Amendment Under 37 CFR 1.121

United States Patent and Trademark Office (USPTO)

Applicant: Luis Minier

Phone: 347-459-1502

Email: luismnier79@gmail.com

Independent Researcher

Application No.: 63/749,644

Title: Hybrid Computational Framework for Quantum and Resonance Simulation

Date of Submission: [Insert Date]

Clarification & Amendment Submission

Dear Examiner,

Pursuant to 37 CFR 1.121, the applicant respectfully submits the following clarifications and amendments to the application titled 'Hybrid Computational Framework for Quantum and Resonance Simulation' to further define the underlying principles of resonance Fourier transformations, topological encryption, and geometric computational frameworks without altering the scope of previously submitted claims.

I. Amendments to Specification

1. Resonance Fourier Transform (RFT) as a Topological Model

Existing Text: 'The Resonance Fourier Transform (RFT) processes frequency information to optimize computational resonance states.'

Proposed Clarified Text:

The Resonance Fourier Transform (RFT) extends beyond traditional Fourier analysis by operating within a topological phase-space, rather than a purely numerical frequency domain. Unlike classical Fourier Transforms, which decompose signals into sine and cosine waveforms, the RFT preserves phase-space relationships to encode, transform, and compress symbolic quantum states. This topological transformation framework is applied in computational scheduling, resonance computing, and encryption schemes to achieve non-binary data processing and improved waveform coherence tracking within hybrid symbolic-quantum models.

2. Topological Hashing & Resonance-Based Cryptography

Existing Text: 'Waveform-based hashing ensures data integrity within the resonance framework.'

Proposed Clarified Text:

A topological waveform hashing system is introduced as an alternative cryptographic framework to conventional number-theoretic encryption schemes. Unlike SHA-based hashes, which operate in discrete numerical spaces, the introduced method preserves amplitude-phase correlations across transformations, enhancing entropy and making it resistant to conventional and quantum attacks. The use of resonance amplitudes, phase shifting, and wave interference patterns as security parameters allows for a more dynamically evolving and self-modulating encryption scheme than classical deterministic cryptography.

3. Geometric Computational Data Storage (Beyond Binary Encoding)

Existing Text: 'Data is stored in resonance-based structures for enhanced efficiency.'

Proposed Clarified Text:

A novel geometric computational framework is introduced, wherein data is encoded within tetrahedral and multi-dimensional topological structures instead of binary bitstreams. This method, based on symbolic resonance principles, allows for higher compression rates, enhanced fault tolerance, and improved parallel processing within computational systems. Unlike traditional digital storage methods, which rely on Boolean logic states, the geometric storage model leverages wave-amplitude encoding and phase-resonance alignment to enable continuous-state data processing, reducing storage overhead while enhancing adaptive computing capabilities.

II. Claim Clarifications (Without Adding New Claims)

Claim 1 (Amended):

A hybrid computational system comprising:

(a) A topological Fourier transformation engine, designed to preserve phase-space relationships and operate in a non-binary frequency domain for the optimization of computational resonance states...

Claim 7 (Amended):

A method for quantum-symbolic computing, wherein wave-based encryption is applied through resonance modulations, comprising:

(a) Encoding symbolic states within a geometric computational framework that replaces binary storage, allowing for the preservation of resonance amplitude and phase-based transformations to facilitate an adaptive encryption model robust against quantum attacks.

III. Legal Basis & Request for Examination

These amendments and clarifications do not introduce new claims but rather refine the language to ensure the full scope of the invention is protected. As such, the applicant submits that these amendments comply with MPEP 714.02 and 37 CFR 1.121, permitting updates to the specification and claims without requiring new filing fees.

The applicant kindly requests that these clarifications be considered within the scope of the original application and that the examination proceed accordingly.

Thank you for your time and consideration.

Respectfully submitted,

Luis Mineir

Phone: 347-459-1502

Email: luismnier79@gmail.com

Independent Researcher