

# Forward Edge-AI Leads American AI Innovation for National Defense with Phase II SBIR to Enhance Secure Communications

*Advancing Secure, AI-Driven Communications to Strengthen Naval Dominance and Protect Maritime Operations in Contested Environments*

SAN ANTONIO, TX, UNITED STATES, March 12, 2025 /EINPresswire.com/ -- Forward Edge-AI, Inc.



This initiative aligns with Forward Edge-AI's mission to deliver cutting-edge AI solutions that enhance the safety and security of the free world."

*Eric Adolphe, CEO Forward Edge-AI, Inc.*

(Forward Edge-AI) announces the award of a Phase II Small Business Innovation Research (SBIR) contract by the Naval Air Systems Command (NAVAIR). This contract focuses on developing an advanced [Artificial Intelligence](#) (AI)-driven, adaptive beam-steering antenna system with quantum-resistant cryptology, known as Smart Beam-QRC™. The goal is to enhance the security and resilience of communication channels, including Command and Control (C2) for Unmanned Aerial Systems (UAS), Unmanned Surface Vehicles (USVs), and Unmanned Underwater Vehicles (UUVs)—collectively referred to as UxS, downed

pilots; and mobile Sensitive Compartmented Information Facilities (SCIF) and command centers.

The Smart Beam-QRC technology aims to enable cover operations and secure electronic communications in contested environments, minimizing the risk of detection and interception by adversaries. Key advantages of this solution include enhanced operational security, resistance to jamming, integration of quantum-resistant cryptographic methods, AI-driven adaptive beam steering, and modular design for flexibility and scalability. The University of Texas at San Antonio (UTSA) is a research partner.

Ross Coffman, President of Forward Edge-AI, added: "The Smart Beam-QRC project represents a pivotal advancement in secure communications for unmanned systems. By integrating AI-driven adaptive beam steering with quantum-resistant cryptology, we are setting new standards for operational security in contested environments."

About Forward Edge-AI, Inc.

Forward Edge-AI, Inc. is a pioneering Artificial Intelligence and [cybersecurity](#) company dedicated to advancing public safety, national security and defense capabilities. As the consortium leader for this research project, Forward Edge-AI brings together top experts in AI-driven adaptive communications, quantum-resistant cryptology, and secure autonomous systems to enhance the U.S. Navy's unmanned platforms. With a strong track record of innovation and collaboration, Forward Edge-AI is committed to delivering cutting-edge, mission-critical solutions that ensure secure and resilient operations in contested environments.

#### About the University of Texas at San Antonio

The University of Texas at San Antonio (UTSA) is a Tier One research institution and a leader in cybersecurity, artificial intelligence, and national defense innovation. As a key research partner for this project, UTSA's Wireless Information Networking & Security (WINGS) Laboratory specializes in secure, resilient, and intelligent wireless communication systems, making it an ideal collaborator in advancing AI-driven, quantum-resistant technologies. Through this partnership, Forward Edge-AI and WINGS Lab will develop cutting-edge solutions to enhance the security and operational effectiveness of unmanned naval platforms in contested environments.

Eric Adolphe

Forward Edge-AI, Inc.

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