

# The Pyramid Electric Generator

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## Abstract

We describe here an electric generator capable of harvesting power from Earth's electric field. The generator comprises a geometrically optimized square base pyramid-shaped antenna connected to a set of coils near the pyramid's apex. The coils consist of a coil of high turn number (secondary coil) positioned coaxially within the primary coil; together, these function as a resonant step-up transformer winding, as they are inductively coupled and connected to the pyramidal antenna, which acts as a quasi-capacitive series element coupled to the surrounding space to provide a specific resonant frequency. The primary coil is connected to an AC driver operating in the LF radio band. Activating the primary coil drives the pyramid to a high AC voltage essential for its power attraction function. A power of over 7000VA and an apparent power gain of nearly one hundred-fold have been measured in the secondary coil relative to the input power. We have also established the operating principles for the pyramid electric generator.

## Introduction

We have introduced a new theory of space, energy and matter that predicted that electromagnetic interaction propagates through a carrier medium called the space lattice that is made up of pulsating, phi-based spiral vortices (STAR), the excitation of which generates propagating sinusoidal lines of force across the space lattice recorded as electromagnetic waves by our instruments.<sup>1,2</sup> We have also predicted that natural pressure gradients exist within the space lattice that can be used for power generation by inserting a capacitor into such gradient. Furthermore, we proposed that a pyramid-shaped capacitor is an optimally shaped device for tapping the energy gradient of the space lattice that manifests in the form of an electrical potential gradient in Earth's atmosphere. This was demonstrated subsequently.<sup>3-5</sup> We also found that the pyramid-shaped capacitor design should be based on ratios of pi and phi<sup>5</sup> because electrical energy propagates along a phi-based spiral.<sup>6</sup>

We suggested that elemental particles are composed of STAR oscillators that make up the space lattice by electromagnetic compression of its elemental cubes into pulsating conical/vortexual subunits that form the basis for all particles of matter.<sup>1,2</sup> We proposed that atomic and subatomic oscillators could vibrate in a very wide frequency range from sub-acoustic to extremely high EM frequencies.<sup>1,2</sup> This does not mean that material bodies can take or maintain a physical form at any energy level, but this allows the recycling of atoms into the space lattice as part of their natural evolution.<sup>2,6</sup>

Atomic oscillators are constantly in motion, and such motion is electric because all motion and energy is fundamentally electric.<sup>2,6</sup> It is known that atomic bodies con-

stantly exchange electric energy. Such energy flow can be harvested when the spiral physical nature of electric waves is recognized. Russell observed that energy always moves during its generative cycle in spirals towards the higher potential<sup>7</sup>; therefore, we reasoned that an "attractor" of high electric potential must be provided to pull in the random electromagnetic emissions of atomic oscillators. The "attractor" must function as a phi-based antenna/waveguide to focus the phi-based electric emissions of atomic bodies into the apex of a vortex, the same method Nature uses for power multiplication.<sup>6,7</sup> Therefore, a phi-based pyramidal antenna/waveguide must be at a high voltage in order to perform its attractor function.

As all material manifestations are tonal,<sup>8</sup> acoustic vibrations are always generated during the oscillations of atomic bodies, even though they are inaudible most of the time. Sometimes, however, they are detected; one such example is Earth's hum.<sup>9-11</sup> Earth's solid mass and its atmosphere represent a coupled resonant system, and is therefore our expanded target power source. Acoustic waves are also electrical<sup>8</sup> and can be harvested. To achieve this goal, the geometrically optimized pyramidal antenna/waveguide must be connected to an oscillator that operates at a high voltage and is

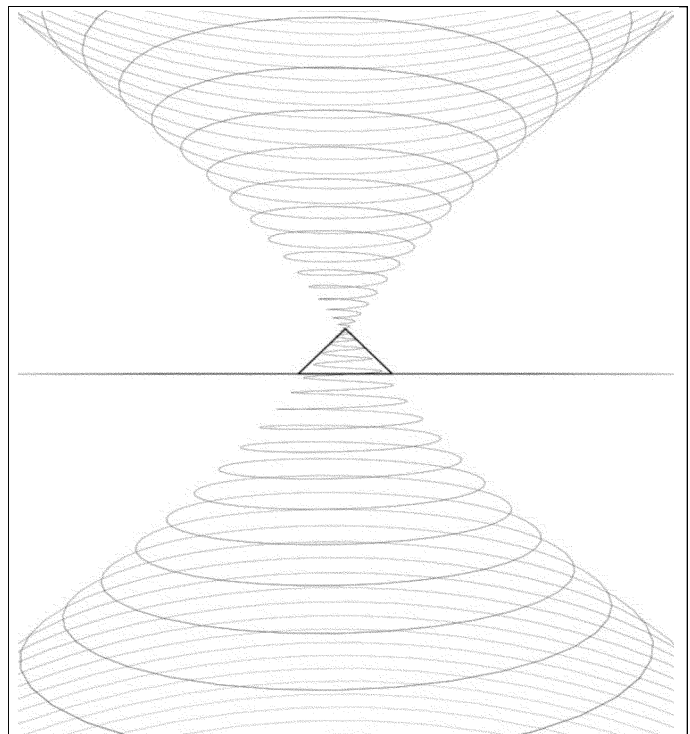


Figure 1. Proposed electric vortices propagating across the pyramidal antenna/waveguide.

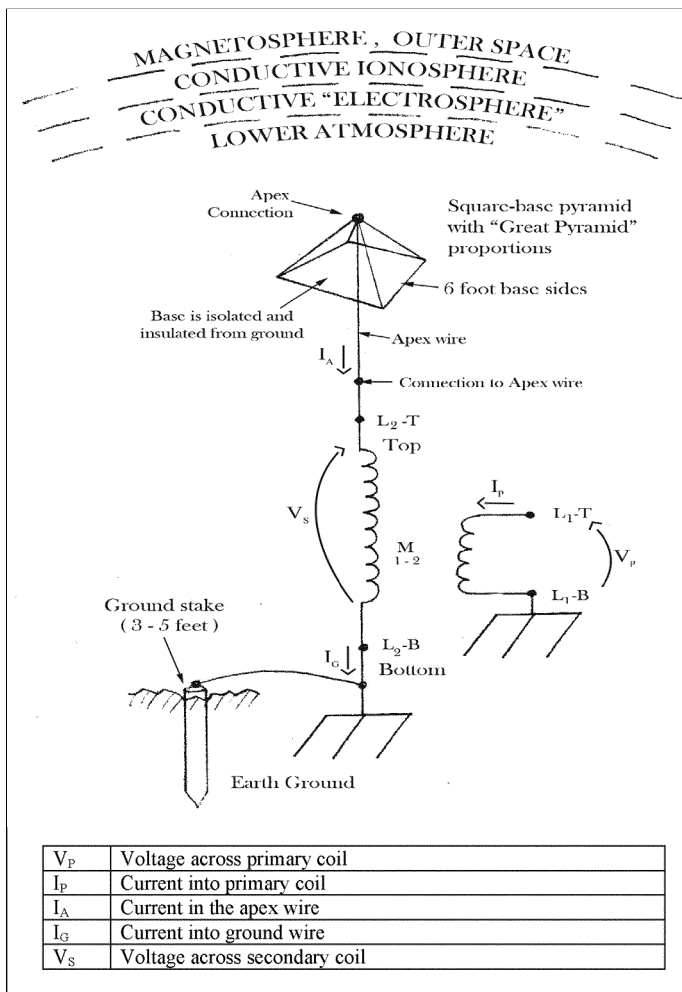


Figure 2. Circuit diagram of the pyramid generator.

tuned to a suitably selected frequency.

The appropriate resonant frequency is dictated by practical considerations. Atomic oscillators can vibrate in a very wide frequency range<sup>1,2,6-8</sup> but short wavelength radiations are readily re-absorbed by atoms and are rapidly attenuated; therefore, long wavelength electromagnetic emissions must be targeted. The operation of the pyramid generator is feasible in the ELF to the LF range. As electric radiation propagates in a vortex,<sup>2,6-8</sup> the emitted electric vortex over the pyramidal antenna (Figure 1) increases its "size," and so it is capable of funneling atmospheric electromagnetic emissions of the same frequency back into the antenna/receiver. Thus, the pyramid electric generator could capture the energy emitted by both telluric and atmospheric atomic oscillators. We have tested these assumptions and demonstrated the basic principles of an electric generator.

## Methods and Results

In our previous papers, we reported that a pyramid-shaped capacitor/antenna converts atmospheric electrostatic discharge impulses (ESD) into a periodic high-frequency signal that can be detected in an insulated coil placed in proximity of the capacitor.<sup>3,4</sup> Here, we report on further developments including a new design for the resonant coil system and an expanded range of energy sources targeted. A Tektronix TPS 2024 digital oscilloscope was used for signal acquisition and analysis, and Tektronix A503 current amplifiers were used with the Tektronix A6302 and A6303 probes

Table 1. Physical and electrical parameters of the resonant transformer.

Secondary turns of wire	840 turns
Height	0.85 m
Wire diameter	0.00081 m
Primary turns of wire	5+9/10 turns
Height	0.21 m
Wire diameter	1/4" O.D. copper pipe with 0.030" wall thickness
Primary	
Inductance	98 $\mu$ H
Resistance	0.118 ohms
Secondary	
Inductance	24.16 mH
Resistance	24.42 ohms
Capacitance	1040nF
Winding ratio	1:142
Mutual inductance	6.13 mH

for current measurement. High voltage was measured using a Tektronix P6015 probe. An ENI-1140LA amplifier was used to activate the primary coil of the resonant coil system at the selected frequency.

For the experiments, we used a geometrically optimized pyramid-shaped antenna/waveguide.<sup>3-5</sup> The pyramid expressed ratios of pi and phi and was approximately a 1:125 scaled down replica of the Great Pyramid of Giza, 6 feet base length. The pyramid was built of a wooden frame and covered with triangular copper sheets of 0.66mm thickness on its sides that were electrically connected. It was placed on an insulating base and positioned in the general North-South direction.

The secondary coil (coil 2) was wound with a 20 AWG insulated magnet wire with a monofilament nylon spacer (0.06mm diameter) between the turns on a fiberglass cylindrical coil form, and connected to the conducting surface of the pyramid near its apex. Thus, the secondary coil was connected with the pyramidal antenna/waveguide as a quasi-capacitive series element to provide a specific resonant frequency with coupling to the surrounding electromagnetic environment. The other lead of coil 2 was grounded (Figure 2). The purpose of the monofilament spacer was to reduce interwinding capacitance in coil 2 by increasing distance between wire turns of the coil.

A primary coil of larger diameter (coil 1) was wound on or near the lower cylindrical volume of coil 2 with the lead connected to Earth ground, and served as a driver coil inductively coupled with the secondary (coil 2). The secondary was isolated from the primary by layers of silicon rubber and foam. The two coils make a resonant step-up transformer, the parameters of which are shown in Table 1.

In the experiment, the controlled variable was the voltage, which was increased in steps until the maximum voltage in the secondary (permitted by circuit components and test equipment) was achieved for the given resonant frequency. The objective was to "drive the atmosphere" by radiating a high voltage (~20kV p-p), LF (40-120 kHz) signal developed by the high ratio step-up transformer and fed by a powerful signal generator at a resonant frequency either with an L-C resonant secondary coil, or a resonance determined by the pyramid as a quasi-capacitive series element connected to the secondary coil of the transformer and radi-

**Table 2.** Power measurements in the pyramid-resonant coil system.

Primary							
Frequency (kHz)	83.00						
$V_{P\text{ RMS}}$	3.97	9.86	20.3	26.7	33.8	39	40.8
$I_{P\text{ RMS}}$ (mA)	87.6	300	792	1117	1389	1541	1838
$I_P$ angle with respect to $V_P$	18°	14°	22°	23°	21°	20°	28°
Total power (VA)	0.35	2.95	16.02	29.70	46.77	59.95	74.75
True power (W)	0.33	2.87	14.85	27.35	43.66	56.34	66.01
Secondary							
$V_{S\text{ RMS}}$	341	1150	3540	4670	6220	7140	7710
$I_{A\text{ RMS}}$ (mA)	62.2	193	438	579	728	834	919
$I_A$ angle with respect to $V_S$	42°	44°	52°	52°	54°	53°	52°
Total power (VA)	21.2	222.8	1552	2707.8	4530.2	5957.5	7087.3
True power (W)	15.7	160.3	956	1668.1	2664.5	3587.6	4366
Power sec/prim	61.1	75.4	96.9	91.2	96.9	99.4	94.8

ating to the local atmosphere. The experimental data are shown in Table 2. The current readings were also confirmed by using “current sensing” resistors (not shown). An apparent power gain of nearly 100-fold was achieved in the secondary coil relative to input power in the primary coil, and a linear increase of power in the secondary coil with the increase of input power into the primary coil (Figure 3). The power in the secondary coil exponentially increases with the pyramid apex voltage (Figure 4).

A load may be connected to coil 2 to draw power from the system. The load may also be connected via a tertiary coil inductively coupled to the secondary coil. The load may be a resistor, a rectifier or storage capacitor powering a DC load.

A graphic representation of the test system is shown in Figure 5. The pyramidal antenna/waveguide, placed on an insulating base, is coupled to the surrounding electromagnetic environment and serves as an antenna/waveguide for the concentration of atmospheric and telluric electromagnetic oscillations at resonance frequency. As the flow of electric energy is always balanced,<sup>6</sup> two vortices may cross the pyramidal antenna: one from the direction of the ground concentrating into its apex and another one from its apex propagating into the atmosphere (Figure 1). The atmospheric electric vortex possibly acts as an ionic antenna pulling in EM radiations from a large atmospheric domain.

The pyramid’s apex is attached to a coil of high turn number (Figures 2 and 4). This secondary coil wound on a non-conductive coil form serves as a step-up transformer, and forms a resonant circuit with the pyramid that acts as a quasi-capacitive series element. The secondary coil is acti-

vated by a signal from an RF generator via a primary coil of a few turn numbers inductively coupled to coil 2. The measurement points are also indicated, displaying the positions of voltage and current probes. The data are captured by a digital oscilloscope and recorded on a laptop computer.

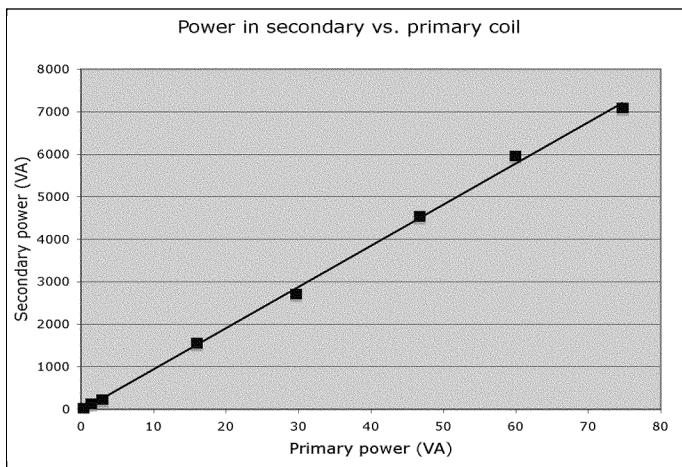
## Discussion

This study demonstrates a novel approach to harvest Earth’s electric energy, including the rational design principles of a “free-energy” device. The masses of Earth and its atmosphere represent a coupled resonant system that is continually electrified by solar radiation. We have found that a pyramidal antenna designed based on the ratios of phi and pi is optimal for the capture of atmospheric electrostatic discharge (ESD) impulses.<sup>3-5</sup> Atmospheric ESD is a product of solar radiation and is a wide bandwidth phenomenon. The pyramid as a wideband, non-resonant antenna is uniquely adapted to harvest the energy of atmospheric ESD.

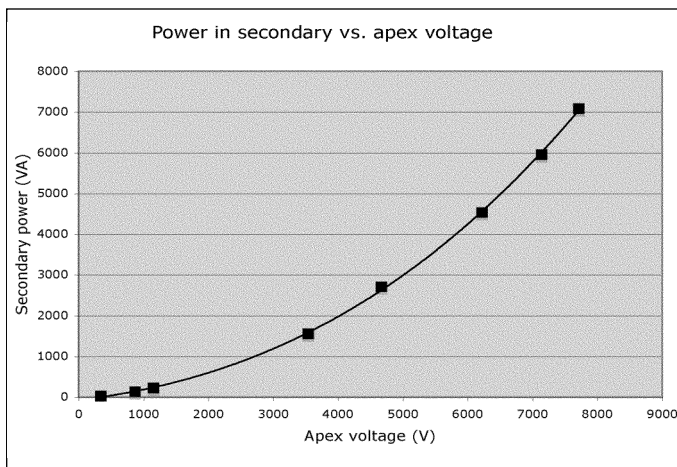
This study also points out an additional energizing mechanism at work during the operation of the pyramid electric generator. The observation is derived from our theory on energy, matter and space<sup>1,2</sup> as well as that of Russell.<sup>6,7</sup> Both Russell and we observed that spiral motion is a fundamental action of matter and that the vortex is the mechanism of power multiplication in Nature. A vortex concentrates power into its apex where the highest velocity of motion, the highest pressure and the highest electric potential resides.<sup>1,2,6,7</sup> As electricity propagates along a pulsating phi-based spiral,<sup>6,7</sup> a phi-based antenna/waveguide is suitable to focus its energy into the apex of a vortex inside the antenna. A phi-based pyramid is optimal for this purpose.

As atomic bodies can oscillate in a very wide frequency range,<sup>1,2,6-8</sup> a pyramidal antenna/waveguide coupled to an oscillator that is tuned to a suitable frequency can focus the “electric noise” from Earth’s atomic oscillators into the apex of the pyramid that is at a high voltage. Russell observed that energy moves towards the higher potential during its generative cycle<sup>7</sup>; therefore, it is essential that the pyramidal antenna be at a high potential. Our data corroborated this assumption.

To select a suitable frequency range, one can begin with the observation that all material manifestations are tonal,<sup>8</sup> and that acoustic frequencies are always generated during the oscillations of atomic bodies even though they remain inaudible most of the time. Acoustic waves are also electric<sup>8</sup>



**Figure 3.** Power in the secondary coil as a function of power in the primary coil.



**Figure 4.** Power in the secondary coil as a function of pyramid’s apex voltage.

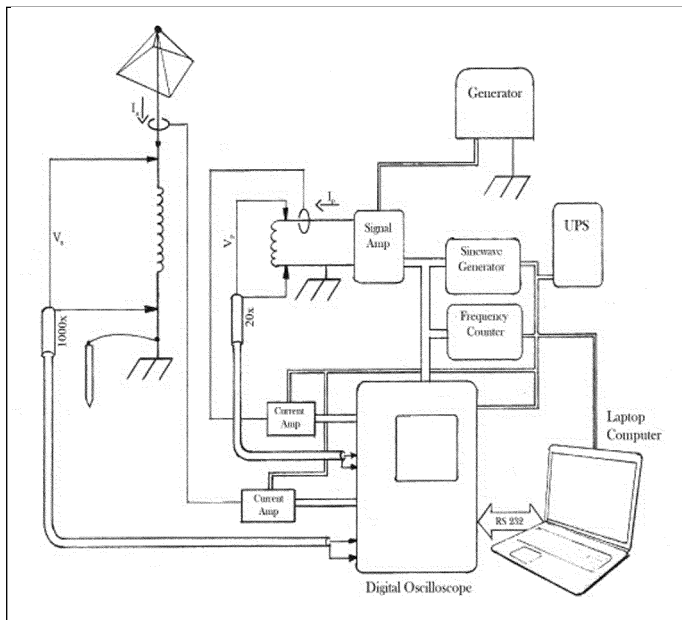


Figure 5. An outline of the test circuit.

and therefore Earth's enormous mass and its atmosphere represent a coupled resonant system that offer a vast source of power.

For practical reasons on our small pyramid, we have chosen a frequency above the audio range but below the radio frequency spectrum; our antenna was made to radiate at the target wavelength. The wavelength of the 50-120kHz range is 6km to 25km, thus allowing energy to be harvested over a large atmospheric domain. As electrical energy propagates in a vortex,<sup>6,7</sup> the emitted electric vortex (ionic antenna) over the pyramidal antenna/waveguide increases its "size" and enables it to funnel the same frequency atmospheric electromagnetic radiations back into the antenna. Thus, the pyramid electric generator captures at the selected frequency the energy emitted by Earth's atomic oscillators.

The presence of an electric (ionic) vortex was demonstrated by radar testing of the space over a 44m tall fiberglass pyramid located near Moscow.<sup>12</sup> The Russians found that the large ionized column of air over the area of the vertical axis of the pyramid had a width of about 500m and reached an altitude of 2km. It is remarkable that this effect was induced by a nonconductive pyramid surface demonstrating a significant degree of atmospheric ionization even under fair weather conditions. Thus, a suitably sized large or an electrically activated small pyramid should open a low impedance path to higher elevations of relatively conductive atmospheric domains.

In conclusion, the total power that can be extracted from Earth's atomic oscillators must be extremely large, likely far exceeding current global electric generation capacity. In our experiment, we obtained over 7000VA power at about 20kV p-p pyramid voltage using a 6 feet base length pyramid. This power is nearly 100 times greater than the power necessary to drive the pyramid to the required operating voltage. By constructing the pyramid generator from dedicated high voltage components and using higher drive voltages, a significant increase in power output is envisioned. The power extraction will also be enhanced by further optimization of the designs of both the pyramid and the coil system.

The power output will also increase by employing larger

pyramid structures and coils. As voltage is the primary factor in attracting power into the system, the necessary voltage can be provided by the vertical atmospheric potential on a tall pyramid. Since the atmospheric vertical potential gradient could go as high as 1200V/m near Earth's surface under fair weather conditions,<sup>13</sup> a pyramid height of 80-150m seems sufficient to provide the apex voltage for a self-sustaining power generator. As the pyramid scales up volumetrically, a power generator pyramid of the size range of the GPG could likely have an output in the hundreds to thousands of megawatts range. Groups of several pyramid electric generators could be placed within specific geographical areas, thus combining their energy harvesting capacity.

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### References

1. Grandics, P. 2002. "The Genesis of Electromagnetic and Gravitational Forces," *J. New Energy*, 6, 3, 33-45.
2. Grandics, P. 2007. "The Genesis of Fundamental Forces Acting at a Distance and Some Practical Derivations," *Infinite Energy*, 12, 71, 13-24.
3. Grandics, P. 2000. "A Method to Capture Atmospheric Electrostatic Energy," *Proceedings of IEJ-ESA Joint Symposium on Electrostatics*, Kyoto University, Kyoto, Japan, pp. 355-361.
4. Grandics, P. 2006. "A DC to RF Converter for the Capture of Atmospheric Electrostatic Energy," *Proceedings of the 5th Conference of the Societe Francaise D'Electrostatique*, SFE 2006, Grenoble, France, pp. 279-284.
5. Grandics, P. 2007. "Pyramidal Electric Transducer: A DC to RF Converter for the Capture of Atmospheric Electrostatic Energy," *Infinite Energy*, 13, 73, 20-27.
6. Russell, W. 1947. *The Secret of Light*, 3rd ed., University of Science and Philosophy, Waynesboro, Virginia, pp. 218-288.
7. Russell, W. 1957. *Atomic Suicide?*, 2nd ed., University of Science and Philosophy, Waynesboro, Virginia, pp. 129-153.
8. Russell, W. 1926. *The Universal One*, University of Science and Philosophy, Waynesboro, Virginia, pp. 247-249.
9. Nishida, K., Kobayashi, N., and Fukao, Y. 2000. "Resonant Oscillations Between the Solid Earth and the Atmosphere," *Science*, 287, 5461, 2244-2246.
10. Tanimoto, T., Um, J., Nishida, K., and Kobayashi, N. 1998. "Earth's Continuous Oscillations Observed on Seismically Quiet Days," *Geophys. Res. Lett.*, 25, 1553-1556.
11. Tanimoto, T. 2001. "Continuous Free Oscillations: Atmosphere-solid Earth Coupling," *Ann. Rev. Earth Planet. Sci.*, 29, 563-584.
12. [www.pyramidoflife.com/eng/tests\\_experiments.html](http://www.pyramidoflife.com/eng/tests_experiments.html).
13. Marshall, T.C., Rust, W.D., Stolzenburg, M., Roeder, W.P., and Kriebel, P.R. 1999. "A Study of Enhanced Fair-weather Electric Fields Occurring Soon After Sunrise," *J. Geophys. Res.*, 104, 24, 455-24,469.

### About the Author

Peter Grandics has an MS in chemical engineering and a Ph.D. in biochemical engineering. He has worked in the fields of biomedical research and recently in physics focusing on new energy technologies. He intends to help find answers to our current global energy challenges.

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