A Nano- Generator of Electric Current based on the new Axioms and Laws

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Abstract

The Theory of new Axioms and Laws contains 2 new Axioms and 8 Laws and it is invented by the same author.The classical axiom (Maxuell 1864) states that the uniform vortex is closed and verifies the Classical Field Theory. In contrast, the first new axiom (Axiom1) asserts that the ununiform vortex is always open and on this basis develops a new Theory of Open vortices.The second new axiom (Axiom2) shows that open vortices in nature (not in technic) are mutually orthogonal. On this basis, the electron is defined as orthogonal to the proton. The Law1, applied to the electron, affirms that a decelerating transverse open vortex generates an accelerating longitudinal vortex in its center. As one of result of the decelerating transverse vortex, the electron becomes a strong eccentric. The center of body moves from Geometric center to a new center, which is the center of Gravity.

This means that during its pulsation, this eccentric body emits a transverse electric wave with a greater amplitude from the convex side of eccentric spiral than from its flattened side. As other of result is that the eccentric electron has an open active end of its decelerating transverse vortex.

This means that for flowing of Electric wave only 1 axis (coordinate) phasing and ordering is required.Therefore the electrons arrangement their open ends (tails) towards positive end of a conductor and the movement of theis own Electric wave is also to positive end of the Conductor.

But the phenomenon induction of Electric current is connected with phasing of the electrons along the 3 axes. In case of outer hitting of Magnetic lines ,electrons arrange themselfs that their own axes are parallel to outer Magnetic lines and to be at minimal distance to them.

What's more- the existence of phenomena induction is direct evidence of exactly this structure of the electron. The inner structure of the electron as open decelerating very eccentric vortex is what causes it to react of the external impact from lines of force of external Magnetic field, as a particle possessing some internal intelligence.

On this base the author propose to construct an Modified Conductor using nano grid of internal Magnetic lines. When electrons pulsate in Time they hit to this Magnetic lines , they rotate so that they will phase along the 3 axes (3D) and thus imitate induct Electricity current.

1. Introduction

The article uses the conclusions from the new Axioms and Laws developed by the same author. With their help and as a result of many years of researches, the author has established the approximate shape of the elementary particles and in more particular of the electron.

For example:The electron is formed by an open transverse vortex (Axiom1) (Figure 1b). The transverse vortex,delayed from the outside-in, generates an accelerating longitudinal vortex from the center-out (Law1) (Figure 1c). The decelerating transverse vortex emits primary hot decelerating vortices which warm the inner side of electron (Law5, Figure 1e).

a) The Classic Axiom

It is known that the Classic Field Theory is based by Maxwell's Laws (1864) and on a single Classic Axiom (Figure 1a) [1]. It states that:

$$\textbf{div rot E = 0.} \qquad \qquad \textbf{1.}$$

The previous studies attempt to expand the Classic Field Theory

to a more general Theory of Extended Field. The author change a little this axiom as the movement of a vector E in an open loop (div rot E ≠ 0) or an open vortex (div Vor E ≠ 0) is unevenly (velocity is variable (Figure 1b,c,e).

div (VotE) ≠ 0 for vector E in 2D 2.
or div(VotH) ≠ 0 for vector H in 3D.

div (Vor E)> 0 or div (Vor E) <0 in 2D, div (Vor H)> 0 or div (Vor H) <0 for 3D.

The main result of Axiom 1 is that there have been 4 types of vortices : a cross vortex in 2D (E2D) that can be accelerated(E2D +) or decelerated (E2D -) and a longitudinal vortex in 3D (H3D) that can also be accelerated (H3D +) or decelerated (H3D -) [2].

We are accustomed to the wrong image of a spiral with a constant distance between the turns. But it is "unreal" spiral . Because if it is a spiral, it must be opened and eccentric . If there is no opened, then it is not a spiral, but it is a closed loop The reason is in the acceleration .

The open monotonically varying vortex is eccentric. For example, in "real" decelerating vortex E1> E3 and the Geometric Center will aim to move to the larger vector E1(up). In the same vortex E3> E4 and at the same time the Geometric Center will aim to move to the larger vector E3 (to the left). Therefore, the Geometric Center will move to a second quadrant or to the Gravity Center (Figure 1e) [3] .

At every (i) point p(i) of a decelerating cross vortex E there are two simultaneous movements: velocity vector (-V) and amplitude of the cross vortex(-W) . The two simultaneous movements (V and W) also exist at all points of the vortex .The cross vortex (E2D -) is transformed into a longitudinal vortex (H3D+). This is accomplished through a specific operator (Δ1) for cross-longitudinal transformation (Figure 1c).

The more general Theory of Extended Field consists of 2 Axioms and 8 Laws.The new Theory leads to the following results: evenly movement is replaced with unevenly movement (decelerating or accelerating); movement in a closed loop is replaced with movement in an open loop or vortex; during its movement decelerating vortex emits primary free cross vortices, while accelerating vortices suck in sucs of this primary free cross vortices; movement in 2D is transformed into the movement in 3D as a cross vortices in 2D generates a longitudinal vortex in 3D through a special transformation and vice versa- longitudinal vortex in 3D through another special transformation generates the cross vortices [4] .

Definitions
• A decelerating cross vortex (E_{2D}^-) is a cross (transverse) open vortex (E_{2D}) for which div (Vor E_{2D}) < 0.
• A decelerating longitudinal vortex (H_{3D}^-) is a longitudinal open vortex (H_{3D}) for which div (Vor H_{3D}) < 0. The Figure 2b shows a decelerating longitudinal vortex (H_{3D}^-) inward,
• An accelerating cross vortex (E_{2D}^+) is a cross open vortex (E2D) for which div (Vor E_{2D}) >0 . -An accelerating longitudinal

vortex (H_{3D}^+) is a longitudinal open vortex (H_{3D}) for which div (Vor H_{3D}) > 0.
• The decelerating cross vortex (E_{2D}^-) inward generates an accelerating longitudinal vortex (H_{3D}^+) outward in its center through a physical transformation (Δ1-) (Figure 1c).
The Full Resonance (resonance in amplitude, frequency and phase) is phenomenon which makes this transformation (Δ1).

c) Law1
Law1 for electron: The open decelerating cross vortex (E_{2D}^-) generates inward an open accelerating longitudinal vortex (H_{3D}^+) outward . This action takes place from the center of decelerating cross vortex (E_{2D}^-) through a particular cross-longitudinal transformation Δ1-:

$$\Delta 1-$$
$$\text{Vor } (E_{2D} -) => \text{Vor } (H_{3D} +) . \qquad 3.$$

Actually it describes in 2D the model of electron as the decelerating inward vortex (dec (e-)) (Figure1c).

Every electron (dec(e-)) of this type appears as an " expanded cross vortex " which pulsates in 3D in two modes of : to in and to out. Surely this type of electron or rotates at outside orbits(orbitals) or exists outside of the atom as free electron.

The type of free electron(dec(e-)) exists when the electron is outside of the atom or it has decelerating cross vortex (E2D-) inward , which generates an accelerating longitudinal vortex upward (H3D+) ,

But for free electron the decelerating cross vortex (E2D-) is broken. The accelerating longitudinal vortex (H3D+) radiates a fast ingredient that connects to the decelerating longitudinal vortex (H3D-) at input of the proton.

There is a significant difference in mass of a bound electron and a free electron. For example scientists measure the mass of a free electron with a decelerating cross vortex (E2D-) .But the mass of bound electron is less than the mass of free electron[4,5].

d) Law5
Law 5 for electron : The deceleration vortex in 2D is described with a system of 2 equations in which: longitudinal velocity (V) decreases in (n) portions (ψ^n) times; the amplitude (W) increases in (n) portions (ψ^n) times:

$$I \ V(t)^2 = V_0 (Vo - V(t)), \qquad 4.$$
$$I \ W(t)^2 = W_0(Wo + W(t)),$$

where v_n, w_n n are periodic roots with period n; v_n, w_n are **mutual orthogonal** that fulfill the requirement for orthogonality :: $v_n.w_n = V_0.W_0$, $v_n.\omega_n = V_0.W_0$; $n = 0 \div \infty$; the roots vn, wn are expressed as: $v_n = (1/\psi_n).V_0$, $\omega_n = \psi_n.W_0$; linear velocity V_0 is the starting value of V_n, amplitude of cross vortex W_0 is the starting value of ω_n; ψ is a proportional that fulfills the requirement: $\psi-1/ \psi =1$; t is continual and even, Vn are uneven(decelerated) and V(t) is nonlinear (Figure 1d) [4,5].

2. Structure of electron according new Axioms and Laws

According **Axiom 1** every nonuniform vortex with monotonically varying speed appears an open vortex. In the case of an electron the vortex is decelerating from outside to inside ,so it is an open vortex whichis deformed to eccentric vortex.It is obviously that the velocity vector at the entrance E1 is greater than the velocity vector E2 at the opposite point. Therefore the spiral will **move up** to the bigger vector E1 or to higher speed. And the next velocity vector E3 is greater than the velocity vector E4 at the opposite point from the left . Therefore the spiral will shift **to the left** to the higher speed . Thus, the whole spiral shifts up and to the left, and the spiral of the electron changes from centric to eccentric (Figure 1b,c).

Result : The whole spiral shifts up and to the left.
This means that the center of the spiral moves from the position of the Geometric center (O) to up and to the left towards a new center in second quadrant, called the Gravity center (F). The distance between the Geometric center and the Gravity center determines the magnitude of the Eccentricity vector (OF) (Figure 1b).

Result: The Eccentricity vector determinates the distance between the Geometric center and the Gravity center.
It turns the spiral of the electron from centric to eccentric. Meanwhile a fundamental role of this Eccentricity vector (OF) is that its projection along the x-axis repels the electron from its personal proton, and its projection to the y-axis rotates the electron around its personal proton. But in this article, we will not describe these movements.

Result: The transverse spiral of the electron becomes eccentric spiral.
According Law1, each transverse vortex generates in its Gravitational center (F) a longitudinal vortex, perpendicular to the plane of the transverse vortex. In the case of the electron, the decelerating transverse vortex from outside-in generates in the Gravitational center (F) a longitudinal accelerating vortex, perpendicular to the plane of the transverse vortex (Figure1c).

Result: The decelerating transverse vortex of spiral of electron generates a perpendicular accelerating longitudinal vortex in center of spiral.
According Law5, each main decelerating vortex radiates outward from itself decelerating primary vortices. In the case of the electron ,the main decelerating transverse vortex emits outwards primary decelerating transverse vortices (Figure 1d). These primary transverse vortices are concentrated and phased at the Gravitational center .Exactly they generate a longitudinal accelerating vortex by full resonance (in time and space) At the same time these primary transverse vortices radiate heat energy and fill the body of the electron with warmth (Figure 1e) [6].

Result: The transverse vortex of electron is not empty, but it is full of primary decelerating transverse vortices that concentrate in the Gravity center and fill the body of electron with heat.
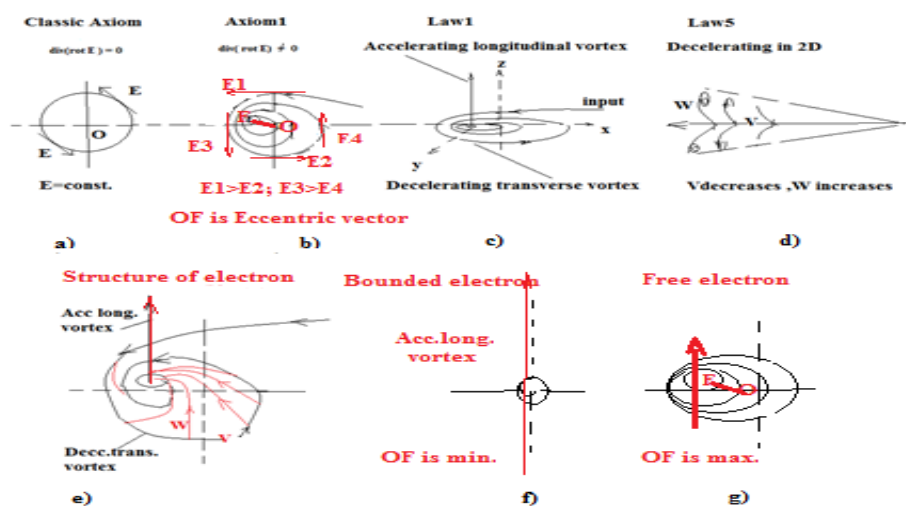

Figure 1: Description of an electron (e-)
Figure1e) Structure of electron as eccentric transverse vortex;
Figure1f) Bounded electron with min eccentricity;
Figure1g) Free electron with max eccentrity

According to the **Axiom1**, transverse and longitudinal vortices are obtained. The transverse vortices in the face of the electron and proton reflect the transverse waves of the Sun's rays, and any outside observer can see these particles. The result is that electrons and protons are visible to an external observer.

Result: The electron and the proton are visible to an outer observer.
But unlike the transverse ones, the longitudinal vortices do not reflect the transverse waves of the Sun's rays. Reaching the thin thread of the longitudinal vortex, the transverse waves diffract. This means that transverse wave bypass the longitudinal vortex and continue in their previous direction and with their previous speed. According to Axiom 2, the electron and proton

are connected as mutually orthogonal vortices by bond of longitudinal vortex and they operate in master-slave mode.

Result: The bond between the electron and the proton is invisible to an outside observer.

According to **Law 1,** an accelerating longitudinal vortex perpendicular to the plane of the transverse vortex is generated at the Gravitational Center of the decelerating transverse outside-in electron vortex. This longitudinal accelerating vortex in Gravity center is also invisible to an external observer because it reacts with diffraction of the transverse wave of Sun light.

Result The longitudinal vortex generated by the Gravitational Center (F) of the eccentric electron is also invisible to an external observer.

That's why the electron and the proton are visible but the connection between them is not visible. And the longitudinal vortex generated by the electron's Gravity center is also not visible[6] .

3. The link

between the structure of electron and phenomenon of Electric Induction
a) Introduction
The current knowledge of the structure of the atom, in particular of the electron and the proton, is based exclusively on the Quantum Theory of the structure of matter. This theoretical knowledge is partially supplemented and proven by the observations of the internal structure through optical devices.The Quantum Theory tries to get at the internal structure and internal forces that move the electron but fails to do so.

All current knowledge describe the matter only from the outside - what is the wave length, width of packet, dispertion , statistical distribution ,quantity and quality of particle , spectrum analysis, etc. This description does not reach to the inner side - to the causes, to the driving forces, to the internal structure which includes the driving forces, to the internal logic of processes.

b) The structure of electron and proton according new Axioms and Laws
The new Axioms and Laws proposes a new structure of the electron and the proton. The reason is that this new Theory describes their inner side , the internal causes, the internal driving forces, the internal logic of moving and links between them.
It is very curiously that the electron described by the new Theory(as an open eccentric decelerating from outwars to inward vortex) fully obeys the Right Hand Rule (as the electron in Classical Theory) [4].

The Right Hand Rule for direction of inducted electrons (e-) states: If the external magnetic field lines (Ho) break through the palm of the right hand from top to bottom, and the thumb points to the direction of movement of the conductor, then the fingers point to the direction of the induced electrons (e-).

Result: The direction of inducted electron (e-) as an open eccentric generated (from out to in) by a decelerating transverse vortex fully obeys the of Right Hand Rule.
But in an opposite to the direction of electrons (e-) is the direction of the Electric current.
But the direction of the Electric current or the direction of the positive particles is in an opposite to the direction of electrons (e-) is Actually the positive particles don't move because they are included statically the nucleus of the atom . When negative flexible particles are moved (e-) than one part of Conductor .When the negative mobile particles move (e-) to one end of the wire, then the opposite end of the wire experiences the lack of electrons. Therefore, there is measured a positive potential. The direction of positive particles and the Electric current (I) is determined by the Left Hand Rule [5] .

Result: The direction of inducted Electric current (I) fully obeys the of Left Hand Rule.
The Left Hand Rule for direction of inducted Electric current states : If the magnetic lines of force (Ho) pierce from up to down the palm of the left hand and the thumb points to the direction of movement of the conductor, then the fingers point to the direction of the induced Electric current (I) or direction of positive particles (p +).

c) Tne essence of Induction phenomena
Because they are flexible the negative charges move to the positive end of Conductor. This is the reason they to orient their open ends (tails) towards to the positive end of the Conductor.

Because they are fixed immovably in the nuclei of atoms the positive charges accumulate at the bare end of the Conductor. This is the reason they to accumulate their charges towards to the opposite (negative) end of the Conductor. Therefore, the phenomenon of induction actually carries out a separation of negative charges (electrons e-) which are directed to positive end of the Conductor from positive charges (protons p), which are accumulated in the negative end of the Conductor [6].

Result : The essence of Induction phenomenon is to separate the negative movable charges (electrons e-) which are directed to positive end of the Conductor from the stationary charges (protons p) which are accumulated in the negative end of the Conductor.
In reality, the electrons move at a slow speed (cm /min), but their pulsation in time creates an internal Electric wave that moves at the speed of light (c). It is very curiousy that the electron (pulsating in Time) emits internal Electric wave simultaneously to **both opposite directions**. But because of its eccentricity, it emits from a bulging part (to positive end of Conductor) an Electricity wave with bigger amplitude than from a flattened part (to negative end of Conductor).The result is obtained after subtracting the smaller wave from the larger wave As a result the direction of the internal Electric wave is towards the positive pole.

Result: The direction of electrons as bodies maches with the direction of internal Electric wave - mostly to positive end of Conductor.

Due to friction, the internal Electric wave stratifies with decreasing speed in the direction from the center of the Conductor to the periphery. Thus, along the longitudinal axis of the conductor, the speed of the Electric wave is maximum and appears first in time $(t1)$. Due to friction in the periphery of the Conductor, the Electric wave in periphery has a minimum speed and appears as an helical cylinder last in time (tn) [6,7].

Result: The internal Electric wave delaminates as its maximum speed is in central axis and appears first in time $(t1)$, and its minimum speed is in periphery and appears last in time (tn).

Thus, from the first wave in time $(t1)$ to the last wave in time (tn), a so-called Reverse Wave is formed. It starts from the longitudinal central axis of the Conductor and continues on its surface ,but in the opposite direction of the internal wave. This peripheral external Reverse Wave is defined as an Electric current (I) with a direction opposite to the internal Electric wave $(e-)$ of pulsation and movement of electrons [7].

Result: It is formed the Electric current as so called Reverse Wave: from the first layer of internal Electric wave in time $(t1)$ in center towards the last layer of Electric wave in time (tn) in periphery of Conductor.

Therefore the internal Electric wave (which is cause from movement and pulsating of electrons) has an opposite direction to the external Electric current.

Result: The direction of electrons (internal Electric Wave) has an opposite direction to the Electric current (outer Reverse Wave).

The internal Electric wave is the reason and the Electric cureent is result.If an Electric Current is already flowing along the Conductor, then the electrons are arranged so that their own planes (x,y) are perpendicular to the cross section (Q) of the Conductor .This means that their own third coordinate (z) is parallel to the cross section (Q) of Conductor [8].

Result: When Electric Current (I) flows , then the planes (x,y) of electrons phases perpendicular and the own third coordinate (z) of electrons is parallel to the cross section (Q) of Conductor.

We saw that in case of flowing Electric current the phasing of electrons are only along 1 coordinate (x- coordinate). For comparison in case of Induction phasing of electrons are along 3 coordinates (x,y-plane and z-coordinate) (Figure3g).

Result: In flowing Electric current the phasing of electrons are only along 1 coordinate (x- coordinate) but in Induction phasing of electrons are along 3 coordinates (x,y-plane and z-coordinate).

We already notice that the phenomenon of **Induction requires a much stricter arrangement** of the electrons (in 3- coordinates) than the phenomenon of the flow of Electric current (in 1-coordinate).

d) Summary

We saw that the Induction of an electrons $(e-)$ occurs when a conductor moves in an outer constant magnetic field (Ho) and the conductor crosses the magnetic lines of force (Ho) perpendicularly. The direction of the induced electrons is determined by the Right Hand Rule (Figure 3g). The essence of Right Hand Rule is that if the magnetic lines of force (Ho) pierce from above - downwards the palm of the right hand and the thumb points to the direction of movement of the conductor, then the fingers point to the direction of the induced electrons $(e-)$.

The essence of the phenomenon of induction actually carries out a separation of negative charges (electrons $e-$), which are directed to one end of the conductor , and conditionally positive charges (Electric current I).

Let's recall and summarize that in the metal lattice the electrons are free and mobile but protons are bound to the nuclei of atoms and are actually stationary. According of Law1 and Law5 from new Theory, the electron $(e-)$ is eccentric as in plane (x,y), so in volume (x,y,z) (Figure 1e). Therefore the electron looks like an eccentric toroid.

Furthermore electrons pulsate in time. According Law1, when an electron pulsates, it act two phazes: In one phaze It swells up along a transverse components (plane x,y) and shrinks along longitudinal component (perpendicular z) and inversely -in the next phase electron shrunks up along transverse component (plane x,y) and elongates along longitudinal component (perpendicular z) (Figure 1e).

Let us outline the first phase the electron : it swells up in plane (x,y). Because electron is an eccentric body it emits a transverse wave with a greater amplitude from its convex side (which is in more distance to the Gravity center) than from its flattened side (which is in less distance to the Gravity center). This is the reason the electron in first mode (swells up mode) to emit internal Electric wave with more amplitude to one direction than to the opposite direction After subtracting the two waves we obtain the main result: In first pulsating phaze (swells up mode) the electron emits own internal Electric wave with more amplitude to positive direction that to the opposite direction.

If an Electric Current is already flowing along the Conductor, then the electrons are arranged so that their own planes (x,y) are perpendicular to the cross section (Q) of the Conductor. This means that their own third coordinate (z) is parallel to the cross section (Q) of Conductor.

In pulsating mode the electron emits to the both poles the internal Electric wave, but the wave is bigger to positive pole of external Electric Voltage than to negative pole. In this arrangement the bigger wave is pointed to positive pole of external Electric Voltage. But the less wave is pointed to negative pole of External Voltage.Therefore in pulsating (in time) mode the electron emits simultaneously to the both poles the internal Electric waves, but the wave has bigger amplitude to positive pole of external Electric Voltage than to negative pole. Therefore In pulsating

mode the electron emits to the both poles the internal Electric wave, but the wave is bigger to positive pole of external Electric Voltage than to negative pole.

According to Law 1, the free electron is expanded electron ant it has a perpendicular of longitudinal vector (with a small height) in the center of the transverse vortex (with a large radius) in the place of the Gravitational center. This is how the body of the free electron is formed as an inflated eccentric toroid (Figure 2). According Axiom1 and Law1 the decelerating transverse vortex is the reason the electron to be a strong eccentric. This means that during its pulsation, this eccentric body emits a transverse wave with a greater amplitude from its convex side than from its flattened side. We saw that the electron is an eccentric, and the new center called the center of Gravity is located in the second quadrant. Therefore the new center of eccentric electron (Gravity center) is located in the second quadrant (Figure 1b,c).

According to Law 5, for free electron the decelerating vortex from outside to inside emits transverse primary decelerating vortices in direction from outside to inside. They fill the body of the toroid with heat vortices
(Figure 1e).

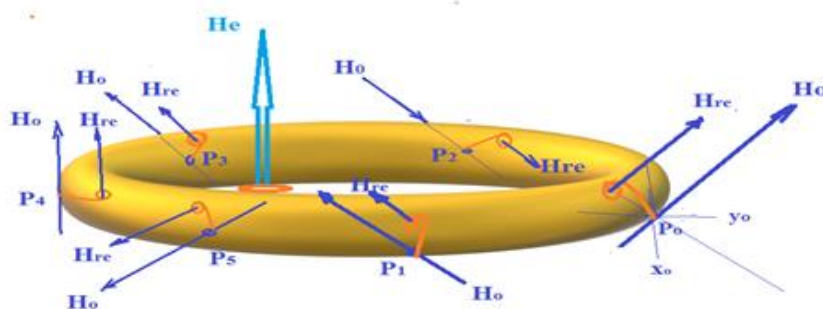Therefore the free electron emits (from outside to center)

transverse primary decelerating vortices which fill the center of toroid with heat. Thus the free electron looks like a very eccentric and very inflated toroid full of warmth [7].

4. The essence
Of Electric Induction according new Theory of new Axioms and Laws

Let's recall and summarize that the electrons exist in the metal lattice as free electrons. Because electrons are in free mode they are **bulgedalong a transverse component** and shrunk along a longitudinal component (Figure 1e). According Axiom1 the decelerating transverse vortex is the reason the electron to be a strong eccentric. This means that during its pulsation, this eccentric body emits a transverse wave with a greater amplitude from its convex side than from its flattened side. We saw that the electron is an eccentric, and the new center called the center of Gravity is located in the second quadrant. The distance between the Gravity center and the Geometric center determines the Eccentricity Vector (Figure 1b) .The magnitude of this Eccentricity vector is maximum for free electrons. (Figure 1g) . For bound electrons, the eccentricity vector decreases with decreasing the distance to the nucleus .It limites to minimum (Figure 1f) [8].

Figure 2: Model of electron (e-) according new Axioms and Laws and reaction to outer hits (Ho)

a) The bonded electrons
For bonded in peryphery electrons the Gravity Center is placed low (closer to x-axis) in second quadrant. That is why the x-vector is big. This means that the force of attraction to nucleus has big size. But y-vector is short – this means that the angular velocity of the closer to periphery electrons is very small. Or electrons in periphery rotates around its axis slower [8].

Result: The bonded in peryphery electrons have big x-vectors and the force of attraction to nucleus has big size, but they have short y-vector and angular velocity around nucleus is smaller.
For bonded internal electrons the Gravity Center is placed hight in the second quadrant and x-vector is small and the force of attraction to nucleus has less size. But the y-vector is long and this is the reason the angular velocity of the electrons around nucleus to be bigger.

Result: The internal bonded electrons have short x-vectors and the force of attraction to nucleus has little size and have

long y-vector and angular velocity around nucleus is bigger. We saw that the peripheral and internal electrons are held and controlled by their respective protons in the nucleus by the transverse vortices.This control makes a different behavior of peripheral and internal electrons.

Result: The periphery electrons have a big force of attraction to nucleus and a less valocity of rotation, but the inner electrons has a smaller force of attraction and a big speed of rotation.
The state of the free electrons is very specific. They are not in an intermediate state between peripheral and internal electrons[9].

b) The free electrons
According Axiom1,the Gravity center is located maximally low and close to the x-coordinate because the free electrons are maximally inflated. The result is that when in this point the Vectror of Eccentricity is decomposated the length of its x-projection is a maximum.

Result: The free electrons are maximally inflated.
This is the inflection point at which the transverse vortex stretching is maximal, the length is maximal, and finally this transverse bond breaks.

Result :The free electrons have broken their cross-vortex bonds.
The free electrons have broken their transverse bonds and behave and control from their respective master- protons only along bonds of longitudinal vortices.

Result: The free electrons are driven only in the longitudinal vortex.
The free electrons have taken and have remembered the form (very eccentric and bulging) from the last orbit of the atom from which they flew out outside the atom. They are governed both in space (place) and in time (pulsation) only by the longitudinal vortex along the z-coordinate.

Result:The free electrons are governed at Space (place) and in Time (pulsation) only by the longitudinal vortex of corresponding protons.
According to Law 1, the bulged free electron generates a perpendicular longitudinal vector (which has a smaller height) in the center of the transverse vortex (which has a larger radius) from the place of the Gravitational center. This is how the body of the free electron is formed as an inflated toroid (Figure 1e). According to Law 5 for free electron , the decelerating vortex from outside to inside emits transverse primary decelerating vortices in direction from outside to inside. They fill the body of the toroid with heat vortices (Figure 1e).

Result: The free electron have form of maximum eccentric, inflatted toroid with hot body.
c) The electron behaves as intelligent particle.
We know that if a rotating body (for example whipping-top) is struck from outside and depending on the direction of rotation the body bounces on its axis (up or down) according to Right Hand Rule [8].

In case of electron -the reason is that the Conductor crosses the line of the permanent Magnetic field (Ho) which hit the electron perpendicularly. The secret of induction is that the electronS in 3D becoms arranged, phased and directed to one end of the Conductor (Figure 3g).This outer hit (Ho) cause a primary decelerating transverse vortex (Law 5) from outside-in towards its center of Gravity of plane (xo,yo), that is perpendicular to outer hit(Ho).

Let us get to know the participants: Ho (outer Magnetic field) perpendicular in plane (xo,yo), He (inner own longitudinal vortex of the electron, Law1) perpenticular in plane (x,y), and Hre (reaction of local longitudinal vortex of local transverse vortex, Law1) also perpendicular in plane (xo,yo) (Figure 2, Figure 3a,b,c).

For example: At point Po the external shock is Ho(down-up) and the reaction Hre not parallel to Ho and makes an angle to He. Therefore Hre will rotate the electron up-down. At point P5 the external shock is Ho (up-down) and the reaction Hre not parallel to Ho and makes an angle to He .Thus Hre will rotate the electron down-up .At point P4, the magnetic line Ho (down-up), reaction Hre and the axis of electron He are parallel each other and stand at minimal distance from each other.So electron is in stable point will not rotate to nowhere [8,9].
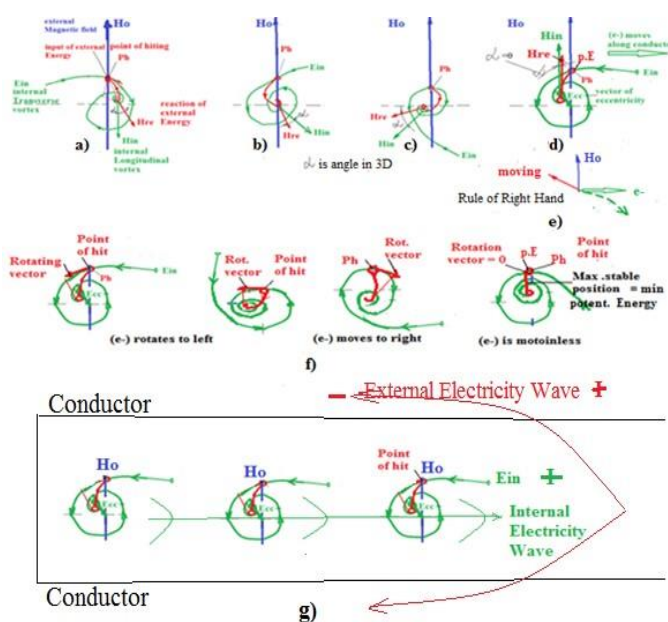

Figure 3: Induction of electrons equals of separation of the electrons and targeting of electrons along one direction of the Conductor
Figure 3a) Electron is invercse left ,Point of hit is up, electron rotates around x-axis,
Figure 3b) Electron is twisted to left;Point of hit is up,electron rotates around z-axis;
Figure 3c) Electron is inverse right,Point of hit is up,electron rotates around y-axis;
Figure 1g) Arrangement of electrons after Induction phenomena

Result: Magnetic field (Ho) hits the electron from outside-in and cause perphendicular primary transverse vortex in plane(xo,yo) in toroid body of electron.

The difference between rotating whipping-top and rotating electron is that the whipping-top is not eccentric, but electron is extremely eccentric body.

We saw that in hit from outside (Ho) to the tilted electron is formed decelerating transverse vortex in own plane (xo,yo) of reaction, which always is perpendicular to outer hit (Ho). This own plane (xo,yo) makes an angle to plane (x,y) of the electron.

The electron in own plane (x,y) form in center (Law1) a perpendicular vector (He) which is not parallel to outer hit (Ho). The decelerating vortex in plane (xo,yo) of reaction forms in its center (Law1) a vector of reaction
(Hre). It is always perpendicular to (xo,yo) and makes an angle to own vector of electron (He) [10].
Therefore the vectorof reaction (Hre) turns out to be at any angle (3D) relative to the own vector (He) of the accelerating longitudinal vortex of the electron itself (Figure2, Figure 3d).

Result: The vector (Hre) of reaction forms any angle (in 3D) relative to the eigenvector (He) of the electron.

The geometric sum of the two vectors (Hre + He) gives a vector (Hsum) which rotates the electron (not shown). The electron reacts , like it twists and rotates, so that the impact to be from the most compressed spring of the spiral (where distances between lines of spiral are minimal). This matches at the point of its minimum potential energy (Figure 2,P4).

Result: The electron seeks to occupy a maximally stable position relative to the external impact of Magnetic field (Ho).

Thus the divergence angle between own electron vector (He) and reaction vector (Hre) is zero (in 3D). Therefore the reaction vector (Hre) to be unidirectional with electron vector (He). Therefore the transverse vortex is generated at the location of the external shock (Pi). This transverse vortex also has a direction - from point of outer hit (Pi) to vector of reaction (Hre). Thus it in turn spins the electron (to the left or right) in its own (x,y) plane also and in 2D.

Result:The electron rotates to this point where the three vectors (Ho,He,Hre) became parallel.

This means that the electron rotates as in 2D as in 3D, until it finds the point where the turns of the eccentric spiral are maximally closely spaced between each other and to Gravity center (Figure 2 ,P4)[10].

Result: The electron finds the point of most compressed spring of the eccentric spiral where the potential energy is minimum.

After this rotation the electron cannot stand in any other way than with its opened tail end to one end , according to the Right Hand Law.

If outer Magnetic lines (Ho) are from down to up (Fgure 2), the open ends (Ein) of electrons will arrange to right according

Right Hand Rule. The electrons are twisted so that their active tails to point to (Ein) right end of the Conductor (Figure3g).

If outer Magnetic lines (Ho) are from up to down (Fgure 2), the open ends (Ein) of electrons will arrange to left direction, according Right Hand Rule. The electrons are twisted so that their active tails to point (Ein) to left end of the Conductor.

Result: The electrons point their active tails (Ein) to one and the same end of conductor with positive potential.

5. Conditions for Electricity current flow
a) Current conclusions
For the phenomenon of Induction of electrons, the necessary condition is to have an outer Magnetic field .The sufficient condition is that there is anouter movement and the Conductor crosses and hit perpendicularly the lines of the outer Magnetic field (Ho) (Figure 3e).

Result: The first result of the hit is to *deformate* the electron body.

Because of an impact at an outer point to the eccentric electron body, it additionally strongly deforms the body of the electron (Law5). According to Law5, this abrupt hit causes a primary transverse decelerating vortex in plane(xo,yo) in direction from out to in. According to Law 1, this primary decelerating vortex generates a longitudinal acceleration vortex of the reaction (Hre) from its center upwards perpendicular to the plane of the transverse decelerating vortex (xo,yo).This too significant accelerating longitudinal vortex (Hre) is a reaction of body to outer impact (Ho). The plane of reaction (xo,yo) do not match with the electron plane (x,y). Therefore vector of reaction (Hre) will make an angle in 3D space relative to the electron's own longitudinal vector (He).

Result: The second result of the outer strike is to *rotate* the electron body.

The electron body will rotate so that the two vectors (He,Hre) to become parallel (in phase) with each other. As a result the angle between Hre and He will tend to zero.Also they aim to become parallel (in phase) with the external magnetic field (Ho). Such the angle between Hre,He, Ho in 3D also will tend to zero. In this way the three vectors will become parallel between each other.

Conclusion for a nessecary condition for Electricity current to flow: A necessary condition is the three vectrors (He,Ho,Hre) to be mutual parallel

where He (inner own longitudinal vortex of the electron, Law1) perpenticular in plane (x,y), Ho (outer Magnetic field) perpendicular in plane (xo,yo) and Hre (reaction of local longitudinal vortex of local transverse vortex, Law1) also perpendicular in plane (xo,yo) (Figure 2, Figure 3a,b,c).

The point of maximum sustainability of the electron coincides with the point where the electron has minimum potential energy. This point is located where the distance between the three vectors (He,Ho,Hre) is minimum.
Therefore the three vectors will aim to be parallel or in phase

(He, Ho, Hre) and at the same time aim to stand at minimum distance between each other.

Conclusion for a sufficient condition for Electricity current to flow: A sufficient condition is the three vectors (He,Ho,Hre) to stand at a minimum distance from each other,
Conclusion for the *essence of Induction*: After a hit from outer magnetic field (Ho) the electron twists, seeks and finds the maximum stable position in 3D ,where Hre tends to zero.
It moves in such kind that are phased the three longitudinal axes (He,Ho,Hre) in a maximum stable point of spiral. In this point has minimum potential energy - the transverse lines of the spiral or the longitudinal vectors (He,Ho,Hre) are in minimal distance between each other.
As a final result , large percentage of the electrons will be phased and directed with their active tails to one end of conductor and their body will be pherpendicular to outer Magnetic field (Ho) (Figure 3g).

Conclusion for *Electric current of Induction*: In Conductor the free electrons will be arranged and pointed their active ands to positive end (of Conductor), while the planes of their body will stand pherpendicular to outer Magnetic field (Ho).

The reason the electron to react in this way is that it represents an open eccentric vortex with decelerating transverce vortex moving from out to inside. Electron react to the external shocks of the external Magnetic field (Ho) by searching the most stable position in Space with lowest Potential Energy. Electron finds the stable position in 3D by rotating its body to this place where Point of hit (P4) is closest to Gravity center where the coils of spiral are closest to each other. Thus Point of hit (Pi) coincides with the point of minimum potential energy (P4) (Figure 3,P4).

Conclusion for *reflex reaction*: This reaction of electron get closer to response of the the living thing and any outside observer would think that this elementary particle has some kind of primary intelligence.
Finally, in order, but not in importance, the phenomenon of Induction would not be possible if the electron were not exactly such an open vortex body, which is described by the new axioms and laws. Therefore, exactly the presence of the phenomenon of induction is evidence of precisely this internal structure of the electron.

Conclusion for *proof of the truth* of the internal structure of electron: The existence of the phenomenon of Induction is proof of the truth of the new Axioms and Laws.
b) The necessary conditions
Let's repeat again: The movement of electrons along a conductor included between 2 electric potentials requires phasing only along 1 axis (x-axis). Electron induction in a passive conductor crossing a perpendicular constant Magnetic field requires 3 axes phasing. Manifestation of the Lorentz force of electrons moving in an active conductor placed in a Magnetic field perpendicular to the Electric one also requires phasing along 3 axes.

Let's note: The simple directional movement of pulsating eccentric dipoles is known as Electric Current. It requires phasing on only 1 axis and does not require phasing on 3 axes.

Necessity and the sufficiency: It is necessary that the electrons pulsate and are ordered with their tails towards one end of the conductor. Such construction means that the bulging part of the eccentric will always be turned towards one positive end and during pulsation will emit a greater amplitude to the plus end than to the minus end of the conductor. It is enough that the plains of electrons to be oriented perpendicular to the conductor section [9].

In order for an Electric Current to flow along a Conductor *it is not necessary:* to apply Electric Voltage to both ends of the conductor, and it is not necessary for the electrons to move along the Conductor.

In order for an Electric Current to flow along a Conductor *it is necessary:* the electrons to pulsate in Time, and (due to the eccentricity of their dipoles) the electrons to radiate in one direction a greater amplitude than in the opposite direction. At the same time (thanks to shocks in the lines of force of a Magnetic Field) the opened ends of the electrons to phase along the axis of the Conductor, and the planes of their bodies of transverse vortices to stand perpendicular to the cross-section of Conductor [10.11].

6) Proposal for Nano- Generator of Electricity Current
a) The essence
The scientists must imitate the phenomenon of the of flowing the Electricity Field. Thus it is good for them use the phenomenon of Induction, according new Axioms and Laws. That is why the constructors are forced to invent a very **Modified Conductor.** It should be a Conductor with very specially installed dense grid of internal lines of a permanent Magnetic field . As a result the pulsating electrons (due to the fact that they are connected with their respective pulsating protons , Axiom 2) will hit these lines from inside. Thus the electrons (due to the fact that their bodies are eccentric dipoles, Axiom 1) will emit Electricity wave to one direction with bigger amplitude than to the opposite direction. At the same time electrons will phase along 3 coordinates (in 3D) [10]. This will be more than enough to get an Electricity Voltage between the two ends of the Modified conductor.

b) The Modified Conductor
Designers create a Modified Conductor with 2 halves of Magnetic threads. The two halves carry different Magnetic poles, One option is when the Magnetic threads are parallel to each other. When the Conductor has a rectangular cross-section the Magnetic lines pass from one pole to the other through the entire section of the Conductor almost parallel to each other (Figure 4).
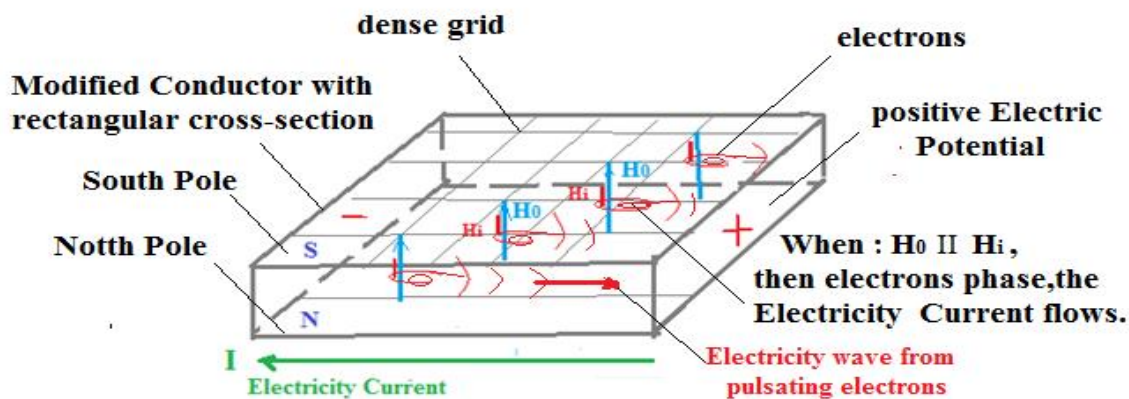
Figure 4: The Nano- Device as a Modified Conductor with installed inside The Magnetic lines

At first, a charging Electric Current is started. Its magnitude and duration are specified by the material composition and electrical resistance. It is better to apply an Electricity impulse. After the charging Electric Current is started, then the majority of the electrons are phased in the direction of the Conductor, i.e. in 1 x –dimension.

In more detail, this means that the dipole of the electron stands perpendicular to the cross-section of the Conductor. Its free input end points to the Positive Pole and is powered by it. Because most of the eccentric also points to the Positive Pole. When the electron pulses it emits a pulse with a higher amplitude towards the Positive Pole than the Negative Pole.

The eccentricity is the reason the smaller part of the eccentric electron to emit towards the Negative Pole a pulse with a smaller amplitude . The eccentricity is the reason the bigger part of the eccentric electron to emit towards the Positive Pole a pulse with a bigger amplitude.

As a result when pulsating, the electrons emit an internal Electricity wave towards the Positive Pole of the Conductor's power supply. And the opposite wave, called outer Electricity Current, moves along the surface of the Conductor in the opposite direction- from the Positive to the Negative Pole of the Conductor's power supply.

After some time, the Conductor is charged with a charging Electric Current. The majority of the electrons are phased in the direction of the wire, i.e. by 1 x –dimensionality. Then the charging current can be stopped. During pulsation (shrinking to minimum and expanding to a maximum diameter) the electrons hit the Magnetic Lines and are self- phased, thus maintaining the magnitude of the Electric Current.

In more detail, this happens as follows :The first phase is the phase of contraction, in which own Magnetic vector (Hi) in the center of the electron is maximum (Law 1). And this own vector (Hi) is phased (becomes parallel and unidirectional) with the

Magnetic vector of the external magnetic field (Ho). The second phase is the phase of maximum expansion in which the electron is struck from the outside towards the Magnetic line and rotates its body (because Hre) so that the distance from the outer point of impact to the Gravity Center of the electron to be a minimal (Figure 3d).

If the external magnetic field consists of parallel lines , then on the upper part of the surface, for example, is the South Pole, and on the lower part it is the North Pole, and the direction of the force lines, for example, is from bottom to top. Then the electrons are phased by standing perpendicular to the lines and at the same time, they are also perpendicular to the cross-section of the Conductor (Figure 4).

c) Two model of constructions (rectangular and round cross -section)
We saw that the Modified Conductor can have rectangular cross –section. The dense network of magnet treads at outer surface (2D) of the so-called Modified Conductor is to create a dense network of Magnetic lines inside in the volume (3D). Because cross –section is rectangular one Magnetic pole should be at upper surface , but the other –at lower surface of Modified Conductor.

Ideally, this Magnetic network should have a distance between the field lines (D) commensurate with the dimensions of the electron (d). In the real case it is enough the distance (D) to be twice more than dimension of electron (d).

From the above description we know that electrons pulsate in Time. The reason is the pulsation of their corresponding protons (Axiom 2). The purpose of the sufficiently dense network inside the volume (3D) of the Modified Conductor is to maximize the number of naturally pulsating electrons in Time. It will maximize the hits of electrons to these internal Magnetic lines of force (Ho) (Figure 5a,b). As a result of the impacts from the outside, the electrons will phase their own magnetic vectors (Hi) with the internal magnetic vectors (Ho) and will reset the Reaction vector

(Hre =0)(Figure 3d). And even more-resetting the reaction (Hre) means that the active tails of the open vortices of the electrons will build in to the one and the same direction, according to the Right-hand Rule (Figure 3g).

This action will imitate the flow of an Electric Current in the indicated direction of the Modified Conductor.

d) Two modes of operation (passive and active)
The described dense network of Magnetic lines on the top and bottom surfaces (2D) of the Modified Conductor can be coupled with Electric field lines and converted from a passive Magnetic field (without power) to an active Electromagnetic field (with power).

Of course, the input secondary supply of the network is less than the result of the output. This ratio will also determine the Coefficient of Useful Action. It is expected to be much higher than unity. Its size will depend on the percentage of effective strikes of the pulsating electrons in the internal grid of Magnetic field lines.

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