



## SIS Advances Smart Multi-Robot Autonomy

**Virginia Beach, VA** - Spatial Integrated Systems Inc. (SIS) is pleased to announce the extension of its Unmanned Surface Vehicle (USV) Swarming program under the auspices of the Office of Naval Research (ONR). USV Swarm 2019 will set another benchmark for US Navy USV operations as it will be the first integrated heterogeneous eight USV Swarm of autonomous Very Small (class 1) and Small (class 2) USVs, which will conduct a coordinated mission. The objective is to demonstrate the utility of very small and small, inexpensive USVs that can be produced in large numbers quickly.

Spatial Integrated Systems Inc. (SIS), a Virginia Beach, VA, engineering design and development company, is the lead integrator and demonstration lead for Swarm and its notable preceding demonstrations: Swarm I and Swarm II. In partnership with National Aeronautics and Space Administration (NASA) Jet Propulsion Laboratory (JPL), SIS adapted the intelligent autonomous technologies used by NASA's Mars Exploration Rover Program to meet the requirements of the US Navy. SIS' expansion of intelligent autonomous capabilities for United States defense clients is accelerative and reflects their rapid advancement of autonomous systems.

Swarm I, conducted in 2014, demonstrated the ability for five USVs to perform as a team, under one operator, without safety riders or remote control, "a first for the US Navy". Swarm (2016) built on those cooperative behaviors by demonstrating a different unmanned mission with 4 USVs. During another event in 2018, SIS successfully demonstrated cooperative autonomous behaviors amongst unmanned surface vehicles during a live demonstration with larger ships. These achievements are a dramatic step forward in America's continuing dominance of the maritime battlespace.

SIS is proud to play a leading role in ensuring the Navy's unmatched supremacy in intelligent autonomous systems. SIS Technical Director, Carl Conti, says "We're at a fascinating moment in Naval history. Autonomous systems are emerging as pivotal capabilities on, under, and above the seas. SIS is facilitating breakthrough in this space by leveraging our decades of operational and technical expertise specific with autonomous technologies and missions, and we're driving to ensure this advantage is America's own."

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**About Spatial Integrated Systems:** SIS is a global leader in the development and integration of autonomy solutions incorporating novel robotic and control technologies. SIS has been developing autonomy solutions since 2006 in cooperation with NASA Jet Propulsion Laboratory (JPL). The SIS Autonomy System (SAS) is a behavior-based autonomy control system that provides an intelligent, goal-oriented vehicle control system that can turn any platform into an intelligent robot. Over the last 13 years, SIS has conducted 15 operational demonstrations for the U.S. government in 13 different mission areas with unmanned vehicles (UxV) amassing over 5,000 hours using SAS. SAS has been integrated on 15 different vessel types, over 50 boats, and on UGV and UAV. For more information visit <https://www.sisinc.org/unmanned/>

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