

AT&T, Naval Postgraduate School to Jointly Research 5G, Edge Computing Solutions



A Naval Postgraduate School deployment plan for the 5G and edge computing work. *NAVAL POSTGRADUATE SCHOOL*

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.

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.

The parties entered into a three-year Collaborative Research and Development Agreement (CRADA). 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.

As part of the CRADA, one initiative is the NPS' Sea Land Air Military Research (SLAMR) program. SLAMR conducts activity at Camp Roberts in South Monterey County, California, and, to a

lesser extent, on the NPS main campus and at SLAMR's beach lab north of the main campus in Monterey.

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.

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.

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 prefabricated pad 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.