



## 5G at Sea: AT&T and Naval Postgraduate School to Jointly Research 5G and Edge Computing Solutions

OAKTON, Va., Sept. 16, 2021 –

**What's the news?** AT&T\* and the Naval Postgraduate School (NPS) have entered into an agreement to explore and develop 5G and edge computing-based maritime solutions aimed at benefitting national defense, homeland security, and industries such as shipping, oil and gas, recreational boating and more.

**Why is this important?** The NPS and AT&T experiments with 5G and edge computing are expected to result in the identification of advanced technology solutions such as a connected system of unmanned and autonomous vehicles that can improve critical elements of national defense, such as multi-domain situational awareness, command and control, training, logistics, predictive maintenance and data analytics.

The research includes the use of edge computing: where data is processed locally near a device to speed the completion of computing tasks.

**What type of contract or agreement is there between AT&T and NPS?** The parties entered into a three-year Collaborative Research and Development Agreement (CRADA)<sup>1</sup>. Under the agreement, super-fast, low latency AT&T 5G networking and edge computing capabilities will support a broad array of 5G-focused experiments on NPS facilities incorporating artificial intelligence, robotics, Internet of Things, machine learning, data analytics and smart base solutions.

**Where will the research be conducted?** As part of the CRADA, one initiative is the Naval Postgraduate School's Sea Land Air Military Research ("SLAMR") program. SLAMR conducts activity at Camp Roberts in South Monterey County and, to a lesser extent, on the NPS main campus and at SLAMR's beach lab north of the main campus in Monterey, California.

**What is the focus of the program?** The NPS SLAMR program will explore the development of 5G and edge computing-powered sea applications that connect crewed and non-crewed vessels and sensors. Experiments will be conducted within the SLAMR's multi-



domain laboratory. The program is also focused on providing all-domain maritime solutions for a broad array of defense, industry and commercial applications.

**What type of solution is being tested?** The vision guiding the SLAMR program is to eventually have a command and aquatics operations facility with which to perform localized, unmanned aerial, surface, and underwater robotic vehicle activity. It is expected the facility and some of the experimental vehicles will be connected and powered by AT&T networking capabilities, including 5G and edge computing services.

**How far along is the program?** The placement of AT&T's 5G networking infrastructure is underway at NPS in accordance with a real estate license. It includes a tower and a short-range antenna on a pre-fabricated pad that is to be located at the SLAMR beach lab within walking distance from the main NPS campus. A key goal of the equipment placement is ease of access for faculty and students conducting autonomous vehicle research at a former waste-water treatment facility on the site. The equipment placement at the NPS main campus and SLAMR beach lab was reviewed and approved by applicable Department of Navy (DON) offices<sup>2</sup>.

**Can you provide specific examples of other SLAMR experiments?** Under the CRADA, an NPS Master's Degree student research project involves exploring the possibility of using virtual and augmented reality in combat medical care when medical evacuations are not possible. A separate student-led research project will study the application of 5G-powered waterborne autonomous systems for operations in the littoral environment. The projects have significant potential for military and non-military applications, and are a part of NPS' support to a Department of the Navy effort to help grow a 5G-ready workforce.

**When will the AT&T 5G and edge computing capabilities be operational at the SLAMR site?** We expect the first 5G and MEC nodes to be installed at the SLAMR site and available for use during the first quarter of fiscal year 2022.

**Lance Spencer, Client Executive Vice President – Defense, AT&T Public Sector and FirstNet**

"This is an important program to the future of our national security and defense. We're honored to explore and innovate new AT&T 5G and multi-access edge computing-based maritime applications with the Naval Postgraduate School."



**Mike Galbraith, Department of the Navy (DON) Chief Digital & Innovation Officer**

“5G and multi-access edge computing capabilities are increasingly important in our personal lives and even more important to our warfighters. The collaboration between the Naval Postgraduate School and AT&T will help us explore better, faster means of collecting, disseminating, and analyzing data at the tactical edge, which is vital to maintaining and exploiting battlespace awareness. Experiments conducted under the NPS-AT&T CRADA are expected to complement other DON efforts to apply 5G and Artificial Intelligence (AI) to enterprise and tactical uses.”

**Retired Vice Admiral Ann E. Rondeau, President, Naval Postgraduate School**

“Innovation occurs at the seams and intersections of practice and expertise and NPS provides an innovation hub where this applied 5G research can occur. AT&T’s experience with the existing 5G infrastructure on the Monterey Peninsula will facilitate our collaboration on the next generation of mobile networks. By working alongside experts from our faculty and industry partners, we can apply the operational experience of our graduate students to accelerate and enhance research into 5G-related naval maritime capabilities.”

The Naval Postgraduate School is the Department of the Navy’s applied research university that combines defense-focused interdisciplinary graduate education and solutions-focused research where experimentation and innovation activities can occur. Learn more about the SLAMR program [here](#).

Go [here](#) for more information about AT&T’s work in the public sector.

<sup>1</sup> - *The Collaborative Research and Development Agreement (CRADA) does not imply endorsement of AT&T, its products, or activities by the Naval Postgraduate School, the Department of the Navy, or the Department of Defense.*

<sup>2</sup> - *HERO/HERP/HERF Certification by Naval Ordnance Safety and Security Activity*

**About the Naval Postgraduate School**

The [Naval Postgraduate School](#) provides defense-focused graduate education, including classified studies and interdisciplinary research, to advance the operational effectiveness, technological leadership and warfighting advantage of the Naval service.

**\*About AT&T Communications**

We help family, friends and neighbors connect in meaningful ways every day. From the first phone call 140+ years ago to mobile video streaming, we @ATT innovate to improve lives.

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