

# Redefining Digital Sovereignty: Next-Generation Quantum Secure AI IaaS and the Protection of Cyber-Physical Systems

## **SPEAKERS**

### **Walt Gall, PhD.**

Walt Gall, Ph.D., is a Co-Founder and Managing Partner at Eminence Grey. A seasoned technology executive, Walt has built and led world-class AI teams across both hardware and software domains, specializing in biologically-inspired, low-SWaP, post-quantum secure computing.

Prior to Eminence Grey, Walt served as Entrepreneur in Residence at The Exploration Institute, where he helped design and deploy TRL-9 AI solutions for NASA and the Department of Defense, including the U.S. Space Force, Navy, Army, and Air Force. He was previously CEO of HyperX Logic, guiding its transition from an aerospace NRE firm to a private-equity-backed AI microprocessor company focused on secure compute and threat intelligence in space.

Walt's deep-tech expertise spans hyperscale and embedded AI systems, with senior leadership roles at Amazon Alexa AI, Meta's AR/VR and AI divisions, and as Chief of Staff at Intel AI. He has managed product operations and strategic roadmaps with >\$1B operational budgets developing and commercializing multimodal assistants, embedded edge AI, and advanced decision support tools for health, financial, and defense applications. His earlier ventures include commercializing machine learning platforms in biotech, medical devices, and enterprise AI, with multiple successful exits. Walt holds a Ph.D. in Molecular Biology from Vanderbilt University and continues to advise early-stage AI startups and venture funds, bridging corporate strategy and mission-focused product innovation.



### **Harley "Trip" Stowell III**

Harley Stowell is a serial entrepreneur, architect of advanced cybersecurity and networking platforms, and a Co-Founder and Managing Partner at Eminence Grey. With over two decades at the forefront of enterprise cloud infrastructure and defense technology, he has led the development of breakthrough platforms including 'Red Cell,' a mobile emergency management system; 'LineSider,' the first software-defined networking platform (acquired by Cisco in 2008); and 'StratOS,' an autonomous, defense-in-depth cybersecurity framework.

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Formerly the CTO for Service Provider Cloud at Cisco, Stowell played a pivotal role in shaping the evolution of network virtualization. At Sea Street Technologies, he pioneered an autonomous cybersecurity fabric designed for scalable, cloud-native deployment across mission-critical environments. In addition to his commercial and technical leadership, Stowell is a committed advocate for national security and veteran causes. He serves on the board of OPTAC-X, supporting satellite-based augmented reality telehealth solutions for military and emergency response. His career reflects deep engagement with venture-backed innovation, advanced data infrastructure, and public-private defense collaboration. Through his continued work with the Special Forces Trust and hands-on contributions to cutting-edge network security architecture, Harley combines visionary technology leadership with a grounded commitment to service.



## **ABSTRACT**

Abstract: The recent rapid scale of distributed AI and the expected launch of quantum computers in the years ahead have exposed critical gaps in legacy cloud and device security. Traditional hyperscale and cybersecurity firewall service infrastructures rely on "selective exclusion" -- reactive perimeter defenses and shared public networks -- leaving cyber-physical systems highly vulnerable to AI-specific threats like data poisoning and quantum-specific risks associated with advanced decryption and other adversarial inputs. At Eminence Grey, we present a paradigm shift to deliver an AI-native Infrastructure-as-a-Service (IaaS) model, built on the principle of "selective inclusion". We will describe an architecture requiring explicit post-quantum cryptographic attestation for every workload, device, and component and how this secures data at rest and in motion for AI/HPC use cases. We will provide an overview of our closed-loop system, which integrates high-density data centers with a Post-Quantum Cryptography (PQC) encrypted 400G private optical fabric. By completely isolating AI environments from public IP networks through strict physical and logical segregation, this vertically integrated approach secures the AI lifecycle, delivering sustainable digital sovereignty and resilient, mission-critical compute for global infrastructure for enterprise, government, and research organizations.