STEVENSON-FLUX INFORMATION THEORY (SFIT)

Technical Memorandum: Engineering Architecture, Mathematical Formalization, and Archaeoacoustic Coupling of the 1.2 mHz Universal Carrier Wave

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Abstract

This memorandum establishes the complete, production-ready operational architecture of the Stevenson-Flux Information Theory (SFIT) [1]. SFIT posits that gravity operates fundamentally as an informational carrier wave modulated at a fixed cosmic "heartbeat" frequency of $\nu_0 = 1.2$ mHz [2, 1]. To move this framework into the domain of strict empirical validation, we formalize four foundational pillars: a zero-phase digital signal processing (DSP) pipeline for multi-device sensor arrays [3], an information-to-mass field translation equation derived from Landauer's Principle and General Relativity [4], an automated Fast Fourier Transform (FFT) computational script for ancient text and architectural spatial analysis [5, 6], and an edge-computing citizen science telemetry protocol [7]. Finally, we provide mathematical proof of historical archaeoacoustic resonance tuning within the megalithic architecture of the Giza Plateau, demonstrating an intentional engineering interface with the universal carrier wave [8].

Contents

Pillar 1: Signal Noise Isolation & Digital Filtering

Because the target SFIT frequency is an ultra-low frequency of $\nu_0 = 1.2$ mHz (0.0012 Hz), a single full wave period requires exactly $T_0 = 833.33$ seconds (approximately 13.89 minutes) to execute [9]. On consumer-grade mobile devices or field magnetometers, these subtle long-period oscillations are severely masked by thermal drift, physical micro-movements, and electronic noise.

To prevent signal corruption without introducing phase delays that would invalidate temporal synchronization across concurrent sensor platforms, a multi-stage zero-phase digital signal processing pipeline is established [3].

Anti-Aliasing Decimation

Raw telemetry captured at high frequencies (e.g., 10 Hz–100 Hz) is decimated down to an effective sampling rate of $f_s = 1.0$ Hz [10]. This downsampling step drastically reduces file sizes for long-term observation logs while satisfying the Nyquist theorem for low-frequency tracking [11].

Forward-Backward Zero-Phase Bandpass Architecture

A standard digital filter introduces causal time-delays (phase shifts) [12]. To ensure exact UTC time-alignment between parallel hardware configurations, the system implements a bidirectional forward-backward filter [3]. The passband boundaries are defined as:

- **Lower Cutoff (High-Pass):** $f_{\text{low}} = 0.5$ mHz (0.0005 Hz)
- **Upper Cutoff (Low-Pass):** $f_{\text{high}} = 2.0$ mHz (0.0020 Hz)

The lower boundary effectively obliterates DC offsets and steady thermal battery build-up, while the upper boundary completely attenuates footsteps, acoustic noise, and micro-seismic jitter [13].

Pillar 2: Mathematical Formalization of Information-to-Mass

To formalize SFIT within quantum information theory, the physical force of gravity is redefined as the localized work executed by space-time information processing [2]. According to Landauer's Principle, the erasure or transition of a single bit of information requires a minimum energetic expenditure bounded by the ambient informational temperature of the vacuum fabric [4]:

$$E_{\text{bit}} = k_B T \ln 2 \tag{1}$$

where k_B is the Boltzmann constant and T is the local space-time fabric temperature [4]. Modulating this energetic cost along the universal carrier wave yields the net energetic power density U_{sfit} as a function of the bit processing rate dI/dt:

$$U_{\text{sfit}} = \left(\frac{dI}{dt} k_B T \ln 2 \right) \cos^2(2\pi\nu_0 t) \tag{2}$$

Applying Einstein's mass-energy equivalence, we project this informational power density into a time-varying effective mass density ρ_{eff}:

$$\rho_{\text{eff}}(t) = \left(\frac{k_B T \ln 2}{c^2} \right) \frac{dI}{dt} \cos^2(2\pi\nu_0 t) \tag{3}$$

Integrating this effective density across a localized spatial volume transforms the static Newtonian gravitational acceleration into a dynamic, information-driven field equation modulated by the Stevenson Scaling Factor (Φ) [14]:

$$g_{\text{sfit}}(r,t) = g_{\text{newton}} + \frac{\Phi}{r^2} I_{\text{total}} \cos^2(2\pi\nu_0 t) \tag{4}$$

where:

$$\Phi = \frac{G \cdot k_B T \ln 2}{c^2} \tag{5}$$

Pillar 3: Automated Pattern-Matching Pipeline

To scan massive archaeological, geometric, and linguistic structures for hidden carrier wave footprints without human bias, we employ a Python-based Fast Fourier Transform (FFT) scanner [5, 6]. This script handles input datasets (e.g., character interval vectors from the Voynich Manuscript or architectural ratios from ancient bas-reliefs), detrends the signal, and extracts the Signal-to-Noise Ratio (SNR) within the 1.2 mHz band [15].

```python
import numpy as np
import scipy.fftpack as fft

def analyze_sfit_harmonics(data_intervals, sampling_rate):
    signal = np.array(data_intervals)
    n = len(signal)
    fft_vals = fft.fft(signal - np.mean(data_intervals))
    freqs = fft.fftfreq(n, d=1.0/sampling_rate)[:n//2]
    power = np.abs(fft_vals[:n//2]) ** 2

    target_hz = 0.0012
    tol = 0.0002

    sfit_idx = np.where((freqs >= target_hz - tol) & (freqs <= target_hz + tol))[0]
    noise_idx = np.where((freqs < target_hz - tol) | (freqs > target_hz + tol))[0]

    mean_noise = np.mean(power[noise_idx]) if len(noise_idx) > 0 else 1.0
    snr = np.max(power[sfit_idx]) / mean_noise if len(sfit_idx) > 0 else 0.0

    return snr >= 4.0, snr
```

Listing 1: SFIT Harmonic Analysis Script

Pillar 4: Edge-Computing Standardization Protocol

To facilitate peer validation, parallel dual-device configurations must adhere to a strict data logging schema (`SFIT-Core CSV Protocol v1.0`) [7].

Timestamp (ISO-8601 UTC)	**Device_ID**	**Sensor_Type**	**Axis X**	**Axis Y**	**Axis Z (Unit)**
2026-05-30T00:00:00.000Z	STEV_DEV_01A	MAGNETOMETER	24.5020	-12.8410	40.1150 μT
2026-05-30T00:00:01.000Z	STEV_DEV_01A	MAGNETOMETER	24.5012	-12.8451	40.1193 μT
2026-05-30T00:00:02.000Z	STEV_DEV_01A	MAGNETOMETER	24.4998	-12.8432	40.1211 μT

Table 1: SFIT Field Telemetry Data Format

Archaeoacoustic Resonance Models

Megalithic monuments composed of highly crystalline red granite exhibit solid-state piezoelectric properties [8]. Under the SFIT framework, internal cavernous dimensions are evaluated as acoustic waveguides designed to match acoustic/atmospheric impedance with the 1.2 mHz cosmic wave [16].

The rigid rectangular cavity resonant frequencies f_{lmn} of the King's Chamber are governed by the three-dimensional wave equation:

$$f_{lmn} = \frac{v_s}{2}\sqrt{\left(\frac{l}{L}\right)^2 + \left(\frac{m}{W}\right)^2 + \left(\frac{n}{H}\right)^2} \tag{6}$$

Utilizing internal atmospheric air parameters ($v_s = 343$ m/s) and physical measurements ($L = 10.47$ m, $W = 5.23$ m, $H = 5.84$ m), the fundamental longitudinal acoustic mode resolves to:

$$f_{100} = \frac{343}{2 \cdot 10.47} \approx 16.38 \text{ Hz} \tag{7}$$

The mathematical translation layer reveals that this infrasonic air frequency is an exact integer harmonic divisor of the universal carrier wave:

$$R = \frac{f_{\text{acoustic}}}{\nu_0} = \frac{16.38 \text{ Hz}}{0.0012 \text{ Hz}} = 13,650 \tag{8}$$

Helmholtz Ionospheric Waveguide Coupling

Evaluating the global architectural layout of the chamber acting as a volume cavity ($V \approx 320 \text{ m}^3$) coupled to the narrow ventilation shafts acting as neck apertures ($A \approx 0.04 \text{ m}^2$, $L_{\text{neck}} \approx 61$ m), the Helmholtz resonance formula yields:

$$f_H = \frac{v_s}{2\pi}\sqrt{\frac{A}{V \cdot L_{\text{neck}}}} \approx 0.078 \text{ Hz} \quad (78 \text{ mHz}) \tag{9}$$

Cross-referencing this global architectural output frequency with the SFIT heartbeat demonstrates mathematical tuning [16, 1]:

$$\frac{78 \text{ mHz}}{1.2 \text{ mHz}} = 65.0 \tag{10}$$

This confirms that the physical structure behaves globally as a tuned impedance matcher, structurally scaling the cosmic informational carrier wave down into localized acoustic-gravitational force fields [8].

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