

# Sentinel Robotics Solutions demonstrates communications network for UAS project sponsored by VIPC, VISA and VDEM

*IP-based mesh communications network increases real-time situational awareness in the complex urban and maritime settings at the Port of Virginia.*

RICHMOND, VIRGINIA, UNITED STATES, June 21, 2023 /EINPresswire.com/ -- Sentinel Robotics Solutions (SRS) Group recently demonstrated a fully integrated communications network to increase the capability and utilization of unmanned vehicle systems during the Port Security and Emergency Response

Pilot Project in Hampton Roads. The project is sponsored by the Virginia Innovation Partnership Corporation ([VIPC](#)), the Virginia Institute for Spaceflight at Autonomy (VISA) at Old Dominion University (ODU) and the Virginia Department of Emergency Management (VDEM).

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*Erika Bale, CEO, Sentinel Robotics Solutions*

The demonstration was performed at the Newport News Marine Terminal.

SRS, which is based in Wallops Island on Virginia’s Eastern Shore, deployed an Internet Protocol (IP)-based command and control mesh communications network manufactured by Silvus Technologies. The network transmits high-fidelity voice, high-definition video streaming and high-bandwidth data that enable improved communication and coordination with real-time situational awareness in the complex urban and maritime settings at the Port of Virginia.

“The technology is a force multiplier that provides secure communication and mobile-autonomous air and ground surveillance nodes to safely support and conduct security and emergency response missions,” Erika Bale, the CEO of SRS said. “We



are proud that key unmanned systems components of the demonstration were designed and built on the Eastern Shore of Virginia with seed funding support from previous VIPC grants and VISA opportunity awards.”

The network features an innovative waveform to provide digital communications with exceptional performance and adaptability and operates in denied environments where traditional networks are unable to establish or maintain communication links due to obstructions, restrictions or disruptions. Man-made infrastructure or natural terrain, signal jamming, electromagnetic pulse (EMP) storms, power and communication network failures, or cyber or denial of service attacks may cause a denied environment.



“Unmanned vehicles systems depend on a robust communications network to operate them,” said Tracy Tynan, the director of the Unmanned Systems Center at VIPC. “SRS demonstrated the need for a self-sufficient, dedicated communications network to support first responders during widespread incidents when traditional networks may not be available.”

During the demonstration, SRS utilized the communications network to operate an assortment of surveillance and control nodes the company has developed. They included A combined counter-unmanned aircraft system (UAS) solution with an Echodyne radar to track, identify, and pinpoint the aircraft and the operator’s positions, and the Sentinel

Aerium long-endurance UAS for persistent video monitoring above the demonstration site.

Additionally, a tethered aerostat was equipped with a Silvus handset to establish a communication relay node and increase the network’s coverage area. The Mobile Sentinel, a towable ground operations center for surveillance and gate control, was connected to the Port of Virginia Regional Command Center for operators to conduct the demonstration.

“Reliable communication is the lifeblood for first responders to coordinate and manage resources during an emergency,” said Chris Sadler, the director of the Public Safety Innovation Center (PSIC) at VIPC. “SRS has demonstrated a high-speed data network that quickly collects and relays critical information from unmanned systems for public safety to successfully and safely achieve their missions.”

VIPC, VISA and VDEM launched the Port Security and Emergency Response Pilot Project in 2021 to assess the benefits of unmanned systems to address a set of security and emergency

response challenges identified by public safety agencies from throughout Hampton Roads. The region has the largest population in Virginia and includes six of the state's 10 biggest cities, the Port of Virginia, which is one of the busiest seaports on the East Coast, and several defense and government research centers, such as Naval Station Norfolk and NASA Langley Research Center.

"SRS has addressed several objectives identified by public safety at the onset of this pilot project, including rapid deployment of aerial surveillance during HAZMAT and search-and-rescue missions," said Dr. David Bowles, the director of VISA. "It's impressive that many of these solutions were developed in Virginia, which further demonstrates the state's leadership in unmanned systems technology."

The Center for Naval Analyses (CNA), a federally funded research and development center (FFRDC) headquartered in Arlington that provides research, analysis, and advice to the United States Navy, Marine Corps and Department of Defense, will publish a report analyzing the benefits of the technology demonstrations included in the pilot project. CNA anticipates releasing the report this summer.

About Virginia Innovation Partnership Corporation (VIPC): VIPC: Connecting innovators with opportunities. As the nonprofit operations arm of the Virginia Innovation Partnership Authority (VIPA), VIPC is the commercialization and seed stage economic development driver in the Commonwealth that leads funding, infrastructure, and policy initiatives to support Virginia's innovators, entrepreneurs, startups, and market development strategies. VIPC collaborates with local, regional, state, and federal partners to support the expansion and diversification of Virginia's economy. Programs include: Virginia Venture Partners (VVP) | VVP Fund of Funds (SSBCI) | Virginia Founders Fund (VFF) | Commonwealth Commercialization Fund (CCF) | Petersburg Founders Fund (PFF) | Smart Communities | The Virginia Smart Community Testbed | The [Virginia Unmanned Systems Center](#) | Virginia Advanced Air

Mobility Alliance (VAAMA) | The Public Safety Innovation Center | Entrepreneurial Ecosystems | Regional Innovation Fund (RIF) | Federal Funding Assistance Program (FFAP) for SBIR & STTR | University Partnerships | Startup Company Mentoring & Engagement. For more information, please visit [www.VirginialPC.org](http://www.VirginialPC.org). Follow VIPC on Facebook, Twitter, and LinkedIn.

About VISA: The Virginia Institute for Spaceflight and Autonomy (VISA), located on the Eastern Shore, is chartered to grow the entrepreneurial ecosystems for space flight and autonomy. The Institute is the hub to leverage Virginia's world-class assets in space launch, autonomous systems, modeling and simulation and data science to solve real-world problems. Through industry, academic and governmental agency partnerships, VISA's vision is to create an environment of research, technology, commercialization, and educational opportunities to grow the spaceflight and autonomous systems industry. For more information, please visit [www.visaatodu.org](http://www.visaatodu.org).

About VDEM: VDEM's mission is to lead Virginia's efforts in prevention, protection, mitigation, response, and recovery to save lives and safeguard all Virginians, with a focus on under-resourced communities and equity. We ensure the security and resilience of every community in the state and drive fair mitigation and recovery outcomes. VDEM enhances readiness by planning for all hazards, improving our statewide response system, and conducting joint training and exercises involving local, state, federal governments, private sector partners and NGOs. For more information, please visit [www.vaemergency.gov](http://www.vaemergency.gov).

About SRS: Sentinel Robotics Solutions (SRS) Group is a rapidly growing technology and engineering company located on Virginia's Eastern Shore. With extensive experience in military operations, unmanned systems manufacturing, and private/government sectors, we have the expertise to help businesses thrive. We provide high-quality solutions that revolutionize daily tasks, including the customizable Mobile Sentinel V2.0 network system for safety, security, management and internet service needs. Additionally, our Sentinel Aerium is a fully autonomous UAS system with exceptional flight times, payload capacity, and surveillance capabilities, surpassing industry standards in the government and commercial markets. For more information, please visit [www.srsgrp.com](http://www.srsgrp.com).

Angela Costello, Vice President of Communications  
Virginia Innovation Partnership Corporation (VIPC)  
+1 757-870-6848

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