016; U.S. Patent Number 9,489,851 entitled "Landing Signal Officer (LSO) Information Management and Trend Analysis (IMTA) Tool" issued on November 8, 2016; U.S. Patent Number 9,534,863 entitled "Electromagnetic Device and Method to Accelerate Solid Metal Slugs to High Speeds" issued on January 3, 2017; U.S. Patent Number 9,552,391 entitled "Apparatus and Method for Improvised Explosive Device (IED) Network Analysis" issued on January 24, 2017; U.S. Patent Number 9,541,401 entitled "Method and System for Determining Shortest Oceanic Routes" issued on January 10, 2017; U.S. Patent Number 9,457,900 entitled "Multicopter Mobile Buoy

for Persistent Surface and Underwater Exploration" issued on October 4, 2016; U.S. Patent Number 9,567,112 entitled "Method and Apparatus for Singularity Avoidance for Control Moment Gyroscope (CMG) Systems Without Using Null Motion" issued on February 14, 2017; U.S. Patent Number 9,594,172 entitled "Solid-state Spark Chamber for Detection of Radiation" issued on March 14, 2017; U.S. Patent Number 9,563,964 entitled "Method for Computer Vision Analysis of Cannon-launched Artillery Video" issued on February 7, 2017; U.S. Patent Number 9,721,352 entitled "Method and Apparatus for Computer Vision Analysis of Cannon-launched Artillery Video" issued on August 1, 2017; U.S. Patent Number 9,727,034 entitled "Unscented Control for Uncertain Dynamical Systems" issued on August 8, 2017; U.S. Patent Number 9,693,325 entitled "Method and Apparatus for Hybrid Time Synchronization Based on Broadcast Sequencing for Wireless Ad Hoc Networks" issued on June 27, 2017; U.S. Patent 9,590,740 entitled "Method and System for Robust Symmetrical Number System (RSNS) Photonic Direction Finding (DF) System" issued on March 7, 2017; U.S. Patent Number 9,530,574 entitled "Super Dielectric Materials" issued on December 27, 2016; U.S. Patent Number 9,788,213 entitled "Method for Interference-Robust Transmitter Placement in

Wireless Mesh Networks" issued on October 10, 2017; U.S. Patent Number 9,711,293 entitled "Capacitor with Ionic-solution-infused, Porous, Electrically Non-conductive Material" issued on July 18, 2017; U.S. Patent Number 9,655,077 entitled "Device and Method for Cellular Synchronization Assisted Location Estimation" issued on May 16, 2017; U.S. Patent Number 9,656,733 entitled "Life Preserver Location System" issued on May 23, 2017; U.S. Patent Number 9,705,383 entitled "Light Activated Generator" issued on July 11, 2017; U.S. Patent Number 9,822,786 entitled "Light Activated Rotor" issued on November 21, 2017; U.S. Patent Number 9,843,858 entitled "Direction Finding System Using Two MEMS Sound Sensors" issued on December 12, 2017; U.S. Patent Number 9,849,785 entitled "Method and Apparatus for State Space Trajectory Control of Uncertain Dynamical Systems" issued on December 26, 2017; U.S. Patent Number 9,865,761 entitled "Emitterless, Back-surface Alternating Contact Solar Cell" issued on January 9, 2018; U.S. Patent Number 9,870,875 entitled "Super Dielectric Capacitor Using Scaffold Dielectric" issued on January 16, 2018; U.S. Patent Number 9,909,843 entitled "Front-Facing Fluoropolymer-Coated Armor Composite" issued on March 6, 2018; U.S. Patent Number

9,911,046 entitled "Method and Apparatus for Computer Vision Analysis of Spin Rate of Marked Projectiles" issued on March 6, 2018; U.S. Patent Number 9,960,956 entitled "Network Monitoring Method Using Phantom Nodes" issued on May 1, 2018; U.S. Patent Number 9,960,715 entitled "Light Activated Piezoelectric Converter" issued on May 1, 2018; U.S. Patent Number 9,969,504 entitled "Automated Multi-plane Propulsion System" issued on May 15, 2018; U.S. Patent Number 9,978,832 entitled "Wide Bandgap Semiconductor Device With Vertical Superjunction Edge Termination for the Drift Region" issued on May 22, 2018; U.S. Patent Number 9,983,585 entitled "Method and Apparatus for Operation of a Remote Sensing Platform" issued on May 29, 2018; U.S. Patent Number 10,020,125 entitled "Super Dielectric Capacitor" issued on July 10, 2018; U.S. Patent Number 9,994,335 entitled "Rapid Unmanned Aerial Vehicle Launcher (UAV) System" issued on June 12, 2018; U.S. Patent Number 10,024,772 entitled "Device and Method for Applying Internal Pressure to a Hollow Cylinder" issued on July 17, 2018; U.S. Patent Number 10,050,731 entitled "Apparatus and Method for Detecting a Multi-homed Device using Clock Skew" issued on August 14, 2018; U.S. Patent Number 10,062,522 entitled "Powder-Based Super Dielectric Material Capacitor"

issued on August 28, 2018; U.S. Patent Number 10,065,312 entitled "Unscented Optimization and Control Allocation" issued on September 4, 2018; U.S. Patent Number 10,095,198 entitled "Closed-Loop Control System Using Unscented Optimization" issued on October 9, 2018; U.S. Patent Number 10,107,891 entitled "Wireless Signal Localization and Collection from an Airborne Symmetric Line Array Network" issued on October 23, 2018; U.S. Patent Number 9,842,957 entitled "AlGaAs/GaAs Solar Cell with Back-surface Alternating Contacts (GaAs BAC Solar Cell)" issued on December 12, 2017; U.S. Patent Number 10,147,543 entitled "Super Dielectric Capacitor Using Scaffold Dielectric and Electrically and Ionically Conducting Electrodes" issued on December 4, 2018; U.S. Patent Application Number 15/941,536 filed on March 30, 2018, entitled "Method and Apparatus for Rapid Acoustic Analysis"; U.S. Patent Application Number 15/453,198 filed on March 8, 2017, entitled "Apparatus and Method for Determining an Orientation of an Inertial/Magnetic Sensor"; U.S. Patent Application Number 15/251,766 filed on August 30, 2016, entitled "High-Altitude Payload Retrieval (HAPR) Apparatus and Methods of Use"; U.S. Patent Application Number 15/375,279 filed on December 12, 2016, entitled "Method of Electrochemically-

Driven Coated Material Synthesis"; U.S. Patent Application Number 15/463,135 filed on March 20, 2017, entitled "Energy Recovery Pulse Forming Network"; U.S. Patent Application Number 15/251,035 filed on August 30, 2016, entitled "Chemical Method to Create Metal Films on Metal and Ceramic Substrates"; U.S. Patent Application Number 15/625,103 filed on June 16, 2017, entitled "Chemical Method to Create High Stability Heterogeneous Carbon-bonded Materials"; U.S. Patent Application Number 15/593,931 filed on May 12, 2017, entitled "Dynamically Tilting Flat Table to Impart a Time-varying Gravity-induced Acceleration on a Floating Spacecraft Simulator"; U.S. Patent Application Number 15/725,025 filed on October 4, 2017, entitled "Systems and Methods for Evaluation of Potentially Irradiated Objects Using Oxygen-17 Detection"; U.S. Patent Application Number 12/460,923 filed on February 26, 2010, entitled "Agile Attitude Control System for Small Spacecraft"; U.S. Patent Application Number 13/374,601 filed on June 22, 2012, entitled "A Method for Amplifying Detonation Power Output By Circumferential Slapper Initiation"; U.S. Patent Application Number 15/857,972 filed on December 29, 2017, entitled "Methane/Oxygen Rocket Engine with Specific Impulse Enhancement by Hot Helium Infusion"; U.S. Patent

Application Number 15/830,560 filed on December 4, 2017, entitled "Continuous Wave (CW) Radar System for Phase Coded Time Delayed Transmit-Receive Leakage Cancellation"; U.S. Patent Application Number 15/827,832 filed on November 30, 2017, entitled "Systems and Methods for Autonomous Operations of Ground Station Networks"; U.S. Patent Application Number 15/928,459 filed on March 22, 2018, entitled "Systems and Methods for Low Temperature Metal Printing"; U.S. Patent Application Number 15/907,453 filed on February 28, 2018, entitled "Image-Matching Navigation Method and Apparatus for Aerial Vehicle"; U.S. Patent Application Number 16/115,316 filed on August 28, 2018, entitled "Apparatus and Method for Locating Camera Towers and Scheduling Surveillance"; U.S. Patent Application Number 15/827,050 filed on November 30, 2017, entitled "Super Dielectric Capacitor Having Electrically and Ionically Conducting Electrodes"; U.S. Patent Application Number 62/637,863 filed on March 2, 2018, entitled "Capacitors Employing Dielectric Material Outside the Volume Enclosed by the Electrodes"; U.S. Patent Application Number 15/909,590 filed on March 1, 2018, entitled "Vertical Burial Containment System"; U.S. Patent Application Number 16/191,871 filed on November 15, 2018,

entitled "Photonic Compressed Sensing Nyquist Folding Receiver"; U.S. Patent Application Number 16/192,434 filed on November 15, 2018, entitled " Method and Substrate for Easy Release of Parts Made by Cold Spray"; U.S. Patent Application Number 15/910,145 filed on March 2, 2018, entitled "Robot Vision in Autonomous Underwater Vehicles Using the Color Shift in Underwater Imaging"; U.S. Patent Application Number 62/629,534 filed on February 12, 2018, entitled "Unconventional Warfare (US) War Game"; U.S. Patent Application Number 62/629,217 filed on February 12, 2018, entitled " Method and Apparatus for Interrupted Persistent Surveillance Using Aerial Multi-rotor Vehicle"; U.S. Patent Application Number 62/678,888 filed on May 31, 2018, entitled "Automatic Gunshot Detection and Suppression Response System"; U.S. Patent Application Number 62/684,889 filed on June 14, 2018, entitled "Method for Applying Fibrous Composite Failure Criteria with Material Degradation to Finite Element Solvers"; U.S. Patent Application Number 62/725,813 filed on August 31, 2018, entitled "Method and Apparatus for a Life Support System"; U.S. Patent Application Number 62/736,302 filed on September 25, 2018, entitled "Method and System for Automated Drone-based Foreign Object Debris Detection and

Removal"; U.S. Patent Application Number 62/760,370 filed on November 13, 2018, entitled "Clock-Skew-Based Covert Channel".

ADDRESSES: Requests for copies of the inventions should be directed to Naval Postgraduate School, Research and Sponsored Programs Office, NPS Code 41, 699 Dyer Road, Bldg. HA, Room 226, Monterey, CA 93943.

FOR FURTHER INFORMATION CONTACT: Ms. Deborah Buettner, Director, Research and Sponsored Programs Office, NPS Code 41, 699 Dyer Road, Bldg. HA, Room 226, Monterey, CA 93943, telephone 831-656-7893. Due to U.S. Postal delays, please fax 831-656-2038, e-mail: dbuettne@nps.edu or use courier delivery to expedite response.

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Meredith Steingold Werner,

Commander,

Judge Advocate General's Corps,

U.S. Navy,

Federal Register Liaison Officer.

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