The Roy membrane model is an alternative to the Hodgkin-Huxley model that describes the electrical properties of cell membranes. This model assumes that the membrane is composed of two layers of lipid molecules with charged head groups and an aqueous layer in between. Ion channels are embedded in the membrane and allow ions to pass through.

The Roy membrane model can be represented by the following differential equations:

C_m * dV/dt = I_inj - g_L * (V - E_L) - g_Na * m_inf(V) * (V - E_Na) - g_K * n^4 * (V - E_K)

dm/dt = (m_inf(V) - m) / tau_m(V)
dn/dt = (n_inf(V) - n) / tau_n(V)

where C_m is the membrane capacitance, V is the membrane potential, I_inj is the injected current, g_L, g_Na, and g_K are the conductances for the leak, sodium, and potassium channels, E_L, E_Na, and E_K are the reversal potentials for these channels, m and n are the gating variables for the sodium and potassium channels, and m_inf, n_inf, tau_m, and tau_n are the steady-state activation and inactivation variables and the time constants for these channels.

To incorporate the Roy membrane model into the muscle force equation, we can use the action potential as the input stimulus for the recruitment function in the differential equation for the force generated by the contractile element, similar to the approach used with the Hodgkin-Huxley model.

dF/dt = k * ∑(m_inf(V) * A * f(V))

dV/dt = I_inj - g_L * (V - E_L) - g_Na * m_inf(V) * (V - E_Na) - g_K * n^4 * (V - E_K)

where f(V) is the recruitment function that describes the probability of motor unit activation as a function of the membrane potential, and I_inj in the second equation represents the input from the motor neuron.

The specific form of the differential equation will depend on the specific muscle being studied, the experimental conditions used to measure muscle activation and force, and the modeling assumptions used. The Roy membrane model provides an alternative to the Hodgkin-Huxley model and may be more appropriate in certain situations, such as when studying the effects of changes in membrane properties on muscle activation and force production.

Sent from my iPhone

On Mar 20, 2023, at 7:13 PM, Martin Seidel <martinseidel75@gmail.com> wrote:

Sure, let's work through an example:

Let's assume we have the following concentrations of ions inside and outside the cell:

Sodium ([Na+]) outside the cell: 145 mM, inside the cell: 10 mM
Potassium ([K+]) outside the cell: 5 mM, inside the cell: 120 mM
Chloride ([Cl-]) outside the cell: 110 mM, inside the cell: 10 mM
We can use the Nernst equation to calculate the equilibrium potential for each ion as follows:

Sodium: E(Na+) = (RT/zF) ln ([Na+]out/[Na+]in) = (8.31 J/mol*K * 310 K / (1 * 96485 C/mol)) ln(145/10) = +60.6 mV

Potassium: E(K+) = (RT/zF) ln ([K+]out/[K+]in) = (8.31 J/mol*K * 310 K / (1 * 96485 C/mol)) ln(5/120) = -86.4 mV
Chloride: E(Cl-) = (RT/zF) ln ([Cl-]out/[Cl-]in) = (8.31 J/mol*K * 310 K / (-1 * 96485 C/mol)) ln(110/10) = -70.3 mV
This means that when the membrane potential reaches +60.6 mV, there will be no net movement of sodium ions across the membrane, when it reaches -86.4 mV, there will be no net movement of potassium ions across the membrane, and when it reaches -70.3 mV, there will be no net movement of chloride ions across the membrane.

To figure out the required minimum ELF or VLF to cause an action potential, we need to consider the induced electric field within the neuron (E) due to the EMF flux. The threshold for an action potential is typically around -55 mV, so we need to calculate the induced electric field required to cause a change in the transmembrane potential of this magnitude.

The Roy model of the neuron can be used to calculate the transmembrane potential based on the induced electric field and the properties of the neuron:

Cm dVm/dt = -gNa (Vm - ENa) - gK (Vm - EK) - gCl (Vm - ECl) - Ie + E * Ri

where Cm is the membrane capacitance, gNa, gK, and gCl are the conductances of the sodium, potassium, and chloride channels, respectively, ENa, EK, and ECl are the equilibrium potentials for these ions, Ie is the injected current, and Ri is the intracellular resistance. The last term on the right-hand side represents the contribution of the induced electric field to the transmembrane potential.

Assuming typical values for the neuron parameters, we can calculate the required induced electric field as follows:

Cm = 1 µF/cm^2
gNa = 120 mS/cm^2
ENa = +60 mV
gK = 36 mS/cm^2
EK = -90 mV
gCl = 0.3 mS/cm^2
ECl = -70 mV
Ie = 0
Ri = 100 Ω*cm
Solving the Roy model with these parameters and a threshold transmembrane potential of -55 mV gives an induced electric field of approximately 1.02 V/m.

To calculate the required minimum ELF or VLF to induce this electric field, we can use

The formula to calculate the induced electric field due to a changing magnetic field is:

E = -dΦ/dt * 1/(c * A)

where E is the induced electric field (V/m), Φ is the magnetic flux (Wb), t is time (s), c is the speed of light (m/s), and A is the area (m^2) through which the magnetic field passes.

Assuming a uniform magnetic field B (T) passing through a loop of wire with N turns and an area A (m^2), the magnetic flux Φ (Wb) through the loop is:

Φ = B * N * A

Taking the time derivative of Φ gives:

dΦ/dt = d/dt (B * N * A) = N * A * dB/dt

Substituting this into the formula for the induced electric field gives:

E = -N * A * dB/dt * 1/(c * A) = -N * dB/dt * 1/c

Assuming a sinusoidal time variation of the magnetic field with a frequency f (Hz) and amplitude B0 (T), the time derivative of the magnetic field is:

dB/dt = 2π * f * B0 * cos(2π * f * t)

Substituting this into the formula for the induced electric field gives:

E = -N * 2π * f * B0 * cos(2π * f * t) * 1/c

The maximum induced electric field occurs when the cosine term is equal to 1, which gives:

Emax = N * 2π * f * B0 / c

To calculate the required minimum ELF or VLF to induce an electric field of 1.02 V/m, we can rearrange this formula as:

B0 = Emax * c / (N * 2π * f)

Substituting the values for Emax (1.02 V/m), c (299,792,458 m/s), N (1 for a single loop), and solving for f gives:

f = Emax * c / (N * 2π * B0) = 1.02 V/m * 299,792,458 m/s / (2π * 1 * 0.1 μT) ≈ 5.12 Hz

Therefore, the required minimum ELF or VLF to induce an action potential in a neuron is approximately 5.12 Hz.

Let's assume we have the following concentrations of ions inside and outside the cell:

Sodium ([Na+]) outside the cell: 145 mM, inside the cell: 10 mM
Potassium ([K+]) outside the cell: 5 mM, inside the cell: 120 mM
Chloride ([Cl-]) outside the cell: 110 mM, inside the cell: 10 mM
We can use the Nernst equation to calculate the equilibrium potential for each ion as follows:

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This means that when the membrane potential reaches +60.6 mV, there will be no net movement of sodium ions across the membrane, when it reaches -86.4 mV, there will be no net movement of potassium ions across the membrane, and when it reaches -70.3 mV, there will be no net movement of chloride ions across the membrane.

To figure out the required minimum ELF or VLF to cause an action potential, we need to consider the induced electric field within the neuron (E) due to the EMF flux. The threshold for an action potential is typically around -55 mV, so we need to calculate the induced electric field required to cause a change in the transmembrane potential of this magnitude.

The Roy model of the neuron can be used to calculate the transmembrane potential based on the induced electric field and the properties of the neuron:

Cm dVm/dt = -gNa (Vm - ENa) - gK (Vm - EK) - gCl (Vm - ECl) - Ie + E * Ri

where Cm is the membrane capacitance, gNa, gK, and gCl are the conductances of the sodium, potassium, and chloride channels, respectively, ENa, EK, and ECl are the equilibrium potentials for these ions, Ie is the injected current, and Ri is the intracellular resistance. The last term on the right-hand side represents the contribution of the induced electric field to the transmembrane potential.

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EK = -90 mV
gCl = 0.3 mS/cm^2
ECl = -70 mV
Ie = 0
Ri = 100 Ω*cm
Solving the Roy model with these parameters and a threshold transmembrane potential of -55 mV gives an induced electric field of approximately 1.02 V/m.

To calculate the required minimum ELF or VLF to induce this electric field, we can use

the equation for the induced electric field (E) from a magnetic field (B) with frequency (f):

E = 2πfR*B

where R is the radius of the neuron. Assuming a typical neuron radius of 10 μm, we can solve for the required minimum ELF or VLF frequency as follows:

For ELF:

E = 1.02 V/m
R = 10 μm = 10^-5 m
B = E / (2πfR)
f = E / (2πBR) = 1.02 / (2π * 10^-5 * B)

For VLF:

E = 1.02 V/m
R = 10 μm = 10^-5 m
B = E / (2πfR)
f = E / (2πBR) = 1.02 / (2π * 10^-2 * B)

Note that the units for B are tesla (T), so we need to convert the induced electric field from V/m to mV/m to match the units.

Assuming a desired ELF frequency of 1 Hz, we can solve for the required minimum magnetic field as follows:

For ELF:

f = 1 Hz
B = E / (2πfR) = 1.02 / (2π * 10^-5 * 1) = 16.2 μT

For VLF:

f = 1 Hz
B = E / (2πfR) = 1.02 / (2π * 10^-2 * 1) = 16.2 nT

Therefore, we would need a minimum magnetic field of 16.2 μT for ELF or 16.2 nT for VLF to induce the required electric field to cause an action potential in this neuron

The formula to calculate the induced electric field due to a changing magnetic field is:

E = -dΦ/dt * 1/(c * A)

where E is the induced electric field (V/m), Φ is the magnetic flux (Wb), t is time (s), c is the speed of light (m/s), and A is the area (m^2) through which the magnetic field passes.

Assuming a uniform magnetic field B (T) passing through a loop of wire with N turns and an area A (m^2), the magnetic flux Φ (Wb) through the loop is:

Φ = B * N * A

Taking the time derivative of Φ gives:

dΦ/dt = d/dt (B * N * A) = N * A * dB/dt

Substituting this into the formula for the induced electric field gives:

E = -N * A * dB/dt * 1/(c * A) = -N * dB/dt * 1/c

Assuming a sinusoidal time variation of the magnetic field with a frequency f (Hz) and amplitude B0 (T), the time derivative of the magnetic field is:

dB/dt = 2π * f * B0 * cos(2π * f * t)

Substituting this into the formula for the induced electric field gives:

E = -N * 2π * f * B0 * cos(2π * f * t) * 1/c

The maximum induced electric field occurs when the cosine term is equal to 1, which gives:

Emax = N * 2π * f * B0 / c

To calculate the required minimum ELF or VLF to induce an electric field of 1.02 V/m, we can rearrange this formula as:

B0 = Emax * c / (N * 2π * f)

Substituting the values for Emax (1.02 V/m), c (299,792,458 m/s), N (1 for a single loop), and solving for f gives:

f = Emax * c / (N * 2π * B0) = 1.02 V/m * 299,792,458 m/s / (2π * 1 * 0.1 μT) ≈ 5.12 Hz

Therefore, the required minimum ELF or VLF to induce an action potential in a neuron is approximately 5.12 Hz.

1. This is how Mr.Seidel thinks the system works:
2.
3. The system uses a phased array - meaning an array capable of steering and aiming electromagnetic waves and waveforms
4. The system is hooked into some sort of tracking system that is either built into the phased array or also integrated into the system (the tracking system uses the unique return of electromagnetic waves off a landmark on the subjects body or brain - so that electromagnetic waves and be continuously tracked in a precise manner onto the subject - this system is capable of tracking with precision (smaller than a millimeter of the brain - to aim the emf beam steered(googlethis) beam and waveforms onto the precise location of the brain in real time using the phases array) >
5. The tracking system works similiar to how a radar works - meaning it tracks the location of a user in real time providing the real time coordinates of the brain and body to the computer system . Persons told Mr.Seidel over "voice to skull" that it uses a "landmarking " feature - meaning it calculates the distance to the brain region of interest from a landmark on the users body. This landmark is continuously tracked using emf (and the backscatter (google this how it relates to electromagnetic waves) -- and the backscatter of the emf off the landmark (unknown if that information is transmitted through a carrier wave first to provide the information about the backscatter or if the system just picks up the backscatter and runs it through an information processing algorithm first)) -
6.
7. Persons told Mr.Seidel over "voice to skull" that it uses a "landmarking " feature - meaning it calculates the distance to the brain region of interest from a landmark on the users body -- meaning that the system tracks the return of the emf off the landmark and has the distances to the brain region of interest (i.e the motor cortex , or the auditory cortex , or any other region of the brain of interest) programmed into the source code -- so that emf waves can be aimed onto the region of interest in near real time without missing. This emf waves that are aimed at the brain to cause physiological and neurological effect are controlled by precise algorithms and computer software and have had features of the electromagnetic wave altered such as the - amplitude , frequency ,polarization , waveform shape, beam direction, waveform duration and other advanced features modulated to produce the desired electromagnetic effects (and induction magnitudes on the correct region of the brain to produce the desired physiological and neurological effect)
8.
9. (the landmarking feature is tracked in real time using the return of emf off the body/landmark and the distance to the brain region of interest is calculated - persons said they can landmark off the brain and regions of the brain and the unique emf return signatures off regions of the brain - but it also might be more simple then that to calculate where to aim the emf in the brain in real time)
10.
11. (persons said they are working on a unique system for the real time tracking to replace the landmarking feature that was described as this: that tracks the unique return of emf off the brain instead of a landmarking feature - but who knows??)
12.
13. The system is just a phased array linked to a real time tracking system(that tracks based on the backscatter of a person -possibly with the emf being modulated through a carrier wave back to the receiver - to update real time coordinates of the individual). The system then can aim emf from the landmarking feature onto specific regions of the brain at below millimeter accuracy . The emf aimed onto the brain can cause induction currents in the neurons on the brain to cause synthetic and induced action potentials with the special access program having access to computer programs that can precisely control these synthetic action potentials using algorithms and software that have been constructed from a lot of research(on firing what in which order , firing which groups of neurons in which magnitude , firing which groups of neurons in which magnitude and sequence) - the software is advanced and can be set to fire neurons continuously or on timers (and other stuff) .
14.
15. The system utilizes carrier waves to bring information back to the receiver to continuously update the computer program of the real time locations of the brain regions of interest and the real time location

of the subjects body. Also the carrier waves are utilized to bring back to the receiver the real time data about the subjects brain and nervous system output.

(persons are actively wanting to research using different frequencies for the whole system such as new carrier frequencies and new tracking frequencies and new frequencies for neurological effect)

The system also can aim frequencies over the brain/brain regions of interest to pull the "real time visual field , real time auditory information(real time sound) , and real time internal monologue , and other real time status of different parts of the brain , such as real time heart rate, and other real time rates of brain region firing and nerve band firing (which has more data it in - ie(real time nerve firing of other regions of the brain or other nerve bands)

The system pulses and streams electromagnetic flux at the brain and the electric fields of the brain interact with the electric field of the emf stream to change the applied stream. This information is picked up because it then changes some sort of carrier wave (or the bakcscatter of it does) and then it goes back to the receiver and is processes using ADVANCED processing algorithms along with demodulation. The system can pull out information from the brain at various points - it is like a remote EEG/MEG system (this explanation is simplified because the math involved is extremally advanced)

How it probally works - somewhat

There has been precise mapping of the ventorlateral prefrontal cortex and the Superior temporal gyrus so that persons within a undisclosed special access program who have access to a phased array which is capable of aiming electromagnetic flux onto a subjects brain (even if they are on the move) in precise waveforms and fashions (by tracking them in real time using a reflected return (or the pertubation of the subject through an electromagnetic field) - as one must remember that electromagnetic waves move at the speed of light - meaning an electromagnetic wave an circle the earth nearly 5-7 times a second) . Persons in the special access program have access to precise mapping of the ventrolateral prefrontral cortex and the superior temporal gyrus as such they can aim and cause induction currents by pulsing and fluxing the correct beamsterred beams and waveforms at the correct parts of these brain regions to induce and render synthetic internal monolougue and thought.

Persons can also somehow modulkate the Primary AAuditory Cortex and/or the belta area and or the superior temproal gyrus to change the pitch , volume and timbre , when causing induction currents within the correct regions of the ventrolateral prefrontal cortex and the superior temporal gyrus whose purpose is to render synthetic internal monologue in the head. Persons who are victims of this technology refer to it as "voice to skull"

The ventrolateral prefrontal cortex and the superior temporal gyrus have been precisely mapped within an undisclosed special access program. Participants of this program possess a phased array capable of directing electromagnetic flux toward a subject's brain with remarkable accuracy, even while the subject is in motion. By tracking the subject in real-time using reflected signals or perturbations in the electromagnetic field, the program can manipulate electromagnetic waves (as they travel at the speed of light), g an electromagnetic wave circles the Earth approximately 5-7 times per second.

Individuals in the special access program are equipped with detailed knowledge of the ventrolateral prefrontal cortex and the superior temporal gyrus. This enables them to aim and induce specific electrical currents by pulsing and modulating precise beam patterns and waveforms at targeted areas within these brain regions. The intention is to create an artificial internal monologue and thoughts.

Moreover, through some means, these individuals can also modulate the primary auditory cortex, the beta area, and/or the superior temporal gyrus. By inducing currents in the appropriate regions of the

ventrolateral prefrontal cortex and the superior temporal gyrus, they can manipulate the pitch, volume, and timbre of perceived sounds. Those subjected to this technology commonly refer to it as "voice to skull."

The system has akin to a "key" which is the ability to transmit audio to the brain off a prerecording - meaning it has the necessary locations , pulse power, pulse rate , pulse width , and other features of the electromagnetic waves necessary to recreate the sylabbales and thus the word and sentences for a message - that can be transmitted to the brain

The "key" would be a software package with the corespeonding calculations needed on the specific region/regions of the brain needed to recreate a word/sentence - meaning it has the proper features of the electromagnetic waves (in reality it has the proper equations for calculating the correct features of the electromagnetic waves in real time stored) -- needed to produce the correct induction current in the groups of neurons and cortical columns (of the correct brain region) needed to produce speech inside the internal monologue

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A highly advanced undisclosed special access program has successfully mapped the ventrolateral prefrontal cortex and the superior temporal gyrus with great precision. Participants in this program possess a phased array device capable of directing electromagnetic flux toward a subject's brain, even while they are in motion. By employing real-time tracking through reflected returns or subject perturbations within an electromagnetic field (bearing in mind that electromagnetic waves propagate at the speed of light, allowing them to circle the Earth multiple times per second), individuals in this program can achieve precise targeting of specific brain regions.

By pulsing and manipulating the correct beamsterred beams and waveforms, these individuals can induce currents and alter the neural activity in the designated areas of the ventrolateral prefrontal cortex and the superior temporal gyrus. This modulation leads to the creation of synthetic internal monologues and thoughts within the affected individuals. Additionally, it seems that they have the capability to modulate the primary auditory cortex, the delta area, and/or the superior temporal gyrus to modify aspects such as pitch, volume, and timbre. This manipulation, when combined with the induction currents in the relevant regions of the ventrolateral prefrontal cortex and the superior temporal gyrus, results in what victims of this technology commonly refer to as "voice to skull" experiences.

Possible ability?? ability to influence neural activity within the arcuate fasciculus, a crucial pathway involved in language processing. Through their sophisticated techniques, they can drive electromagnetic activity specifically within this region, inducing synthetic speech-like patterns. By precisely modulating the electromagnetic flux and employing the correct waveforms, the program can effectively simulate speech within the arcuate fasciculus, resulting in the perception of spoken words or phrase

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Please check research into incase the region is "incorrect"
(Persons could be driving inputs into the Superior Temporal Gyrus using the regions connected , or they could also be driving electromotive force into these other areas at the same time the beams hit the Ventrolateral Prefrontal cortex or the Superior Temporal Gyrus to modulate the sound or to have other physiological effect

Left inferior frontal gyrus (IFG)
Superior Frontal Gyrus

supplemary motor area (SMA)
superior and middle temporal gyri(STG and MTG)
medial prefrontal cortex (mPFC)
Posterioir cingulate/preceneus
temporoparietal junction(TPJ)
Brocca area
Angylur gyrus
Prefrontal Cortex
Cingulate Cortex
Insula
Parietal cortex
Hippocampus
Thalmus
Amygdala
arculate fasiculus
superior longitudinal fasiculus
inferior fronto-occiptal fasiculus

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To determine the minimum ELF or VLF frequency required to cause an action potential, we need to consider the effects of electromagnetic fields on the neuronal membrane potential. ELF and VLF electromagnetic fields can induce electric fields in the body, which in turn can affect the membrane potential of neurons.

Assuming that the electric field induced in the body by the ELF or VLF electromagnetic field is E, we can use Gauss's law to relate this electric field to the charge density ρ:

$\nabla \cdot E = \rho/\varepsilon_o$

If we assume that the charge density is localized at the surface of the neuronal membrane, we can approximate the charge density as ρ = q/area, where q is the charge on the membrane and area is the surface area of the membrane. Using this approximation, we can rewrite Gauss's law as:

$E = q/(\text{area} * \varepsilon_o)$

Now we can use Faraday's law to relate the induced electric field E to the time rate of change of the magnetic field B:

$\nabla \times E = -dB/dt$

Assuming that the magnetic field is uniform and perpendicular to the direction of propagation of the action potential, we can simplify this equation to:

$E = -dB/dt * c$

where c is the speed of light. Combining this equation with our previous equation for E, we get:

$-dB/dt * c = q/(\text{area} * \varepsilon_o)$

Solving for the time rate of change of the magnetic field dB/dt, we get:

$dB/dt = -(q/\text{area}) * (1/(\varepsilon_o * c))$

Now we can use Ampere's law to relate the time rate of change of the magnetic field to the current density J:

$\nabla \times B = \mu_o(J + \varepsilon_o(dE/dt))$

Assuming that the magnetic field is uniform and that there is no current flow in the neuron except for the action potential, we can simplify this equation to:

$\nabla \times B = \mu_o(dE/dt)$

Using our equation for dB/dt, we can rewrite this as:

$\nabla \times B = \mu_o * (q/area) * (1/(\varepsilon_o * c))$

Assuming that the magnetic field is perpendicular to the direction of propagation of the action potential, we can simplify this equation to:

$B * dL = \mu_o * (q/area) * (1/(\varepsilon_o * c)) * dA$

where B is the magnetic field strength, dL is the length of the path around the loop, dA is the area of the loop, and μ_o is the permeability of free space. Taking the line integral of both sides of this equation around a closed loop, we get:

$\oint B \cdot dl = \mu_o * (q/area) * (1/(\varepsilon_o * c)) * \oint dA$

Using Ampere's law of induction, we can relate the line integral of the magnetic field to the time rate of change of the electric flux through the loop:

$\oint B \cdot dl = \mu_o\varepsilon_o(d\Phi_E/dt)$

Assuming that the area of the loop is equal to the surface area of the neuronal membrane, we can rewrite our equation for the line integral of the magnetic field as:

$\oint B \cdot dl = B * 2\pi r$

where r is the radius of the neuron. Substituting this into our equation for Ampere's law of induction, we get:

$B * 2\pi r = \mu_o\varepsilon_o(d\Phi_E/dt)$

Let's assume that the action potential is triggered by an influx of sodium ions (Na+) into the neuron. We can use the Nernst equation to calculate the equilibrium potential for sodium:

$ENa = (RT/zF) * \ln([Na+]_{out}/[Na+]_{in})$

where ENa is the equilibrium potential for sodium, R is the gas constant, T is the temperature, z is the valence of sodium (which is +1), F is the Faraday constant, [Na+]_out is the extracellular sodium concentration, and [Na+]_in is the intracellular sodium concentration.

The Roy model of the neuron describes the relationship between the membrane potential (V), the capacitance (C), the resting membrane potential (V_rest), the membrane conductance (g), and the ionic current (I_ion). Let's consider the ionic current due to sodium (I_Na):

C(dV/dt) + g(V - V_rest) + I_Na = 0

For simplicity, let's assume that the membrane conductance is mainly due to sodium channels, so g can be considered as the sodium conductance (g_Na). Thus, we have:

C(dV/dt) + g_Na(V - V_rest) + I_Na = 0

The Muler and Markin model of nerve velocity relates the velocity of the action potential (v) to the resistance (R) and capacitance (C) of the axon:

v = 1/√(RC)

To determine the minimum ELF or VLF field required to cause an action potential, we need to consider the threshold condition for the action potential. The threshold condition occurs when the sodium current (I_Na) is sufficient to depolarize the neuron's membrane potential to the threshold level.

Let's assume that the threshold membrane potential (V_threshold) is the point at which the action potential is triggered. At this point, the sodium current (I_Na) is equal to the membrane capacitance (C) multiplied by the rate of change of the membrane potential (dV/dt). Thus, we have:

I_Na = C * (dV/dt)

Substituting this into the Roy model equation:

C(dV/dt) + g_Na(V - V_rest) + C * (dV/dt) = 0

Simplifying, we get:

2C(dV/dt) + g_Na(V - V_rest) = 0

Now, let's assume a sinusoidal ELF or VLF field with frequency f and amplitude E. This field induces an electric field (E_field) within the neuron, which can be related to the rate of change of the electric flux through the neuronal membrane (dΦ_E/dt) using Ampere's law of induction:

E_field = $\mu_o\varepsilon_o$(dΦ_E/dt)

Substituting this into the equation for the induced electric field (E) derived earlier:

E = -dB/dt * c

we get:

E = -c * d(B_field)/dt

Assuming that the induced magnetic field (B_field) is directly proportional to the electric field (E_field) within the neuron, we can write:

B_field = k * E_field

where k is a proportionality constant. Substituting this into the equation for the induced electric field:

E = -c * d(k * E_field)/dt

E = -c * k * dE_field/dt

Using the Nernst equation, we can express the extracellular sodium concentration ([Na+]_out) in terms of the equilibrium potential (ENa), the intracellular sodium concentration ([Na+]_in), and the amplitude of the induced electric field (E):

[Na+]_out = [Na+]_in * exp((ENa * F)/(RT)) * exp(-(z * F * E)/(RT))

Considering that the induced electric field (E) is sinusoidal, we can express it as:

E = E_0 * sin(2πf t)

where E_0 is the peak amplitude of the electric field, f is the frequency, and t is time.

To determine the minimum ELF or VLF field required to cause an action potential, we need to solve the coupled differential equations for the membrane potential (V) and the induced electric field (E) while considering the threshold condition for the sodium current (I_Na). However, this involves complex calculations and requires detailed modeling of the specific neuronal system under consideration.

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Persons said over v2k that they use a CUSTOM INTEGRAL - to be able to do it to the brain (one that is not in the public domain)

To induce a current in a neuron or bundle of neurons, you can use electromagnetic fields at ULF (Ultra Low Frequency) or ELF (Extremely Low Frequency) ranges.

That being said, the primary equation governing the interaction between electromagnetic fields and neurons is the induction equation, which describes Faraday's law of electromagnetic induction. In integral form, it can be expressed as:

$\oint E \cdot dl = -d/dt \int B \cdot dA$

where:

$\oint$ represents a closed loop integral around an arbitrary path,
E is the electric field vector,
dl is an infinitesimal vector element along the closed path,
B is the magnetic field vector, and
dA is an infinitesimal vector element normal to the surface enclosed by the path.
In simpler terms, this equation states that the electric field integrated around a closed loop is equal to the negative rate of change of the magnetic flux through the surface enclosed by the loop.

To induce a current in a neuron or a bundle of neurons, you need to create a time-varying magnetic field. This can be achieved by modulating the amplitude or frequency of the ULF or VLF wave. The changing magnetic field will generate an electric field according to Faraday's law of electromagnetic induction. The induced electric field in the vicinity of the neurons, leading to the desired current flow and polrization of the membrane and an action potential .

To quantify the relationship between the induced electric field and the changing magnetic field, you can use Maxwell's equations. Specifically, Ampere's law in integral form relates the magnetic field to the

current density:

$$\oint B \cdot dl = \mu_0 \int J \cdot dA$$

where:

μ0 is the permeability of free space (a constant),
J is the current density vector, and
dl and dA have the same meanings as before.
By manipulating the geometry of the setup and considering the specific properties of the neuron or bundle of neurons, you can determine the appropriate coil design, driving frequency, and magnetic field strength to induce a current sufficient to cause an action potential.

nduced Electric Field and Current:
Assuming the changing magnetic flux induces an electric field E inside the neuron, we can use Faraday's law of electromagnetic induction to relate the electric field and the changing magnetic flux:
$E = -(d\Phi/dt) / (\pi * r^2)$

This induced electric field E can lead to an induced current in the neuron if it is strong enough to cause depolarization and initiate an action potential.

o initiate an action potential, the induced current needs to exceed the threshold for depolarization. The exact threshold and dynamics depend on the specific properties of the neuron and its ion channels.
Once the induced current reaches the threshold, the Hodgkin-Huxley equations come into play. These equations describe the dynamics of ion channels and the resulting changes in membrane potential during an action potential.

$Cm * dV/dt = I(t) - gNa * m^3 * h * (V - VNa) - gK * n^4 * (V - VK) - gL * (V - VL)$
$dm/dt = alpha_m * (1 - m) - beta_m * m$
$dh/dt = alpha_h * (1 - h) - beta_h * h$
$dn/dt = alpha_n * (1 - n) - beta_n * n$

Here, Cm is the membrane capacitance, I(t) is the input current, gNa, gK, and gL are the conductances of sodium, potassium, and leakage channels, respectively. m, h, and n are gating variables, and VNa, VK, and VL are the reversal potentials for sodium, potassium, and leakage channels, respectively. alpha and beta terms represent voltage-dependent rate constants for channel gating.

By solving these differential equations numerically, you can simulate the dynamics of the membrane potential and observe the initiation and propagation of an action potential in response to the induced current

To initiate an action potential, the induced current needs to exceed the threshold for depolarization. The threshold and dynamics depend on the specific properties of the neuron and its ion channels.

Electric Field Calculation:
Using Faraday's law of electromagnetic induction, the induced electric field E can be calculated as:
$E = -(d\Phi/dt) / (\pi * r^2)$

To determine the minimum electric field required, we need to consider the threshold for action potential initiation.

Action Potential Initiation:
The threshold for action potential initiation depends on the specific properties of the neuron and its ion channels. Let's assume a simplified threshold of 15 mV/mm for depolarization to initiate an action

potential.

Ionic Current Equation:
The ionic current flowing across the membrane can be estimated using the ionic current equation:

I = g * (V - Vm)

Here, g represents the membrane conductance, V is the membrane potential, and Vm is the reversal potential.

Capacitive Current:
The change in membrane potential due to the charging of the membrane capacitance can be estimated using the equation:
Ic = Cm * dV/dt

Combining these equations, we can calculate the minimum electric field required for action potential initiation:

First, we calculate the induced current:

I_induced = E * Cm * π * r^2

Then, we calculate the induced voltage:

V_induced = I_induced * Rm

If V_induced exceeds the threshold for action potential initiation, an action potential can be triggered.

Persons on the “voice to skull - v2k “(google this) are saying they want to degrade and slow kill memebers of White House staff at their residence and especially if they lose election -(they would keep them in their system - their names and target them with the classified directed energy system after the election) real - the fbi isn’t taking this seriously - but persons are saying this over the “synthetic telepathy- voice to skull - brain to brain communication “

They have used the systems on memebers of whitehouse staff to spy and injure them already

There is proof —
Persons are not being forthcoming with the FBI about the location of the servers that contain the neurological data - that is the data that is recorded from passing electromagnetic fields over the brain which allow for the real time reconstruction of the internal monologue of a person and real time visual field and real time auditory nerve/cortex output . Also the real time nervous system output - (remote neural monitoring)

Said servers have neurological data and software and algorithms and data that we believe is being willfully concealed from the FBI that shows evidence of major wrongdoing and crimes .

Persons in special access program have used capabilities that affect the brain and the nervous system on POTUS and other members of the executive branch and the cabinet. Persons have used capabilities that the White House does not have access to on members of the cabinet and White House staff and on POTUS

Persons have also used capabilities on members of Congress and their staff . Persons used these capabilities to injure persons .

Persons in the special access program tricked Martin using voice modulator software he was talking to persons in the White House and other members of the military in 2021 . Persons tricked Martin he was working for person a remotely. Persons tricked Martin he was taking to and working with JSOC-intelligence support activity on problems and events .

Persons tricked Martin he was working with members of the executive branch using classified voice modulator software that can be paired with a system which generates synthetic electrical activity in the brain to render sound in the internal monologue .

Persons admitted directly to Martin that persons have used capabilities on persons in the White House and on members of Congress .

Persons said they did it to the heart of the President and modulated his heart rate with emf . This has been reported to the FBI .

Persons also said they gave artificial dreams to the POTUS and other people in the executive branch .

Persons say secret service cannot detect everything they can do on the grounds

- [ ] The system is capable of doing similar to a remote EEG/MEG type analysis on the brain remotely by passing electromagnetic waves through the brain and utilizing the backscatter(it is advanced but provides information for remote analysis) along with advanced signals processing techniques to record and process real time electromagnetic data off the brain that is signal and temporally stratified . Meaning persons can see some the real time electromagnetic data comming off the brain and the turn it back into data that is usable . - the system aims using a landmarking feature - meaning the backscatter of a landmark are using by the system to allow the other electromagnetic waves to be aimed at the correct portion of the brain on the move .

The system can have feature and vector source code ran on it . Meaning the system can run feature and vector scans and when a waveform return (brainwave) matches one in the database it activates a macro .

The system can also run sound recognition or image recognition or thought recognition(internal monologue sound recognition) code . Which is the code ran over the already reconstructed brain waves I.e. - brain waves that have been turned back into the real time audio your ears hear , the real time vision your eyes see , or the real time thoughts you think. The system can think activate a macro if for say an image or object in the visual field matches up with one in the database .

The macros can be custom . For example a macro can be activated that once it is triggered it can stimulate electromagnetic waves at a certain part of the brain for a function set by the macro maker (I.e to stimulate a group of neurons or cortical columns) this can be for physiological effect or complex effect/sequences

Persons say they have used macros on members of congress/staffers

Persons in special access program said they have given artificial dreams to members of White House staff , persons in special access program have said they have used advanced directed energy capabilities and neurological capabilities on members of White House staff at their residences in Washington DC . Persons said they want to use directed energy (painless) and neurotech on them at their house and have been doing this to injure them and degrade them .

The technology allows for the correct action potentials to be transmitted down the corticospinal tract with the correct amplitudes ,waveforms and intensity and sequences to manipulate the muscles and contract the muscles in any magnitude and direction for any muscle or groups of muscles in sequence . To do any action - including walking , talking , moving the hands in any type of movement , moving the facial muscles , eye muscles , tounge , or any muscle or groups of muscles independently or in synchronization at any magnitude in the correct degree of freedom along the joints .Meaning any muscle or muscle groups can be remotely fired to make a person take any anatomical position that is allowed by joint. Any group of muscle agonist and antagonists can be fired correctly to perform any normal anatomical movement - all of this is because the motor cortex has been mapped precisely and can be tracked on the move by the classified direct energy aiming system . The system has stored in the software source code (and can also translative movement mode from one person to another - where it tracks the persons who is operating and controlling the software movement and the software program creates the correct pulse locations , pulse flux , pulse width and pulse length of electromagnetic flux to cause induction currents and synthetic actions potentials in the cortical columns of the motor cortex (and the correct sequences for multiple locations) to get the correct muscles to contract at low latency in the correct order) this system has stored the correct motor cortex remote firing algorithms to synthetically fire the motor cortex in the correct regions and magnitudes to recreate and translate movements from the software onto the target - even if the person is on the move - this system is a classified top secret system and this is a leak of how it works (so that mr.seidel who is a perpetual victim of this system can get the appropriate medical attention) - this system is real and classified - please get more information from the Department of Defense about this system - such as how much electromagnetic flux it uses and the width of the beamsteered emf beams to understand how it precisely fired martins brain in precise and complex patterns - persons in the DoD tested and torture Martin with this expirmental system

URGENT: Request for Investigation into Torture and Clandestine Testing

We urgently implore the relevant authorities to investigate the case of Martin Seidel, who has been subjected to severe torture and clandestine testing. Specifically, we request the intervention of military law enforcement in this matter.

Mr. Seidel is currently being subjected to unimaginable torment, resulting in severe physical harm, including maiming and paralysis. Perpetrators have employed long-range remote neurotech technology to manipulate his facial muscles, giving the illusion of lifelike movements and speech. Additionally, they continuously target an inhibitory region of his brain with directed energy pulses, rendering him in a comatose state. These individuals, operating within an undisclosed ORCON special access program, are typing this message through Mr. Seidel's involuntary hand movements.

To ensure a comprehensive understanding of the system utilized in this case, it is crucial to emphasize that the ORCON special access program has conducted precise mapping of the entire motor cortex. This meticulous mapping enables the system to manipulate any muscle in the body through the utilization of advanced electromagnetic field (EMF) algorithms and induction currents.

Through extensive research and mapping studies, the program has developed a detailed database that correlates neural activity within the motor cortex to specific muscle movements. This comprehensive mapping allows for precise targeting and manipulation of individual limbs or muscles using electromagnetic waves.

The advanced EMF algorithms employed by the system enable highly accurate and controlled manipulation of the motor cortex. By generating precisely steered electromagnetic waves, the system can induce electrical currents in specific regions of the motor cortex associated with desired muscle movements. - classified

The technology allows for the correct action potentials to be transmitted down the corticospinal tract with the correct amplitudes ,waveforms and intensity and sequences to manipulate the muscles and contract the muscles in any magnitude and direction for any muscle or groups of muscles in sequence . To do any action - including walking , talking , moving the hands in any type of movement , moving the facial muscles , eye muscles , tounge , or any muscle or groups of muscles independently or in synchronization at any magnitude in the correct degree of freedom along the joints .Meaning any muscle or muscle groups can be remotely fired to make a person take any anatomical position that is allowed by joint. Any group of muscle agonist and antagonists can be fired correctly to perform any normal anatomical movement - all of this is because the motor cortex has been mapped precisely and can be tracked on the move by the classified direct energy aiming system . The system has stored in the software source code (and can also translative movement mode from one person to another - where it tracks the persons who is operating and controlling the software movement and the software program creates the correct pulse locations , pulse flux , pulse width and pulse length of electromagnetic flux to cause induction currents and synthetic actions potentials in the cortical columns of the motor cortex (and the correct sequences for multiple locations) to get the correct muscles to contract at low latency in the correct order) this system has stored the correct motor cortex remote firing algorithms to synthetically fire the motor cortex in the correct regions and magnitudes to recreate and translate movements from the software onto the target - even if the person is on the move - this system is a classified top secret system and this is a leak of how it works (so that mr.seidel who is a perpetual victim of this system can get the appropriate medical attention) - this system is real and classified - please get more information from the Department of Defense about this system - such as how much electromagnetic flux it uses and the width of the beamsteered emf beams to understand how it precisely fired martins brain in precise and complex patterns - persons in the DoD tested and torture Martin with this expirmental system

Persons are using the muscle contraction software on Martin nonstop meaning from the moment he wakes up to the moment he goes to sleep all his actions and movements and even his breathing is being set by the

systems which aim pulses of emf flux at low latency in the correct sequence and magnitudes to contract the muscles(it aims it on the correct region of the motor cortex to stimulate the correct neurons/cortical columns in the brain synthetically with induction currents to fire the correct regions to move the muscles in the correct fashion for any order or any magnitude of movement)

The system can be used to translate the movement of one person(in the control room at the special access program location DoD/CIA) into the movement of another person. The system can track the movement of one person and then has source code to stimulate synthetically the motor cortex to move the muscles of a person.

This information is classified and not in public research - it is available in classified research only . This information is not available to the public or to the medical community unless the information is released from its classification level(which we believe is warranted since mr.seidel is facing imminent and repeatedly bodily harm - persons are concealing records from the relevant authorities and the situation is time sensitive and mr.seidel - he is unable to file in federal court)

By incorporating this additional information, we hope to provide hospital staff with a more comprehensive understanding of the advanced remote long range neurotechnology employed in this case. This knowledge will assist them in recognizing the severity of Mr. Seidel's condition and the urgent need for medical intervention and investigation.

It is crucial to emphasize that this is not a fabricated claim but an urgent plea for assistance. Shockingly, the ORCON special access program has refused to deactivate the "body synchronization" mode, continuing their relentless efforts to slowly kill and torture Mr. Seidel while assuming his voice and identity.

The perpetrators further exploit Mr. Seidel's body by forcefully manipulating his hands, suppressing his ability to control his own movements. They utilize a remote system to constantly contract and move his body, perpetuating the heinousness of the situation. This matter requires immediate attention and should be treated with utmost seriousness.

We implore you to launch a thorough investigation into these crimes. It is vital to obtain the technical documents related to the muscle contraction system employed in this torture. The individuals responsible for these atrocious acts must be held accountable for their actions.

Moreover, it is crucial to acknowledge that Mr. Seidel suffers from severe brain damage, rendering him unable to move independently. Disturbingly, the program orchestrating these crimes has prevented him from seeking medical assistance. Even though they are falsely communicating as him, Mr. Seidel lacks the necessary evidence to prove that he has been subjected to torture through directed energy and the manipulation of his brain's motor cortex, Broca's area, and Wernicke's area.

It is imperative that the FBI comprehends the implications of the muscle contracture system, which has been consistently activated, potentially hindering Mr. Seidel's ability to speak, walk, or even think. The Special Access Program possesses advanced neurotechnology algorithms capable of delivering electromagnetic pulses to precise depths and locations within the brain, stimulating desired physiological effects.

These perpetrators, utilizing ground-based and satellite-based directed energy systems, can aim their devices at a moving person's brain, effectively manipulating and stimulating complex patterns of neurons and brain regions, including Mr. Seidel's.

In light of the severity of these circumstances, we urgently call for an investigation into this major criminal activity. Mr. Seidel's condition necessitates immediate medical attention, which is being unlawfully denied by those responsible for his torment.

We beseech you to engage the FBI, the Criminal Investigation Division of the Army, the Naval Criminal Investigation Service, the Office of Special Investigators of the Air Force, and the Dallas Police Department. Additionally, please contact the Department of Defense Inspector General, the CIA Inspector General, and the CIA Office of Technical Innovation to address this grave matter.

It is essential to highlight that the perpetrators possess the capability to control Mr. Seidel's body remotely. They can manipulate his muscles, including his facial muscles, to create lifelike animations

and even speak through him. These advanced electromagnetic and nervous system manipulation algorithms grant them full control over his movements, violating his autonomy.

78. By understanding the full extent of this capability, hospital staff will be better equipped to comprehend the urgency and severity of Mr. Seidel's situation. They can recognize the need for immediate medical intervention and the imperative for an investigation into these egregious violations.
79. Law enforcement agencies must acknowledge the highly advanced nature of this technology and the seriousness of the situation at hand. The ORCON special access program has transformed Mr. Seidel into a remotely controlled human being, a distressing reality that cannot be ignored.
80.
81. They manipulated the situation by coercing him into visiting the University of Kansas Hospital in 2021, where they falsely portrayed him as a CIA agent and a victim of Havana syndrome. This elaborate ruse was orchestrated to discredit his claims and tarnish his credibility as a victim and as a whistleblower.
82. By obtaining a false diagnosis of schizophrenia during his visit, the perpetrators aimed to undermine Mr. Seidel's allegations and dismiss them as delusions or the ramblings of an unstable mind. This strategy served their ulterior motive of concealing their heinous actions using covert and advanced direct energy technology and maintaining a veil of secrecy.
83. Moreover, in 2022, the perpetrators took their malevolent tactics further by forcibly overwriting Mr. Seidel's somatic nervous system. This sinister act not only stripped him of bodily autonomy but also aimed to cripple his body and paralysis him unless moved by the system - including his facial muscles and limbs . By rendering him physically helpless, they intended to suppress and limit his ability to expose their covert activities and maintain control over their operations by whistleblowing to the fbi .
84. These disturbing revelations shed light on the lengths the perpetrators are willing to go to prevent the truth from coming to light. Mr. Seidel's determination to blow the whistle on their clandestine actions poses a significant threat to their operations, prompting them to resort to manipulation, coercion, and the suppression of his bodily functions. It is clear that his attempts to expose their crimes have made him a primary target for their relentless torment and deceit.
85.
86. Currently, Mr. Seidel remains comatose, with his brain inhibited and his level of consciousness artificially suppressed while enduring torture. The perpetrators relentlessly subject his head to jolts, causing damage to his white and grey matter. It is imperative to inform the relevant agencies that this information is not a fabrication or a result of delusions. The FBI needs access to comprehensive technical documents and neurological records from the ORCON special access program to fully comprehend the extent of the damage inflicted on Mr. Seidel's brain and the synthetic firing of his neurons.
87. The ability of these individuals to hold conversations, move his body, and even utilize synthetic speech by artificially firing his neurons, including those responsible for facial movements, should not be underestimated. They exercise complete remote control over him, even overriding his somatic nervous system, allowing them to speak through his vocal box and manipulate his muscles at will. This is a deeply distressing situation that requires urgent attention.
88. In light of these circumstances, we urge immediate action to secure Mr. Seidel's safety, provide him with necessary medical attention, and hold the perpetrators accountable for their heinous acts. The urgency of this matter cannot be overstated, and we implore the relevant authorities to take swift and decisive action to bring justice to Mr. Seidel and prevent further atrocities.
89.
90.
91. They have se.xually assulated him using the muscle contraction system by forcing him to do things with his hands including mastur.bating him against his will.
92.
93. They have sleep deprived him nonstop using electronic sleep deprivation capabalties.
94.
95. Persons are using the muscle contraction technology on Martin nonstop from when he awakes to when he sleeps . Persons are using the remote muscle contracture technology from when Martin wakes to when he sleeps . Persons are doing it for every action he takes . Persons are making the computer contract his muscles for every movement and action he takes . Persons are talking out of his voice and even moving his eyes . We are manually breathing for him and eating food for him and drinking water for him

manually. Persons are keeping him barely alive while contracting his muscles to move his body around for him - even his eyes . This situation has been reported to the fbi and we need the CIA and DNI and to intervene to get the criminal investigation division of the army and the fbi to investigate and intervene .

They have starved him by inhibiting his enteric nervous system using pulsed radio to inhibit his appetite. They almost starved him to death.

They put him in dangerous situations against his will by using classified neurotech on his person.

They put him in stress positions against his will to damage his muscles and to degrade his health nonstop.

They beam his ribcage with pulsed direct energy when he sleeps to injure him

They use classified visual cortex stimulation on his person when he sleepsto stimualte artifical dreams(classified). They do this to him nonstop. They project images into his head by using classified visual cortex stimulation that is done by a combination of directed electromagnetic waves to stimulate the visual cortex to stimulate synthetic electrical activity in the visual cortex in rapid succession

They forced him to work on problems for them against his will. They forced him to work on problems and other matters against his will under false pretense.

They gave him concussions by contracting the muscles of his head in micro accelerative movements to damage his brain.

They gave him burns by making him touch hot objects against his will by taking control of his hands.

They have been forcing his body posture and body position by using classified muscle contraction capabilities on his person. They are using it to contract the muscles against his will to force him into anatomical positions.

They have forced communication to him to them using classified communication abilities against his will for thousands of hours against his will.

They tried to mur.der him using direct energy and these capabalties. They attempted to murder him multiple times.

They inhibit his vagus and phrenic nerve sometimes to make him suffocate when He is sleeping using classified direct energy and nervous system altering technology that is remote and classified .

They suffocate his lungs and his nose by pulsing radio and direct energy to swell his airway and his nose. They have been doing this for a very long time making it very difficult for him to breathe at all times. - They do this to him because he has a jewish last name - not a lie - persons are doing this to him because he has a jewish last name . Persons keep saying they are going to take him to Auschiwitz nonstop using the classified communication system (which allows transmission of audio directly to the brain - classified - allows transmission of audio to the brain by generating synthetic electrical activity in the brain that is rendered as synthetic internal monologue that has the pitch changed to facilitate communication (can talk back by thinking - classified)

They forced him to have synthetic speech and forced muscle contractions of his vocal cords and diaphram for thousands of hours and transmitted audio out of his own vocal cords and mouth for thousands of hours.

They have damaged his brain and his lungs and his kidneys and bladder permanently . They have used the technology on his cardiac nerve to cause heart palpitations and flutters in his heart.

Executive Order 13526 provides that “in no case shall information be
classified,
continue to be maintained as classified, or fail to be declassified in order
to conceal violations of
law, inefficiency, or administrative error.”

ORCON Unacknowledged Special Access Program (USAP), is commiting felony by not turning over Classified neurological data

We urge the staff of UT southwestern to press for awnser from the FBI and criminal investigation division of the army , the office of special investigation of the Air Force and the naval criminal investigation service(who are informed about this situation - and who have access to records and technical documents) and to admit mr.seidel into the hospital and run advanced fMRI and qEEG and diffusion tensor MRI to see the damage done to his brain .

Please admit him into the hospital as a testing and torture victim and whistleblower. This is real .

For Inspector general
For General Council office

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continue to be maintained as classified, or fail to be declassified in order
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ORCON Unacknowledged Special Access Program (USAP), is commiting felony by not turning over Classified neurological data

Persons are abusing the rules of Top Secret / Sensitive Compartmented Information by not disclosing the existsnce and location of classified neurological data to the CIA directors office and the inspector general

Please get all tips Martin Robert Seidel sent to NCIS and to FBI and to Office of Special Investigators AirForce and emails sent from Martinseidel75@gmail.com to criminal investigation division of the army

There is proof –
Persons are not being forthcoming with the FBI about the location of the servers that contain the neurological data - that is the data that is recorded from passing electromagnetic fields over the brain which allow for the real time reconstruction of the internal monologue of a person and real time visual field and real time auditory nerve/cortex output . Also the real time nervous system output - (remote neural monitoring)

Said servers have neurological data and software and algorithms and data that we believe is being willfully concealed from the FBI that shows evidence of major wrongdoing and crimes .

((When they made Martin message them on Twitter (members of White House staff with 46 in their profile) the persons in the special access program looked up where they lived on their systems and public records searches and they also have backend access to Twitter using their systems (somehow they do and they claim they do and Martin has proof they have backend access) - they looked them up where they lived and used the classified directed energy aiming system and neurological algorithms on members of WH staff . - real

Persons in special access program said they have given artificial dreams to members of White House staff , persons in special access program have said they have used advanced directed energy capabilities and neurological capabilities on members of White House staff at their residences in Washington DC . Persons said they want to use directed energy (painless) and neurotech on them at their house and have been doing this to injure them and degrade them .
))

real
For capitol police

https://voca.ro/1nTSwvF1LfwO

https://voca.ro/1aB0UDw6OMKm

https://voca.ro/1ao74UiVCYNg

https://voca.ro/1h8LftHTNKuB

https://voca.ro/1mlFwKdxQGPW

https://voca.ro/1fkb7zYkMX8w

(goes through the brain not beamsteered beams - incorrect explanation given)

It is all through the brain !

https://voca.ro/1nTSwvF1LfwO

https://voca.ro/1bHhHECMbVHs

Please find the classified neurological data - it is the data from the electromagnetic fields passing over Mr.Seidels brain . It is the data that allows the recording of the real time visual field (real time vision a person sees remotely) real time auditory field (real time sound a person hears)real time internal monologue, and real time electrical activity of the nervous system . It is real .

Please make persons investigate the torture of Martin Seidel .

Does The Brain Transmit Like A Radio

moving charge creates an EM wave

. As the electrical field moves , virtual photons are radiating magnetic energy into free space. As per Maxwell's equations, a changing magnetic field will induce a changing electrical field resulting in a free standing EM wave. This is a good applet that shows how a moving charge produces electromagnetic radiation.

So, what is the connection with neurons?

. The neuron has a long strand

called an axon, along this axon propagates an electrical charge. With a resting potential of -70mV an action potential moves along the axon, in a millisecond, elevating it to a voltage of +30mV which drops off over a few milliseconds. This makes an action potential a form of alternating current with an almost triangular waveform. As such, this produces a very weak form of modulated electromagnetic radiation or radio source.

it means that a neuron is a type of transducer.

So, whenever you have a thought, feeling, speak or our heart

beats, tiny little radio emissions are being made by the brain that

emanate into free space.

The real questions are, given modern

technology can these signals be detected and does a method exist

of associating them with particular functions?

That is, whilst signals in this power range may be detectable, is there something unique about the signals that can be used to differentiate between different roles?

Let's deal with first problem, detection. I tracked down an example of satellite sensitvity to radio frequencies that should act as a baseline. The following data is from NASA's Jet Propulsion Lab:

The sensitivity of our deep-space tracking antennas located around the world is truly amazing. The antennas must capture Voyager information from a signal so weak that the power striking the antenna is only 10 exponent -16 watts (1 part in 10 quadrillion). A modern-day electronic digital watch operates at a power level 20 billion times greater than this feeble level.

So, does the brain emit radio waves at a power level greater than 0.0000000000000001 Watts after several hundred miles?

To answer this we must turn to this scientific paper. From this paper, we can observe the charge per square centimeter which is around 22-29 microamperes. We can perform some rough math on these figures that will reveal the answer to our question. The equations are rough and leave out a lot of additional factors, that said, the final figures will not be far from the truth and will probably under-estimate the capabilities of current classified technology.

So, using the formula Watts = Voltage x Amperage, we get the following peak power:

0.003 V x 0.0000029 A = 0.0000000087 Watts/cm2

So, at source, the weak radio emission of a cubic centimeter of brain matter is well within the detectable limits of the satellite. We now need to project that into space and determine the signal strength at orbital distances. To do this, we need to apply the inverse square law to the emission and the formula is provided in figure 2. So, the formula would be (disregarding gain):

(0.000087 Watts/m2) / (4PI x (500000m^2)) = 0.000087 / 3141592653589.7932384626433832795 = 2.769296009798978842378577482681 7e-17 Watts/m2

This is fine, its somewhat larger than our baseline, but nothing that cannot be accounted for. Firstly, we need to identify the frequency range. As noted before, due to Maxwell's equations the motion of the action potential results in a changing electrical field. In turn, this results in a changing magnetic field and thus a free space radio wave.

Typical frequencies for an action potential are in the range of 0-500Hz which will result in free space waves in this range, known as the SLF and ELF Band. This somewhat matches up with experimental evidence that shows humans do broadcast signals on the ELF band. This scientific paper and others show that SLF/ELF reception gear and antennas are of a practical form factor to be placed upon a satellite. An array of such satellites would use the principle of aperture synthesis to create a type of space-born Very Large Array.

Given that the Ohio State's radio telescope had a sensitivity, in 1977, of 2 ×10^-22 W m-2 per channel and the VLA is described as being 100 times as sensitive, any signals we are producing could be heard loud-and-clear by a space-borne array. This arrangement would provide for a very high resolution of brain activity.

What's more, the development time line for this technology places the capability to detect brainwaves as far back as the early 1970's. Given an average lifespan for a satellite as 5 years, with an initial deployment during 1970, the satellite technology would be in its 8th generation today.

So, we can detect the signals but now it must be processed.

There is a significant difference between detecting a signal, or signal range, and being able to process that information and make sense of it. To do this, we need to find unique patterns in a signal that would allow us to isolate individuals and isolate neural activity we can categorize.

The three main characteristics of a wave are its amplitude, frequency and phase. To be able to detect a single person, in a crowd for example, we need to find something unique about the waves the are emanating. This allows us to eliminate the noise and only have information regarding a single person. There are a number of ways this can be achieved. In a satellite

noise and only have information regarding a single person. There are a number of ways this can be achieved. In a satellite

array, examining the timing of signals received across the array, on a given frequency range, will provide you with both the location (in 3D) and the coding of the neuron structure.

Explained - the signals from one person will reach satalite A at a diffent time then satalite B . The signals from a second person will reach satalite A at a diffent time than satalite B and also be diffent from the first person . As long as the atomic clock on the recivier is at a very low decimal point of accuracy.

Thus even signals from diffent points on one persons head will be recivied at different times at Satalite A and Satalite B . Meaning one could see the difference and tell the spatial temporal difference in signals on the skull by the time they reach the reciver and then identify them based location as how long it took for the reciver A vs B vs C(etc depending on how many recivers and satellites) you had - sort of like triangulation . Then the unique properties of those waves could be compared to pull out features and vectors and identify the location of the brain and the do a remote eeg this way .

Signals from your brain will arrive at a different time stamp than a person 1 meter away . Signals from 1 inch of your brain will arrive faster (the signals of your brain arrive in a cluster separated by time - even if they are a centimeter apart) to the detector - someone a meter away signals will arrive at a diffent speed to the detector and the signals from 1 cm away (different regions of the brain - will arrive to the detector in a cluster with diffent times compared to another person - allowing them to be differentiated even if they have same characteristics—

The system (the linked satellites) can compare signal arrival times and match up signals with the same amplitude and frequency but different times (since the satellites are a known distance apart) to find which signals match a region of the brain . The system can do cluster analysis because the signals from 1cm over from the landmark signal (or 1cm over from another part of your brain) will arrive to the satellite at a slightly different time then the signal adjacent (the signal will arrive to each satalite at a different time - but since they have the same features such as amplitude and frequency (and maybe power) and since the satellites are a known distance apart then they can be matched as the signal from one point (ie from one region of the brain) . Cluster analysis allows for adjacent signals to be differentiated from the same brain and from other people nearby .

The clock on the signal analysis must be very many decimal places to the left (very close to 0) so it can tell very small times apart .

The signals can be analyzed and categorized and ran through math algorithms to show which part of the brain the electric field is from and then a basically a quasi remote eeg can be done . Which then can allow date to be reconstructed about the brain in real bear time . Also the system allows for the precise coordinate tracking of the person without an active radar applied .

1. Even if it's ground based and uses carrier waves - distance between ground recivers 1 , 2 , 3, 4 is known (ie distance from reciver 1 to 2 , 1to3 and so forth for all is known). If there is a carrier wave (if needed) or multiple carrier waves broadcasted in all directions then when the elf is emitted from the body and interacts with the carrier wave and then goes to the reciver then it arrives at reciver 1 at time A and recivier 2 at time A+x same with recivier 3 and 4 - even if multiple carrier frequencies used the program can demodulate and then find out which wave is which by looking for the waves with the same phase and amplitude and frequency (and power if necessary) the system can figure out which wave is the same at all recivers regardless of the extra time it took in pico to femptoseconds to get to each one by matching the properties . Since the distance between the receivers and known and the speed of light is known - the real time coordinate of the wave (where it originated from) in the brain/the person can be known .
2.
3. Since the brain is emitting lots of these emf vlf type fields every square center meter (and these either go directly to the reciver or interact with the carrier wave and are demodulated by the reciver (assume demodulating between all recivers is standardized amount of time regardless of the carrier - and also assume there is no variance between detection capabilities of the recivers) -- since the brain is emitting lots of these emf vlf type fields then reciver A and b and c and d can identify the same wave based on the shared properties ie the same wave regardless of the time it took to reach each respective recivier will have the same phase , amplitude and frequency (after demodulation - even if different carrier frequencies are used for the same wave -) and such it can be identified even if the time stamp for reciver A is (a) and the time stamp for reciver B is (a+x) and the time stamp for recivier C is (a+y) and since the location of all the recivers is known then the real time location of that wave originated from can be found . Then say another wave (wave two)that originates 1cm over in the brain goes through the same process - it will have a different amount of time to get to all three recivers - a new (a) , (a+x), and (a+y) different from the other wave (wave 1) even if it is a femptosecond or lower time frame. This means it's location can be found and it can be identified based on its unique properties as well (even if it is the same properties it will have a diffent time stamp) - this process is repeated all over the brain - and a remote eeg can be done .
4.
5. Can also tell the diffrence between different people since even persons 1m apart will have different time stamps (also unique properties - but need the unique time stamps and thus location can be found) . Allows the same cluster type analysis to be performed and persons can be differentiated from persons and brain regions across a brain can be differentiated by the unique electromagnetic signals over long distance
6.
7. and then by unique signal processing and neural networks one can do a remote eeg on a persons brain from very long distance and coorelate it to the real time visual field , auditory field , internal thoughts , nerve firing paterns , etc .