

Key Largo Inventor Awarded U.S. Patent for Detecting Frequency-Based Manipulation in Digital Media

At 63, independent inventor Randy Segal secures U.S. Patent for AI-powered technology that detects frequency-based brainwave manipulation in digital media.

KEY LARGO, FL, UNITED STATES, June 17, 2026 /EINPresswire.com/ -- Until late last year, Randy Segal had never written a line of code or filed a patent. Today he holds one.

“

I built this on my own, with AI as my partner, because I believe people deserve tools that can verify what they're being exposed to.”

Randy Segal, Inventor

Segal, a 63-year-old independent inventor working out of Key Largo, today announced the issuance of U.S. Patent No. 12659418, covering a System and Method For Multi-Modal Detection of Cognitive Entrainment Signals In Digital Media (a system that detects light and sound patterns that alter brainwaves). He began the project in mid-December

2025, at age 62, and built every part of it himself — the invention, the patented engine, the iOS application, and the supporting web platform — with artificial intelligence as his sole collaborator.

The patent describes techniques for analyzing audio and visual frequency data and generating a threat assessment when patterns associated with brainwave entrainment ranges are detected. Developed and filed independently in late 2025, the invention addresses a growing area of public concern; the potential for frequency-based content to influence viewers without their awareness. The underlying signal engine was independently calibrated by Florida Standards Laboratory, an ISO/IEC 17025-accredited facility, with NIST-traceable results.

The closest existing framework for comparison is the Harding Test, the broadcast industry's long-standing standard for detecting photosensitive epilepsy triggers, primarily rapid visual flashes in television content. While the Harding Test screens finished video for a single visual hazard affecting a specific at-risk population, Segal's patented system is architected to operate at the core of device operating systems in real time, continuously monitoring all audio and visual data streams as they are processed, across both live and recorded media before exposure reaches the user. It analyzes both audio and visual channels simultaneously, detects the full spectrum of

brainwave entrainment frequencies (0.5 Hz through 30+ Hz), and is designed to be licensable directly into OS-level and platform infrastructure, enabling protection that is always on, for every user, on every screen.

Segal is candid that the work would not have been possible without AI, which he used to develop the signal engine, structure the patent claims, build the iOS app, and architect the full backend platform behind it, putting end-to-end invention within reach of someone with no formal technical background.

"I built this on my own, with AI as my partner, because I believe people deserve tools that can verify what they're being exposed to," said Segal, sole inventor and owner. "I'm 63, I'd never coded or filed a patent before, and I started this last December. I built all of it myself; the system, the app, and the website with AI as my partner, and I think that should give a lot of people hope about what they can still create. Issuing the patent is an important step, and I'm now exploring the best opportunity to bring it forward."



The FreqCheck symbol, featuring the Greek letter "nu" —the standard physics notation for frequency—represents the core technical capability of the newly patented FreqCheck system to identify and alert users to frequency-based manipulation in digital media

The technology is live today in [FreqCheck, a consumer iOS iPhone/iPad application](#) Segal designed and built himself, available in the App Store and at FreqCheck.com, giving users real-time, forensic grade audio frequency awareness in their hands right now. The full patent portfolio is further supported by a continuation patent pending application 19/660,467, along with registered federal copyright protection covering the underlying proprietary codebase and application architecture.

Inquiries regarding licensing or acquisition may be directed to the contact below.

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