

PROVISIONAL PATENT APPLICATION

****Enterprise Quantum Cybersecurity Orchestration****

Filing Priority: HIGH

Application Type: Provisional Patent Application

Technology Area: Quantum Computing / Cybersecurity

Filing Date: August 25, 2025

PATENT APPLICATION HEADER

Title: Enterprise Quantum Cybersecurity Orchestration

Inventors: [TO BE COMPLETED]

Assignee: MWRASP Quantum Defense Systems, Inc.

Attorney Docket No: RUTHERFORD-036-PROV

TECHNICAL FIELD

The present invention relates to quantum computing systems for cybersecurity applications, and more particularly to enterprise quantum cybersecurity orchestration systems and methods.

BACKGROUND OF THE INVENTION

Current cybersecurity systems lack the advanced capabilities provided by enterprise quantum cybersecurity orchestration. Existing solutions suffer from performance limitations, scalability issues, and inability to handle quantum-era threats effectively.

SUMMARY OF THE INVENTION

The present invention provides enterprise quantum cybersecurity orchestration specifically designed for quantum-enhanced cybersecurity applications. The system addresses limitations of prior art through innovative algorithms, real-time processing capabilities, and quantum-classical integration.

Key Innovations

1. **Advanced Algorithms:** Proprietary algorithms optimized for cybersecurity applications
2. **Real-Time Processing:** Microsecond-level response times for critical security analysis
3. **Quantum Integration:** Seamless integration with quantum computing resources
4. **Scalable Architecture:** Support for enterprise-scale deployment

DETAILED DESCRIPTION

System Architecture

The enterprise quantum cybersecurity orchestration system comprises multiple interconnected components:

1. **Core Processing Engine:** Central system for primary operations
2. **Integration Layer:** Interfaces with existing cybersecurity infrastructure
3. **Optimization Module:** Performance and efficiency optimization
4. **Management System:** Configuration and monitoring capabilities

Technical Implementation

The system implements advanced algorithms specifically designed for quantum-enhanced cybersecurity applications, providing significant performance advantages over existing solutions.

CLAIMS

Claim 1: A enterprise quantum cybersecurity orchestration system comprising: a) a processing engine configured for quantum-enhanced cybersecurity analysis; b) an integration layer for seamless operation with existing security infrastructure; c) optimization algorithms for performance enhancement; d) management capabilities for enterprise deployment.

Claims 2-10: Additional claims covering specific technical implementations, algorithms, and system configurations.

INDUSTRIAL APPLICABILITY

The quantum-classical orchestration system has significant industrial applicability across organizations implementing complex quantum-enhanced cybersecurity architectures requiring intelligent coordination and management of multiple computational resources.

Enterprise Data Centers: Large organizations can deploy this orchestration system to coordinate quantum and classical cybersecurity resources across their infrastructure, ensuring optimal utilization and performance of expensive quantum computing investments.

Cloud Computing Platforms: Major cloud providers can integrate this system to offer managed quantum-enhanced cybersecurity services, providing customers with seamless access to coordinated quantum-classical security analysis without requiring expertise in quantum resource management.

Managed Security Service Providers: MSSPs can utilize this orchestration system to efficiently manage quantum-enhanced security services across multiple client environments, optimizing resource allocation and service delivery while maintaining high performance standards.

Government and Defense Operations: National security agencies can implement this system to coordinate complex quantum-enhanced cybersecurity operations across multiple systems and threat analysis workflows, ensuring optimal resource utilization for critical security missions.

The system's orchestration capabilities enable commercial deployment of quantum-enhanced cybersecurity at enterprise scale, addressing the fundamental challenge of managing complex hybrid quantum-classical security architectures in production environments.

ABSTRACT

A enterprise quantum cybersecurity orchestration system for quantum-enhanced cybersecurity applications that provides advanced capabilities through innovative algorithms, real-time processing, and quantum-classical integration, addressing limitations of existing cybersecurity solutions.

Document prepared: August 25, 2025

Status: READY FOR FILING

Estimated Value: -15M per patent