



## Emergency Alerting System – Technical Capabilities

October 29, 2024

BSS Technologies Inc. is a research and development company that has designed technology to alert authorities in the event of emergencies. An example of our technology is shown below.

Our patented RIPRIDER® unmanned surface vehicle locates and measures rip currents in the surf zone and issues automatic alerts to first responders.

We have also developed during the past year the Swimmer Emergency Alerting System. We have successfully deployed and tested 23 of these systems since July 4, 2024, along 25 miles of Florida beach in Brevard County from Cape Canaveral to Melbourne beach as shown in Figure 1. These systems, when triggered in the case of emergencies, issue alerts to authorized users in the form of text messages, emails, dynamic audio voice calls, and smartphone notifications. These alert messages consist of real-time locations in the form of GPS coordinates and time of event occurrence. Authorized users also have access to real-time dashboard software that enables them to see at a glance the current system health status of each unit and conveniently monitor the emergency alerting system.

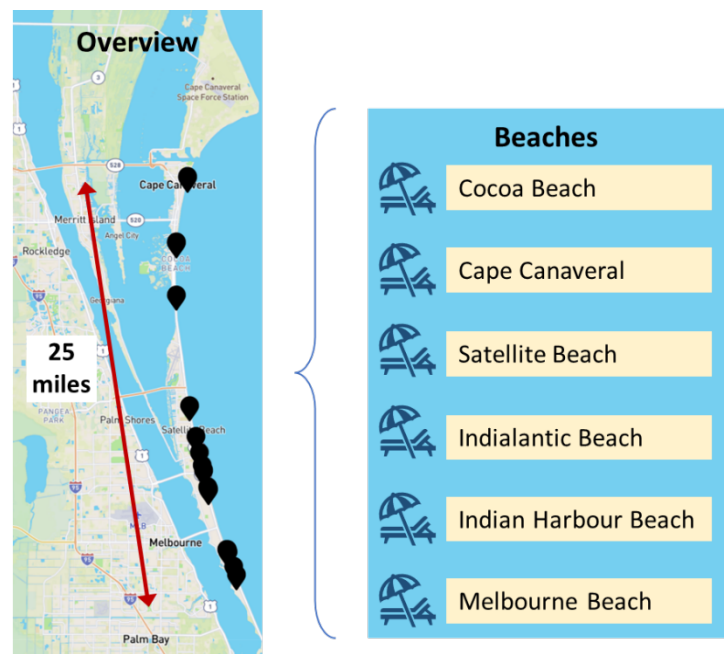


Figure 1. Operational Stations in Brevard County, FL

### **BSS Technologies Inc. Technical Staff:**

Dr. William C. Sandberg, President

Dr. Sunil Kumar Rajendran, Principal Research Scientist

### **BSS Technologies Inc. Capabilities:**

Dr. Sandberg is an Affiliate Faculty in the Dept. of Physics and Astronomy at George Mason University. Prior to starting BSS Technologies he was the Deputy Director of the Laboratory for Computational Physics and Fluid Dynamics at the Naval Research Laboratory where he led research programs on atomic and molecular physics, biomolecular dynamics, nano-fluidics, unsteady hydrodynamics and aerodynamics, submarine dynamics, launch and retrieval of unmanned vehicles, and biomimetics for swimming and flying micro vehicles.

Dr. Rajendran has conducted research and the development of robotics technology for unmanned vehicles, communication technologies such as Internet-Of-Things (IoT), computer-aided design for manufacturing, and product design, electronics technology for embedded systems, and artificial intelligence and machine learning for vehicle control and perception.