

## Components and Activating Function of Radio Waves (31)

- The radio wave is composed of concentration of the magnetic field wave and the space current (induced electromotive force). -

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### Abstract

1. The upward magnetic field wave and the downward magnetic field wave) of the radio wave are occurred with the periodical linkage structure in the side of the electric wire passing with the AC current. This magnetic field wave of the radio wave can be defined as the periodic frequency of the magnetic force having  $S$  pole and  $N$  pole. Also, in the spreading process of the magnetic field wave, vertical vector of the “space current” is produced. Here, the space current of the radio waves has the function of induced electromotive force.

2. The radio wave is composed of the concentration of the magnetic field wave and the space current. Also, this magnetic field wave and the space current maintain the reliance (causal connectivity) of being converted mutually. If the existence of the space current is denied, the occurrence and spread process of the radio wave cannot be interpreted rationally. In this perspective of the logic, the concept of <Electromagnetic Wave = Electric Field Wave + Magnetic Field Wave> must be modified (discarded).

3. The magnetic force ( $S$  pole and  $N$  pole) of the upward magnetic field wave and the downward magnetic field wave composing the radio wave is converted into the opposite pole in the peak of the wave. In other words, the  $S$  pole and  $N$  pole of the magnetic force are the peak of the wave. Therefore, the horizontal axis of  $X$  is unnecessary in the coordinate for expressing the structure of the magnetic field wave. This condition of the radio wave does not have the interference effect. Also, the photoelectric effect and the compton effect are not occurred in the process of spreading the radio waves composed in the wave model.

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※ For your reference – This paper denies some arguments of quantum mechanics, and suggests a new alternative. It is hoped the quantum mechanics of the abolition target will be excluded from the judgment standard.

## Abstract I. Introduction.

As introduced in the study of “Misunderstandings on Maxwell’s Electromagnetic Wave Equation and Other Meaning of Interpretation”, the structure of the electromagnetic wave is distinguished (separated) in two types of models. In other words, the wave model of electromagnetic wave and the particle model of electromagnetic wave exist individually (independently). Here, any one of electromagnetic wave cannot have two functions of the wave model and the particle model simultaneously.<sup>[29]</sup>

<<http://batangs9.com/E-29.pdf>>

All radio waves of the wave model are produced in periodical linkage structure (continuous wave) in the side of the current, and the wave model of electromagnetic wave (long wave, short wave, ultrashort wave, microwave, etc.) has the structure of the “radio wave”. However, all light waves in the particle model are released in independent unit (1, 2, 3, 4, ...) inside the resting electron, and this particle model of electromagnetic wave (infrared ray, visible ray, ultraviolet ray, X-ray, etc.) has the “light wave” structure.

It was presumed that electromagnetic wave was composed of combination of the electric field and the magnetic field in the process of introducing Maxwell's Electromagnetic Wave Equation. However, the electric field of the resting electron does not interfere with the reaction of the magnetic field, and the magnetic field also does not interfere with the reaction of the electric field. In other words, the electric field and the magnetic field do not have causal connectivity (continuity of function). Therefore, the electric field and the magnetic field cannot be concentrated (integrated) into one system. In this perspective of the logic, the concept of <Electromagnetic Wave = Electric Field Wave + Magnetic Field Wave> must be modified (discarded).<sup>[30]</sup> <<http://batangs9.com/E-30.pdf>>

The electric field is released inside the elementary particle, along with the gravity field and the nuclear field. Accordingly, the motion of the energy field (electric field, gravity field, nuclear field) released inside the elementary particle does not produce the magnetic field. This logic refers that the motion of the energy field is unnecessary in the production process of the magnetic field.

However, as shown in Faraday's Law of Electromagnetic Induction, the motion of the electron (proton) has the function of the current, and the current of the electron can produce magnetic field. In other words, the current (motion of the electron) and the magnetic field have causal connectivity (continuity of function). Therefore, the motion of the electron (proton) and the motion of the magnetic field (gravity field, nuclear field) must be strictly distinguished in the production process of the magnetic field.

The major mistake of Maxwell was to recognize the motion of the electron and the motion of the magnetic field in the equal condition. In other words, the motion of the electron (current) and the motion of the magnetic field were not distinguished (separated). Also, the characteristics of the current and the electric field were confused, and it was misunderstood that the property of the current was introduced in the

electric field. That is because the role of the current excluded in the process of introducing the Electromagnetic Wave Equation, and the motion of the electric field was applied as an alternative of the current. This distorted awareness by Maxwell has been passed until today to intrude with the new development of physics.<sup>[29]</sup> <<http://batangs9.com/E-29.pdf>>

The radio wave is composed of concentration of the “magnetic field wave” and space current (induced electromotive force). Here, the “magnetic field wave” refers to the simple wave (vibration) of the magnetic force, and in the spreading process of the magnetic field wave, vertical vector of the “space current” is produced. This “space current” provides help in the process of producing the new magnetic field wave. Therefore, the magnetic field wave and the space current of the radio wave can maintain the reliance of being converted mutually.

The magnetic field wave and the space current of the radio wave have continuity of function, and are compared in equivalent value. Also, the concentration of the radio wave is composed by the mutual conversion of the magnetic field wave and the space current. Therefore, new concept must be selected on the <Radio Wave = Space Current + Magnetic Field Wave>. If the existence of the space current is denied, the occurrence and spread process of the radio wave cannot be interpreted rationally.

The space current of the radio wave is occurred in the spatial element of displacement, in other words, the wind (flow) of the spatial element of displacement is referred to as the space current. In the field that the space current is reacting, the components of the universal space is moved in pushing out action proportional to the reaction of the space current. Also, the space current of the radio waves has the function of induced electromotive force. Therefore, the equation of <space current = induced electromotive force> is established, and when the pace current (induced electromotive force) of the radio wave penetrates the electric wire of the conductor, current and voltage are produced inside this electric wire

like the Faraday's Law of Electromagnetic Induction.<sup>[17]</sup>

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The effect of the magnetic field wave and the space current of the radio wave being converted mutually is enabled in the present progressive form. In other words, the radio wave has the dynamic activating function, and this activating function of the radio wave is preserved permanently. Accordingly, the activating function of the radio wave can be spread to the last boundaries of the universe.

The magnetic field wave and the space current of the radio wave use one medium in joint. in other words, the medium of the universal space reacts in two-ways by the external stimulation. Therefore, the magnetic field wave and the space current occur simultaneously in different directions in the process of spreading the radio wave. Here, the magnetic field wave of the radio wave is spread in the speed of light, and the space current has vertical vector (rotation direction).<sup>[29]</sup>

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However, the magnetic field wave and the space current in different directions have the causal connectivity (continuity of function) mutually being converted. In other words, the magnetic field wave in the speed of light produces the vertical vector of space current, and the vertical vector of space current produces the magnetic field wave in the speed of light. Therefore, the radio wave refers to the concentration of the magnetic field wave and the space current.

The magnetic field wave spread in the speed of light ( $c$ ) in the universal space has the representation of the radio wave. Also, vertical vector of space current is occurred in the passing point of the magnetic field wave. Therefore, the causal connectivity of the magnetic field wave and the space current has the effect of being displaced in the speed of light. Accordingly, when the space current is occurred in the passing

point of the magnetic field wave, it can be misunderstood that the accompanied displacement (movement) is enabled on the magnetic field wave and the space current.

However, the vertical vector of space current does not follow the magnetic field wave in the speed of light in sequaciousness, and does not exist permanently like the magnetic field wave in the speed of light. In other words, the vertical vector of space current repeats the production and extinction in a very short moment in the original location. Therefore, the production and extinction of the space current is finished in the single regression (reversion), and the appearance (production and extinction) of the space current is occurred in the passing point of the magnetic field wave that is spread in the speed of light. In this logical point of view, Maxwell's Electromagnetic Wave Model referring to the solid concentration structure (Electric Field+Magnetic Field) of the radio wave must be discarded.

In the quantum mechanics of modern physics, the existence of the space current is not acknowledged, and the role of the space current is substituted by the motion of the electric field. Accordingly, in the perspective of the quantum mechanics that does not utilize (use) the role of the space current, new level of progressive development is difficult.<sup>[29]</sup>

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The differences of the radio wave and the light wave will be introduced in the main body of this study, along with the basic principles on the process of the radio wave being spread. Also, in the process of spread on the radio wave, the reason on the magnetic field wave in the speed of light and the vertical vector of the space current occurring simultaneously will be described. Lastly, the circumstances of the activation energy on the radio wave being activated in the present progressive from will be explained.

## II. Main Body.

### 1. Discriminatory Characteristics of Light waves and Radio Waves

A. Current (motion of electron) produces radio waves, and the radio waves have wave model of periodic continuity. Also, the electric wire of the conductor absorbs the radio waves of the wave model. Accordingly, new current and voltage are produced inside the electric wire absorbing the radio waves, because the space current of the radio waves have the function of the induced electromotive force.

However, the particle model of the light wave is not produced in the electric wire of the conductor, and the electric wire of the conductor does not absorb the particle model of the light wave. Also the particle model of the light wave does not have the function of the induced electromotive force. Therefore, current and voltage are not produced inside the electric wire even when the light wave in particle model enters the electric wire.

The resting electron releases or absorbs the light wave (photon) in particle model. Also, the thermal energy of the light wave is preserved inside the resting electron that absorbed the light wave in particle model. However, the resting electron does not produce or absorb (accommodate) the radio wave in wave model. In other words, the resting electron and the radio wave in wave model do not have the causal connectivity (continuity of function). Therefore, the radio wave and the light wave must have another condition of production process.<sup>[30]</sup> <<http://batangs9.com/E-30.pdf>>

B. The radio wave and the light wave commonly have the characteristics of the electromagnetic wave, and therefore, the radio wave and the light wave must be composed in the equal function (current + magnetic field). As one example, the property of the radio wave has two functions of the current and the magnetic field. Also, the property of the

light wave has the two functions of the current and the magnetic field like the radio wave, but in the structures of the radio wave and the light wave, the role of the current acts in another condition, and the role of the magnetic field also reacts in another condition.

The radio wave is composed of the concentration of the magnetic field wave and the space current, and in this structure of the radio wave, the magnetic field wave is spread in the speed of light, and the space current (induced electromotive force) has the vertical vector. However, the light wave is composed in the concentration of the photo current (photon) and the photomagnetic. Also in the structure of the light wave, the photo current is spread in the speed of light, and the photomagnetic has the vertical vector (rotation direction). Therefore, the spreading processes of the radio wave and the light wave must be interpreted in an independent perspective.<sup>[17]</sup> <<http://batangs9.com/E-17.pdf>>

C. The radio wave and the light wave are composed in different forms, and produced in different conditions. One example is that the motion of the electron (current) produces the radio waves, and the radio waves induce the motion of the electron. Here, the wave energy of the radio wave and the kinetic energy of the electron are compared in equivalent value, and can be converted mutually. This kinetic energy of the electron and the wave energy of the radio wave have the continuity of function.

However, the light wave in particle model is released in an individual unit inside the resting electron. In other words, part of the element (material) composing the resting electron is released (separated) into the light wave in particle model. This resting electron and the light wave in particle model must be composed in the equivalent type of element, and also, when the electron absorbs the light wave, the volume and components (quantity of electric charge) of this electron can be changed, so the

radio wave and the light wave must have a different condition of production process.<sup>[30]</sup> <<http://batangs9.com/E-30.pdf>>

D. The radio wave has its unique wave height, and this wave height of the radio wave is determined by the frequency of the current passing through the electric wire. In other words, the higher frequency of the current passing through the electric wire results in higher wave height and shorter wavelength of the radio wave. Also, the wave height and wavelength of the radio wave are not modulated (synthesized) in posterior after the radio wave is produced.

However, the size (wave height, light pressure) of the light wave is determined inside the resting electron. In other words, multiple live waves are synthesized into one vector inside the electron when one resting electron absorbs multiple light waves simultaneously. Also, it is modulated into higher light pressure (wave height) by the synthesis process of the light wave, and the modulation of the light pressure provides the causal function of the energy level.

The radio wave is composed of only the wave model, and the light wave is composed only in the particle model. In other words, the radio wave cannot have both the wave model and the particle model at the same time, and the light wave also cannot have the wave model and the particle model simultaneously. These structures of the radio wave and the light wave must be interpreted in an independent perspective.<sup>[18]</sup>

<<http://batangs9.com/E-18.pdf>>

E. The radio wave occurred in the perspective of the current is spread (dispersed) into the wide range of the universal space, and the energy density of the radio wave is in inverse proportion ( $\frac{1}{r^2}$ ) of the square of distance. However, the cubic content (volume) and strength (light pressure) of the light wave released inside the resting electron is spread in the

original form to the last boundaries of the universe. In other words, the light wave form maintains the original structure permanently, and in this spreading process of the light wave, the individual quantity of the light wave is inverse proportion ( $\frac{1}{r^2}$ ) of the square of distance.

The energy density of the radio wave being in inverse proportion ( $\frac{1}{r^2}$ ) of the square of distance specifies that the energy of the radio wave exists in the wave state of the spatialization. However, the individual quantity of the light wave being in inverse proportion ( $\frac{1}{r^2}$ ) of the square of distance specifies that the light wave exists in the particle state of individual unit. Therefore, the structures of the radio wave and light wave must be composed into a different form.

**F.** As stated in the study, “**Components and Activation Function of Light Waves**” that was introduced earlier, all fields of the universal space are composed of the medium of electromagnetic wave (radio waves and light wave), and this medium of electromagnetic wave is frequently referred to as the “Batangs”. Also, the Batangs in universal space has the particle model in an individual unit. Therefore, all fields of the universal space can be divided into the individual unit of the Batangs.<sup>[30]</sup>

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The Batangs in universal space is composed of two types of Taes and Pyeongs. In other words, two elements of the Taes and the Pyeongs coexist inside the Batangs. Here, the Pyeongs of Batangs is used as the medium of the electromagnetic wave (radio waves, light wave), electric force, magnetic force, etc., and the Taes of Batangs is used as the medium of the neutrino, nuclear force, gravitational force, etc. Therefore, the electromagnetic wave penetrates inside the Batangs used as the medium.

In the process of the Pyeongs of Batangs being used as the medium of

the radio wave, the magnetic field wave in the speed of light and the space current in vertical spin action (curl vector) are occurred simultaneously, and here the magnetic field wave and the space current react in different directions. Also, the magnetic field wave and the space current in different directions have the reliance of being converted mutually. The concentration of the radio wave is maintained (preserved) permanently by the mutual dependency of the magnetic field wave and the space current.

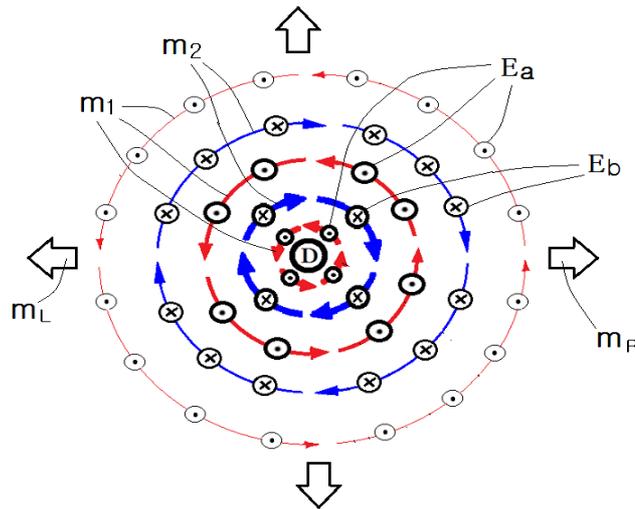
However, the Pyeongs of Batangs has the photo current in the speed of light and the photomagnetic of vertical spin action simultaneously in the process of the light wave using the Batangs of universal space as the medium, and this occurrence process of the photo current and the photomagnetic is enabled inside the Batangs. Also, the concentration of the light wave is maintained permanently by the mutual dependency of the photo current and the photomagnetic.

## 2. Structure and Spreading Process of Radio Waves.

As described in the study, “**Structure and Functional Characteristics of Electromagnetic Waves**” that was introduced earlier, the magnetic field wave in vertical spin action (curl vector) is occurred in periodic linkage structure on the side of the electric wire (current). This occurrence process of the magnetic field wave can be understood conveniently through the cross-sectional diagram of Figure 1.

In the cross-sectional diagram of Figure 1,  $D$  in the center is the cross section of the electric wire penetrating vertically on the ground or monitor screen, all  $m_1$  in red is the magnetic field wave of the curl vector on the left, all  $m_2$  in blue is the magnetic field wave of the curl vector on the right, and the small arrows of  $\cup$  and  $\cup$  refer to the directivity of the magnetic force composing all magnetic field waves ( $m_1, m_2$ ). Also, the  $\odot$  of  $Ea$  is the head of the arrow referring to the displacement direction (direction deviated outside the ground) of the space current,

the  $\otimes$  of  $Eb$  is the tail of the arrow specifying the displacement direction (direction of entering inside the ground) of the space current, and the big arrows of  $m_L$  and  $m_R$  show the spreading direction of the magnetic field wave ( $m_1, m_2$ ).



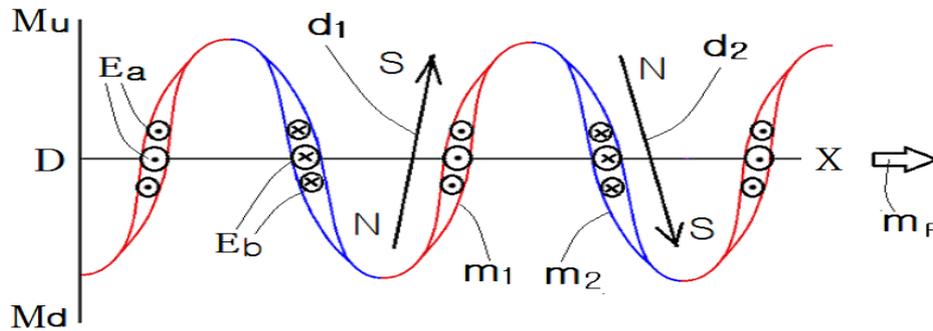
**Figure 1.** Cross-sectional diagram on the process of the AC-type magnetic field wave and the space current of vertical vector occurring on the side of the electric wire ( $D$ ).

As shown in the situation map of Figure 1, when the AC-type current passes through the electric wire ( $D$ ) of the conductor, the magnetic field wave ( $m_1$ ) of the curl vector on the left and the magnetic field wave ( $m_2$ ) of the curl vector on the right are occurred in periodic linkage structure on the side of the electric wire ( $D$ ). Here, the frequency of the magnetic field wave ( $m_1, m_2$ ) is determined by the frequency of the AC current passing through the electric wire, and the space current ( $Ea, Eb$ ) of vertical vector occurred on the side of all magnetic field waves ( $m_1, m_2$ ) has the induced electromotive force.<sup>[29]</sup> <<http://batangs9.com/E-29.pdf>>

The magnetic field wave of the radio wave has the structure of the longitudinal wave model, and is spread in the speed of light of  $C$ . Also, the Pyeongs of Batangs used as the medium of magnetic field wave has the magnetic force being concentrated in the direction of small arrows ( $\cup, \cup$ ). Here, when the AC current passing through the electric wire ( $D$ ) of

the conductor is converted into the opposite direction, the directivity ( $\odot$ ,  $\ominus$ ) and the displacement direction ( $\odot$ ,  $\otimes$ ) of the space current (induced electromotive force) on all magnetic field waves ( $m_1$ ,  $m_2$ ) are converted oppositely.

As shown in the situation map of Figure 1, the effect of the magnetic field wave ( $m_1$ ,  $m_2$ ) being occurred in periodic linkage structure on the side of the electric wire ( $D$ ) can be understood more conveniently through the expression through the coordinate form. The cross-sectional diagram in Figure 2 shows the spreading process of the magnetic field wave ( $m_1$ ,  $m_2$ ) and the production process of the space current ( $E_a$ ,  $E_b$ ) in coordinate form.



**Figure 2.** Cross-sectional diagram on the magnetic field wave of Figure 4 shown in coordinate form.

In the cross-sectional diagram of Figure 2,  $D$  in the coordinate is the center of the electric wire (AC current),  $Mu$  and  $Md$  are the working distance of the magnetic field wave,  $X$  is the horizontal axis of the coordinate,  $d_1$  is the upward function of magnetic force having  $S$ -pole and  $N$ -pole,  $d_2$  is the downward function of magnetic force having  $N$ -pole and  $S$ -pole,  $m_1$  on the red line is the magnetic field wave composed of the magnetic force of  $d_1$ , and  $m_2$  on the blue line is the magnetic field wave composed of the magnetic force of  $d_2$ . Also, the  $\odot$  in  $E_a$  is the head of the space current being deviated (displaced) outside

the ground, the  $\otimes$  of  $E_b$  is the tail of the space current being entered (displaced) inside the ground, and the arrow of  $m_R$  shows the direction of the magnetic field wave  $(m_1, m_2)$ .

As shown in the cross-sectional diagram of Figure 2, the upward magnetic field wave  $(m_1)$  and the downward magnetic field wave  $(m_2)$  of the radio wave are occurred with the periodical linkage structure in the side of the electric wire  $(D)$  passing with the AC current. In other words, when the current of the electric wire  $(D)$  passes outside the ground, the side of the electric wire (current) is occurred with the upward magnetic field wave  $(m_1)$  on the red line like the Fleming's Right-hand Law, and the Pyeongs of Batangs used as the medium of the upward magnetic field wave has the space current ( $\odot$  of  $E_a$ ) that is deviated outside the ground. Therefore, the space current of the radio wave and the current of the electric line  $(D)$  maintain the parallel direction.

However, the when the AC current passing through the electric wire  $(D)$  is converted into the opposite direction, the downward magnetic field wave  $(m_2)$  of blue line is occurred on the side of the electric wire  $(D)$ , and the Pyeongs of Batangs used as the medium of the downward magnetic field wave has the space current ( $\otimes$  of  $E_b$ ) entered into the ground. In other words, the downward magnetic field wave is converted into the space current ( $E_b$ ) of vertical vector.

Pyeongs has the two-way displacement distance proportional to the volume of the space current in the process of the space current ( $E_a, E_b$ ) of the radio wave using the Pyeongs ( $P_2, P_3$ ) of Batangs as the medium. Here, the two-way displacement action of the Pyeongs is returned (restored) into the original position, and is not repeated in regeneration, but the functional continuity (causal connectivity) of the magnetic field wave  $(m_1, m_2)$  and the space current is preserved (maintained) permanently. In other words, the two-way displacement action of the Pyeongs is finished in

one-time regression, and the functional continuity of the magnetic field wave and the space current is replaced in the speed of light, because the magnetic field wave uses the Pyeongs as the medium.<sup>[29]</sup>

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When the magnetic field wave (red line) of  $m_1$  uses the Pyeongs of Batangs as the medium, such Pyeongs of Batangs have the magnetic force of  $d_1$  being concentrated into the upward direction. Therefore, the magnetic force of  $d_1$  refers to the magnetic field wave of  $m_1$ , in other words, the magnetic field wave of  $m_1$  is composed of the magnetic force of  $d_1$ . Also, the head of the arrow ( $\rightarrow$ ) has S-pole and the tail of the arrow has N-pole in the process of occurring with the magnetic force on  $d_1$ .

However, when the magnetic field wave (blue line) of  $m_2$  uses the Pyeongs of Batangs as the medium, such Pyeongs of Batangs have the magnetic force of  $d_2$  being concentrated in the downward direction. Therefore, the magnetic force of  $d_2$  refers to the magnetic field wave of  $m_2$ , and in the process of the magnetic force of  $d_2$  being occurred, the tails of the arrow ( $\rightarrow$ ) has N-pole, and the head of the arrow has the S-pole. This magnetic field wave ( $m_1, m_2$ ) of the radio wave can be defined as the periodic frequency of the magnetic force ( $d_1, d_2$ ) having S-pole and N-pole.

S-pole and N-pole in the magnetic force are occurred inside the Batangs, so the smallest basic unit of the magnetic force specifies the diameter of the Batangs. Also, the S pole and N pole occurred inside the Batangs compose the linkage structure (system of continuity), and the linkage structure of the S pole and N pole is displayed as the magnetic field. This linkage structure of the magnetic field must be divided into the individual unit of the Batangs.<sup>[21]</sup> <http://batangs9.com/E-21.pdf>

The magnetic force ( $S$ -pole and  $N$ -pole) of the upward magnetic field wave ( $m_1$ ) and the downward magnetic field wave ( $m_2$ ) composing the radio wave is converted into the opposite pole in the peak of the wave. In other words, the  $S$  pole and  $N$  pole of the magnetic force ( $d_1, d_2$ ) are the peak of the wave, so the directivity of the two magnetic field waves must be converted oppositely in directivity in the peak of the wave.

In the cross sectional diagram ( $m_1, m_2$ ) of Figure 2, the wave height of the magnetic field wave ( $m_1, m_2$ ) is determined by the length of the magnetic force ( $d_1, d_2$ ) when  $S$  pole and  $N$  pole of the magnetic force compose the peak of the wave. In other words, the wave structure of the radio wave does not have the central axis of the coordinate, so the horizontal axis of  $X$  is unnecessary in the coordinate for expressing the structure of the magnetic field wave. This condition of the radio wave does not have the interference effect.

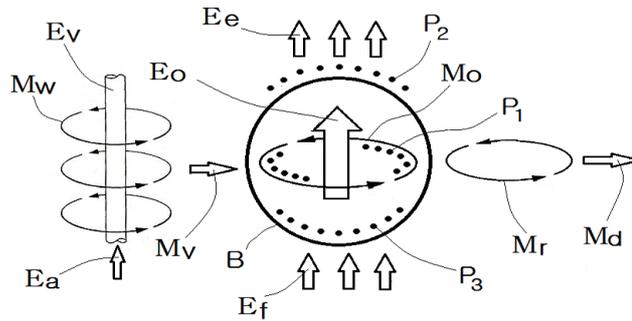
There can be no interference effect in the spreading process of radio waves that do not have the horizontal axis (central axis of the coordinate) of  $X$ , and the radio waves are composed of the wave model and do not have the particle model. Accordingly, the photoelectric effect and the Compton effect are not occurred in the process of spreading the radio waves composed in the wave model.

The magnetic field wave and the space current of the radio wave have the dynamic activation function of being converted interactively. In other words, dynamic energy is reacted in present progressive form inside the radio wave, and accordingly, the activation function of the dynamic energy that is reacted in the present progressive form is preserved permanently in the process of spreading the radio waves. This activation function of the dynamic energy determines the density (wave height), concentration power and strength of the radio wave, and the reflection effect, diffraction effect and refraction effect are occurred in the present progressive form by the active energy of the radio wave.

### 3. Detailed Understanding on the Spreading Process of Radio Waves and Light Waves

As described in the study, “Misunderstandings on the Maxwell’s Electromagnetic Wave Equation and Another Meaning of Interpretation” that was introduced earlier, the electromagnetic wave can be distinguished (separated) into the radio wave in wave model and the light wave in particle model. Also, the radio wave in wave model and light wave in particle model have different conditions in the production process, and are spread in different methods. Therefore, the characteristics of the radio wave and the light wave must be handled independently.<sup>[29]</sup> <<http://batangs9.com/E-29.pdf>>

**A. Spreading Action of the Radio Wave** – The process of the radio wave in wave model using the Batangs in universal space as the medium can be understood conveniently through the situation map in Figure 3. In the situation map in Figure 3,  $Ev$  is the electric wire of the conductor,  $Ea$  is the AC-type current,  $Mw$  is the magnetic field wave in spin action (curl vector) occurred in the side of the electric wire ( $Ev$ ),  $Mv$  is the spreading direction of the magnetic field wave ( $Mw$ ),  $B$  is the Batangs in universal space,  $Mo$  is the magnetic field wave passing inside the Batangs ( $B$ ), the small dot in  $P_1$  is the Pyeongs composing the magnetic field wave ( $Mo$ ), the arrow of  $Eo$  is the space current produced inside the Batangs ( $B$ ), the arrows of  $Ee$  and  $E_f$  are the space currents produced outside the Batangs ( $B$ ), and the small dot in  $P_2$  is the Pyeongs of the space current ( $Ee$ ) deviated outside the Batangs ( $B$ ). Also, the small dot in  $P_3$  is the Pyeongs of the space current ( $E_f$ ) entered inside the Batangs ( $B$ ),  $Mr$  is the magnetic field wave occurred by the space current ( $Ee, Eo, E_f$ ), and  $Md$  is the spreading direction of the magnetic field wave ( $Mr$ ).



**Figure 3.** Situation map of the process on the radio wave using the Pyeongs of Batangs as the medium for being spreaded.

As shown in the situation map in Figure 3, the magnetic field wave ( $Mw$ ) in vertical spin action (curl vector) occurred on the side of the electric wire ( $Ev$ ) uses the Batangs ( $B$ ) in universal space to be spread in the speed of light. Also, the vertical vector (spin action) of space current ( $Eo$ ) is occurred simultaneously inside the Batangs used as the medium of the magnetic field wave. In other words, the magnetic field wave ( $Mo$ ) and the vertical vector of space current ( $Eo$ ) coexist simultaneously inside the Batangs.

The space current ( $Eo, Ee, Ef$ ) refers to the spatial wind (Displacement of Pyeongs) on the Pyeongs ( $P_1, P_2, P_3$ ). Here, the Pyeongs ( $P_2$ ) used as the medium of the space current are deviated externally as much as the volume of the space current, or can be entered (accommodated) inside the Batangs ( $B$ ). Therefore, the Pyeongs inside the Batangs are exchanged in upper direction in proportion to the volume of the space current, and new magnetic field wave ( $Mr$ ) in vertical spin action (curl vector) is occurred by the action of the space current being exchanged in upper direction. In other words, the space current being displaced into upper director is converted into the magnetic field wave in spin action.

The magnetic force refers to the biased concentration of the Pyeongs, and the biased concentration of the Pyeongs is controlled inside the Batangs ( $B$ ). In other words, the Pyeongs having control (influence) of the magnetic force do not deviate from the inside of the Batangs ( $B$ ). The

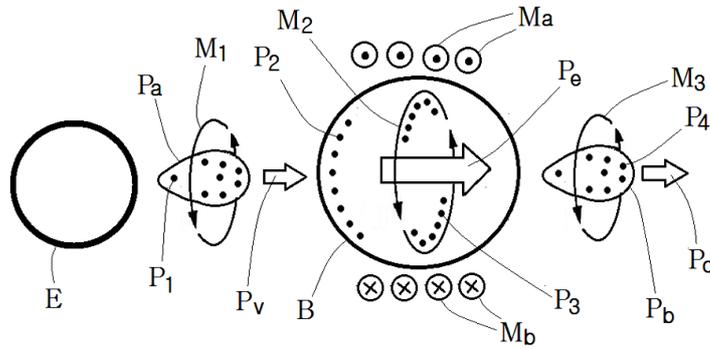


As shown in the situation map in Figure 4, the spin action of the magnetic field wave ( $Mo$ ) occurred on the side of the electric wire ( $Ev$ ) is spread into the fields of all directions through the peripheral Batangs ( $B$ ). Also, inside all Batangs ( $B$ ), the spin action of the magnetic field wave produces the space current ( $Eo, Ee, Ef$ ) in upper direction.

The space current ( $Eo, Ee, Ef$ ) of the radio wave and the current ( $Ea$ ) of the electric wire ( $Ev$ ) maintain the equal direction of parallel. Therefore, the space current and the current of the electric wire can be connected (mutually converted) functionally through the spin action of the magnetic field wave ( $Mo$ ). In this reactive process of the space current, the two-way displacement distance of the Pyeongs ( $P_2, P_3$ ) is formed, and the two-way displacement distance of the Pyeongs is determined by the frequency of the current passing through the electric wire.

In the situation map of Figure 4, all space currents ( $Eo, Ee, Ef$ ) of upper direction can be synthesized into one vector amount, and all space currents synthesized in one vector amount have the function of the induced electromotive force. Therefore, when the space current of the induced electromotive force penetrates through the electric wire of another conductor, new current and voltage are produced inside another electric wire like the Faraday's Law of Electromagnetic Induction. In other words, the space current induces the new current of the electric wire.

**B. Spreading Action of the Light Wave** – As stated in the study, “Components and Activation Function of Light Waves” that was introduced earlier, all types of light waves have the structure of particle model, and the light wave in particle model uses the Batangs of universal space as the medium to be spread. This spreading process of the light wave can be understood conveniently through the situation map in Figure 5.



**Figure 5.** Situation map on the process of the light wave using the Batangs in universal space as the medium to be spread.

In the situation map in Figure 5,  $E$  is the electron in resting state,  $B$  is the Batangs in universal space,  $P_a$  is the photo current (photons) released inside the resting electron ( $E$ ), the small dot in  $P_1$  is the Pyeongs of the photo current ( $P_a$ ),  $M_1$  is the photomagnetic in vertical spin action (curl vector), the arrow in  $P_v$  is the direction of the photo current ( $P_a$ ),  $P_2$  is the Pyeongs of the photo current ( $P_a$ ) entered inside the Batangs ( $B$ ), the arrow of  $P_e$  is the photo current (photons) that penetrates inside the Batangs ( $B$ ),  $M_2$  is the photomagnetic in vertical spin action that is occurred inside the Batangs ( $B$ ),  $P_3$  is the Pyeongs composing the photomagnetic ( $M_2$ ) of spin action, and the  $\odot$  of  $M_a$  is the cross section of the arrow specifying the head of the photomagnetic. The  $\otimes$  of  $M_b$  is the cross section of the arrow referring to the tail of the photomagnetic,  $P_b$  is the photo current produced by the photomagnetic ( $M_2, M_a, M_b$ ),  $M_3$  is the photomagnetic of the photo current ( $P_b$ ), the small dot of  $P_4$  is the Pyeongs of the photo current ( $P_b$ ), and the  $P_d$  is the spreading direction of the photo current ( $P_b$ ).

As shown in the situation map of Figure 5, the resting electron ( $E$ ) releases the photo current ( $P_a$ ) of the light wave. Here, the photo current is composed of the Pyeongs ( $P_1$ ), and the Pyeongs of the photo current use the Batangs ( $B$ ) of the universal space as the medium to be

spreaded. Therefore, the Pyeongs inside the Batangs that are used as the medium of the photo current are exchanged (displaced) in pushing out proportionally to the volume of the photo current.<sup>[30]</sup>

<<http://batangs9.com/E-30.pdf>>

In the process of the Pyeongs of the Batangs ( $B$ ) being exchanged in pushing out proportionally to the volume of the photo current ( $Pa$ ), photomagnetic ( $M_2$ ) in vertical spin action is occurred. However, the photomagnetic in spin action is again converted into the photo current ( $Pe$ ) in the speed of light. Here, the photomagnetic of the spin action does not follow the photo current ( $Pe$ ) in the speed of light in sequaciousness, and does not exist permanently.

The spin function of the photomagnetic ( $M_2$ ) occurred inside the Batangs ( $B$ ) is delivered outside the Batangs ( $B$ ). In other words, the vertical vector (spin action) of photomagnetic ( $Ma, Mb$ ) is produced outside the Batangs ( $B$ ), and this spin function of the photomagnetic is expanded into the fields of all directions. Accordingly, the photomagnetic expanded outside the Batangs is interacted with the photomagnetic of another light wave. Therefore, the photomagnetics of all light waves repulse interactively when multiple light waves pass through the narrow thin film simultaneously. Also, the front and back interval of all light waves can be aligned regularly by the interactive repulsion of the photomagnetics. Here, the regular front and back interval of the light waves provides the causal function of the interference effect.

In the situation map of Figure 5, it is estimated that the diameter of the photo current ( $Pa, Pb$ ) is million times the scale (size) of the diameter of the Batangs ( $B$ ), and therefore, in the mimic diagram in Figure 3, the diameter of the photo current ( $Pa, Pb$ ) is exaggerated into very small ratio, and the diameter of the Batangs ( $B$ ) is exaggerated into very high ratio.

#### 4. the critical mistakes of modern physics and the need for new alternatives.

Stationary electrons produce only an electric field (electric force) and do not produce a magnetic field (magnetic force). Also, stationary electrons are not affected by the invariable magnetic force. That is, stationary electrons and invariant magnetic forces are not functionally linked and do not interact with each other. The magnetic forces of these conditions cannot be included in the basic interactions of Elementary particle.<sup>[8]</sup>

<<http://batangs9.com/E-8.pdf>>

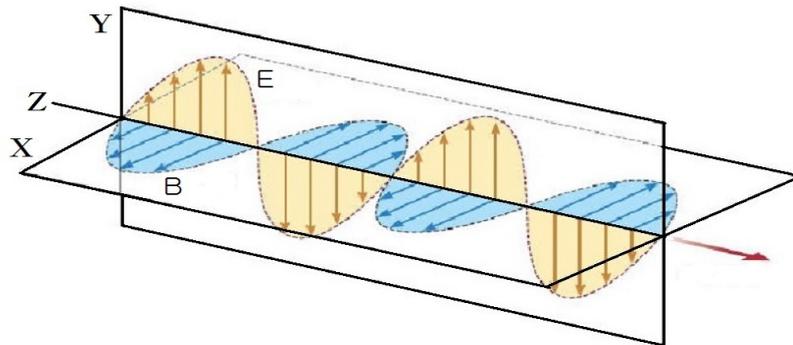
The reason why the invariable magnetic force and electric force (electric field) of stationary electrons do not work is that the magnetic force and electric force are made up of different elements and exist in different forms. The operating principles of these magnetic and electric forces should be handled independently from an individual standpoint.

stationary electrons do not produce a magnetic field, but a magnetic field is developed around a kinetic electron (current). Also, the magnetic field is expressed in the displacement process of the moving electron, and the magnetic field reflects the characteristic of the space. Therefore, space is to be regarded as having the components of magnetic force. However, in Modern physics the Components (element of magnetism, Pyeongs of Batangs) of Space was not accepted. Therefore, one of the claims must be sacrificed.

Modern physics (electrodynamics) has so far understood that electromagnetic wave is constructed through the combination of electric wave and magnetic wave and that the relationship between electric wave and magnetic wave maintains the structure of a vertical vector. Electromagnetic wave as such is expressed as shown in the diagram in Figure 6. In the diagram in Figure 6,  $E$  on the  $Y$ -axis is for electric field,  $B$  on the  $X$ -axis is for magnetic field, and the arrow on the  $Z$

-axis is for the direction in which electromagnetic wave travels.<sup>[17]</sup>

<<http://batangs9.com/E-17.pdf>>



**Figure 6:** The Diagram of the Electromagnetic Wave Constructed through the Regimentation of Electric Field and Magnetic Field.

From a strict viewpoint, the magnetic field must have the direction of the *S* pole and the *N* pole. However, the diagram in Figure 6 can not reflect the directionality of the *S* and *N* poles. In other words, the diagram in Figure 6 is a distortion of the actual phenomenon. Therefore, the diagram of Figure 6 that does not reflect the direction of the *S* and *N* poles, should be discarded.

Like my argument, The electromagnetic wave constructed through the combination of space current and magnetic wave (or photocurrent and photomagnetic) cannot have the diagram as shown in Figure 6. For instance, conductive wire cannot create the electromagnetic wave as shown in Figure 6, and conductive wire cannot absorb the electromagnetic wave as shown in Figure 6. Of course, the electrons of elementary particles cannot generate electromagnetic wave as shown in Figure 6, and the electrons cannot absorb the electromagnetic wave as shown in Figure 6. In a nutshell, the structure of the electromagnetic wave as expressed in the form of Figure 6 is a fictitious, conceptual model that does not exist. Therefore, quantum physics (Niels Bohr's theory that does not reflect the role of current and magnetic fields) which is based on the particle model of light waves should be abolished. Moreover, The electromagnetic theory (Maxwell's theory

that does not reflect the role of current and magnetic fields) based on the accompanying transmission of electric waves and magnetic waves must also be abolished.

Just as magnetic forces (Or space current, various field energy) reflect the properties of outer space, the outer space is not composed of the form of a physical vacuum. That is, the outer space is composed of batangs which have the elastic force of light velocity. Also, all types of field energies are propagated at the speed of light by using batangs as the medium. Therefore, all opinions in the theory of relativity and quantum physics that presupposes the space model of an empty vacuum must be modified (abandoned).

### III. Conclusion

The radio wave is composed of concentration of the magnetic field wave and space current (induced electromotive force). Also, the magnetic field wave and the space current of the radio wave use one medium in joint. Therefore, the magnetic field wave and the space current occur simultaneously in different directions in the process of spreading the radio wave. However, the magnetic field wave and the space current in different directions have the causal connectivity (continuity of function) mutually being converted. In this logical point of view, Maxwell's Electromagnetic Wave Model referring to the solid concentration structure (Electric Field+Magnetic Field) of the radio wave must be discarded.

The space current of the radio waves has the function of induced electromotive force. And, when the space current (induced electromotive force) of the radio wave penetrates the electric wire of the conductor, current and voltage are produced inside this electric wire like the Faraday's Law of Electromagnetic Induction. In other words, the space current induces the new current of the electric wire.

The upward magnetic field wave and the downward magnetic field wave of the radio wave are occurred with the periodical linkage structure in the side of the electric wire passing with the AC current. Also, The magnetic force ( $S$  pole and  $N$  pole) of the upward magnetic field wave and the downward magnetic field wave composing the radio wave is converted into the opposite pole in the peak of the wave. In other words, the  $S$  pole and  $N$  pole of the magnetic force are the peak of the wave.

The wave structure of the radio wave does not have the central axis of the coordinate, so the horizontal axis of  $X$  is unnecessary in the coordinate for expressing the structure of the magnetic field wave. There can be no interference effect in the spreading process of radio waves that do not have the horizontal axis (central axis of the coordinate) of  $X$ . and the radio waves are composed of the wave model and do not have the particle model. Accordingly, the photoelectric effect and the compton effect are not occurred in the process of spreading the radio waves composed in the wave model.

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**\* Difference becomes specialty, Ideal becomes reality,  
at the center of world in the name of center**

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