



SUCCESS STORY

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N132-140

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\$1,649,771

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\$3,133,885



Photo Credit: Kris Patterson

COGNITIVE AUTONOMOUS ARTIFICIAL SYSTEM INTELLIGENCE (CAASI)

La Jolla Logic has created a cybersecurity solution capable of proactively detecting novel threats as they arise with Cognitive Autonomous Artificial System Intelligence (CAASI)

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THE CHALLENGE

In an increasingly digital world, the Navy faces more cybersecurity threats than ever before. Adversaries seek to inhibit the Navy’s mission capability through methods such as network attacks, zero-day exploits, and malware. Traditional cybersecurity technology often struggles to address novel threats because it relies on detecting known threat signatures and following predefined rules. To address this challenge, the Navy sought a cybersecurity capability that could keep the fleet mission ready by autonomously identifying unknown and anomalous network traffic behaviors.

THE TECHNOLOGY

Cognitive Autonomous Artificial System Intelligence (CAASI), developed by La Jolla Logic, monitors aberrations in normal network activity, rather than waiting to detect specific threat signatures. CAASI can flag—and in some cases counter—suspicious network activity without input from human security analysts. The system uses unsupervised machine learning to develop a thorough understanding of normal network activity and leverages that understanding to quickly detect change in network conditions.

THE TRANSITION

On March 10, 2014, NAVWAR awarded La Jolla Logic a Phase I contract to begin research and development of automated cybersecurity software designed to reduce analyst workload and proactively adapt to new threats as they emerged. At that time, the proposal was titled Intelligent Situational Awareness for Advanced Cybersecurity (ISAAC). On April 12, 2016, NAVWAR awarded La Jolla Logic the first of two Phase II contracts to develop a functional prototype capable of demonstrating ISAAC’s network monitoring and diagnostic abilities.

Encouraging test results led to a Phase II contract from NAVAIR on March 12, 2019, allowing La Jolla Logic to further integrate ISAAC with Navy testbeds, reduce false positives, and continue evaluating performance in simulated conditions. Between Phases II and III, ISAAC was re-branded as CAASI. On August 9, 2022, NAVSEA awarded La Jolla Logic a Phase III order-dependent contract to continue development, integration, and deployment of CAASI in support of Navy cybersecurity operations. Boecore acquired La Jolla Logic in 2023 and in 2024 Enlightenment Capital initiated a merger of Boecore, La Jolla Logic, Orbit Logic, and Ascension Engineering Group to operate all four companies as one business entity known as Auria.

THE NAVAL BENEFIT

With CAASI, Navy systems can identify and mitigate novel cybersecurity threats more quickly, reducing downtime caused by cyber attacks when compared with traditional cybersecurity solutions. Its built-in analysis and mitigation capabilities allow analysts to focus on legitimate threats while CAASI continuously monitors and maintains standard network operations. CAASI’s high degree of accuracy and real-time analysis help ensure ships remain mission ready.

THE FUTURE

CAASI will continue to be integrated into both onboard and shoreside cybersecurity operations. La Jolla Logic will continue to support and develop the CAASI platform to improve integration with existing Navy technology and support a wider range of mission capabilities. Future development could also enable CAASI to be deployed commercially to businesses and government agencies with cybersecurity needs.