

## <Quantum Space Time Matrix> ( BLUE-PRINT TRANSLATION IN ENGLISH)

"A deep connections between the mental and the physical world, on the basis of a eureka moment to think about the structure of the Quantum Space-Time"  
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→ Every civilization has developed a close dialogue on space and time in order to include in a logical structure the advancement of knowledge of his age.

Starting from Newton, who saw the Universe as a mechanical watch, where time is based on space-time coordinates that represent absolute and independent values, many scientists still support scientific beliefs so that remain closed in cognitive models arising from or classic mechanical or by the quantum mechanical paradigm .In both the arbitrary division between subject and object excludes the possibility to answer the question of what impact it can have the change of scientific thought in relation to the structure of the S / T to get a better understanding of reality.

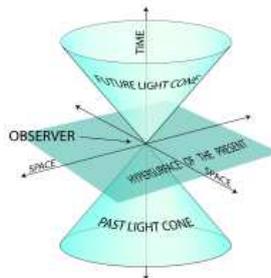
So EgoCreaNet (NGOs R & D in Florence-IT) aims to rethink how to reinterpret a quantum model of space-time, this in order to discover and understand the different levels of reality that remain hidden to those who want to persist in believe that modern science still needs to remain closed in the frame of the mechanical reductionist logic, still based on outdated models of space-time.

The purpose of EgoCreaNet look forward to a better understanding of the reality to achieve a higher responsibility 'social conscious of the situation in which we live.

Unfortunately, we must note that maintaining the concepts and methods derived from mechanical paradigm, it exacerbates the irresponsibility 'scientific in maintaining a system of mechanical production which causes a systematic destruction of life on our planet.

EgoCreaNet believes that we can promote a qualitative leap in the levels of human consciousness through the sharing of a strategy of cognitive development based on the growth of the community "Quantum Creativity" that aims to change the obsolete mechanical models of science.

### -> The change of space-time relativity in 1905.



As the model of the space-time of Newton became obsolete within new evidence and logic of knowledge, a new and more general geometry of spacetime was proposed by Einstein (1905) .It was described as a single continuum represented by four vectors where interactions between energy and matter may determine the curvature of this complex structure. This change was necessary to understand that energy and matter are two different forms of energy ( $E = mc^2$ ), and that the maximum speed of' energy is the same regardless of relative motion between the source of energy of and the observer.

Unfortunately, since our brain is not able to imagine the fourth dimension of space-time, Hermann Minkowski has made a more useful representation of the new structure relativistic space-time .

→ Minkowski wrote in 1908: "*The concepts of space and time, I wish to share with you have sprung from the soil of experimental physics, and therein lies their strength foundation. Henceforth space by itself, and time themselves are destined to fade away into mere shadows, and only a kind of union between the two concepts allow 'to preserve an independent reality. "*

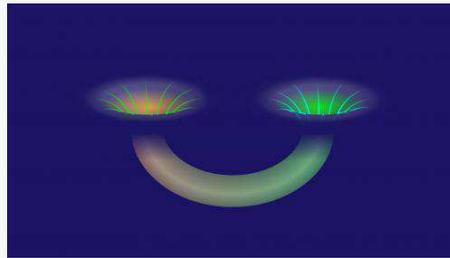
This model of the S / T Minkowski it is described in order that it will be congenial to the relativity of Einstein in 1905.

The structure of space-time (S / T) of Minkowski, has three sections: A) in the absence of interactions between energy and matter space-time is represented as two-dimensional (S / T) that existing in a flat space. Two other sections are B & C); in such cases, seen in relation to an imaginary universal observer, the interactions between matter and energy, are acting in determining a curvature of space, so that this curved space, forms two cones opposite direction of the arrow in time. These cones represent the deterministic past and the future prospects of the development of the S / T.

EgoCreaNet would now like to propose a variant of the description of Minkowski's S / T , since such a change is considered necessary to promote the completeness of quantum science.

In fact, in the model of Minkowski the S / T is considered a continuous, while at the base of the quantum theory, there is a "discreteness" inherent in the new "quantum model of S / T", will have to be taken into account.

### > Quantum Entanglement and the evolution universal space-time.



*Quantum entanglement and wormholes .*

Considering now the hypothesis of the Big Bang (which is not a phenomenon, as a phenomenon means that part of the visibility 'as observable or measurable), we know that it is certainly an imaginary event that happened when the S / T began to exist. Therefore, this event may not have been seen by any universal or virtual observer.

We think now about how to develop a EUREKA moment on the quantization of the space-time organized as a matrix of different levels of space-time. Moving towards this goal we can start with to avoid putting at the center of the structure S / T the man as an observer. This is made to not fall into the old anthropomorphic scientific tradition that arbitrarily center the S / T on the perception of an external observer. This split between subject and perception considered objective, allows us to think that the observer does not belong as part of the evolutionary Universal system. Therefore this arbitrary exclusion of the subject from an objective observation, makes it quite impossible to conceive of both general relativity that the completeness of quantum science, because these theories has a generalized need to include the viewer.

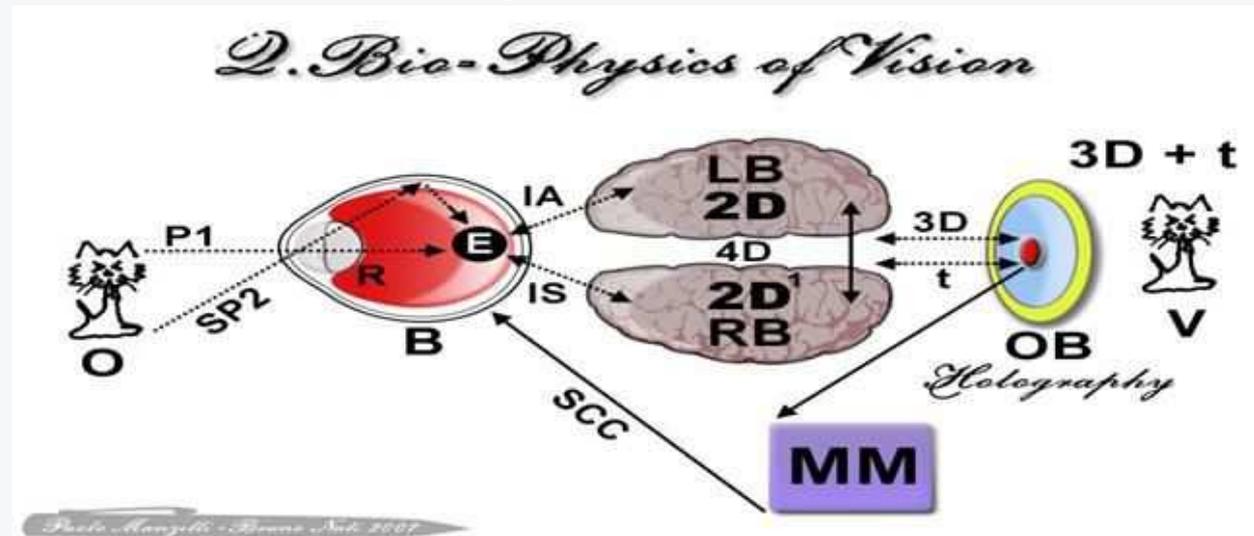
As a matter of fact the man as an outside observer may only produce a fiction of reality or a picture of experienced realism or "naïve- local" reality. .

The observer at the center of the phenomenological perception of S / T creates a conceptual scientific fact very limited, which has a single reference in the "local" dimension, so as it was in the tradition of Euclidean space-time. Conversely quantum reality must include all that we are able to perceive, but also everything that is not observable, but understandable. This quantum complexity ,must understand everything that probably existed in the past, and it exists in the present, or will exist. in the future. So we need to go beyond the central position of the observer to make the development of a new dimension of intuitive and imaginary of quantum science, once in order to reinterpret the Universal evolution of the S / T, able to meet the needs of contemporary knowledge.

Therefore the complex reality of quantum science not be more containable within a single rigid model of space-time.

Based on these preliminary considerations a conscious evolution of the S / T becomes feasible quantum thinking about the different possible combinations of the four-vector geometric S / T, in order to cover the entire array of probability of organization of the interactions between matter and energy and make it imaginable from the brain. .

- -> Notes on the functional nature of space-time in the brain.



SpaceTime codification in the brain (legenda) :

- **O= Observable ; P1= Photon ; SP2 = Second Photon ; R = Retina ; E = Entanglement ; IA = Antisymmetric Information ; IS = Symmetric Information ; LB & RB = Left and Right Hemispheres ; D = Dimensions ; t = time ; OB = Olographic Brain ; V = Vision ; MM = Short and Long Memory processes ; SCC = Saccades Research Movements.**

- The concepts S / T are widely developed in science, however, is a notable lack of biological sciences for understanding the evolution of S / T in relation to the functioning of the brain. However, we know that the geometry of the four-vector, where the space-time are homologous, does not respond to the need to be able to be easily imagined in order to allow a more natural explanation of science.

Certainly creativity quantum needs to be based on imagination in finding a new structure Quantum S / T so that it would highlight a strong relationship with the brain and its cognitive evolution.

Therefore the study on how the ideas of space, are encoded in brain has become a fundamental for improving a correlation between trans-disciplinary quantum physics and quantum neurology of S / T that can cause a great impact on the future knowledge society.

Today some experiments using neuroscientific research with functional magnetic resonance imaging (fMRI) conducted to date, are in accordance with the traditional scientific conception of the dynamic S / T, and therefore are not set in order to reveal something new about the evolutionary function of the brain the basis of a profound innovation in the way we think about the S / T. Therefore in a visionary context of open future investigation we will avoid the objection that the new quantum geometry should not be adopted because it can not be imagined by the brain. Therefore a new quantum model must be designed to be reduced to a maximum of three dimensions vector plus one, in a similar way to the formulation of the geometry of the S / T proposed by Minkowski for relativity.

Recalling also that a quantum Eureka moment can not be organized as a logical sequence of cause and effect, but rather as a coherent set of intuitions; in developing this challenge, as a premise we can point out that the S / T, such as colors, comes from an imagination that takes place in the brain. In fact, we know that the colors exist only in the brain as feelings and not as objective entities; so that the S / T we must consider it as a product of an imaginary development of the brain functionality development of imagination.

The S / T it is perceived by our brain as a scenario of probable interactions with the 'environment. Galileo Galilei became aware of the above and said, noting how the perception of the distance from the moon seems to vary greatly between when it is in the evening behind the mountains and when it appears as far away in the sky after becoming very smallest.

So, when we invoke the 'scientific imagination to develop the construction of a new structure of S / T more useful to represent some emergent properties of quantum physics (such as quantum entanglement), we must be aware of the fact that this new approach will only be a representation likely

concerns the functioning of the brain where the imaginary evolution in interpret the quantum reality. Taking into account these considerations, EgoCreaNet think, that we can re-structure this Quantum of S / T, if from the beginning, we show that, when two or more particles interact, they can no longer be described by its probability independent systems, called "pure states."

So it is clear that "Entanglement between quantum particles" becomes the essence of the evolution of knowledge of quantum S / T.

Therefore quantum entanglement phenomenon is omnipresent in the quantum structure of the Universe.

The above statement also means that the Quantum Entanglement can be placed at the center of the laws that govern the expansion of the interactions of energy and matter in the new quantum structure of the S/T. Therefore, to improve a new understanding of architecture quantum space-time in the Universe, we begin to consider that the starting point of the quantum world every form of energy is completely entangled as a superposition of all possible quantum states. The wave function of generalized this initial state can rhythmically collapse ,activating the generation of "dis-entanglement" . The wavefunction collapse may spit the observable and measurable S/T (XYZ,t) from the other which traditional measurements forbidden because the (X,Y,t1,t2) and (X,t1,t2,t3) represents an "hidden S/T structures " about which the observer has not observable direct information.

- Therefore the rhythmic activity (Entanglement / disentanglement ) generating lower space-dimensioned structures relatively to higher time dimensions , can be seen as a catalyst of the expansion of the Universe.

---> **EUREKA MOMENT - to open a dialog box to "Emerging Technologies and Quantum Creativity"**



- Taking into account the above considerations needed to pass over too deeply rooted in the scientific tradition, we declare that the framework of this imaginary construction of the matrix quantum space-time, refers to the basic relativity in which space and time can become the one to another into changing sign and direction. Finally, the projection of the cross product is described in Cartesian coordinates.

-> If the midpoint of the S/T structure , instead of the "observer" , we put the "Quantum Entanglement-over-position (QE)" that can be imagined as the product of the vector space "A" of coordinates (XYZ) for the vector Time "B that determines a complex mixing of th geometrical composition of the two vectors. (\*).

1) -> Also, when the quantum is overposition (QE = 0%), the coordinate "t" time, is in the direction directed towards the future, then the result is the normal space-time Eulideo representable in catesian coordinate system , **(XYZ , t)**

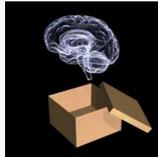
2) -> If the overlap is 50% and the result of the vector's product is a flat organization of two-dimensional surface of spacetime. In can exist in the simultaneity of non-random events. In this case disappears both the direction (up) direction (down), this is because in this case the vector product of the space for the time becomes equal to "zero" in both the two directions. The space-time coordinates of the two-dimensional organization are **(X, T.t1, t2)** This surface structure of S / T represent a field of information and is the most likely result of simultaneous communication of information generated by the Entanglement.

- 3) When the overlap is close to 100% can obtain the full inversion of the time Euclidean space: in coordinates , **(t1, t2, t3, X)** with a single coordinate for the space and three for the time, This situation reflects what will happen in like a "black hole" in the sky or in the cases of "quantum tunneling." The three

coordinates of time are respectively:  $t_1$ , the time entry,  $t_2$  the time of the change, and the time  $t_3$  the output from the tunnel as a result of the transformation. For example for a black hole to  $t_1$ , the energy is in the form of light, while  $t_2$  is the time of energy / matter without mass, and  $t_3$ , the energy which has become in the form of matter.

- This EUREKA MODEL on the creation of the structure of the Quantum Matrix of space time (Quantum S/T), is obtained imaginatively, without any further calculation, that will be able to run as a demonstration, but that is currently described as a simple image to open a discussion on the need to devise a new structure that quantum space-time in its multiplicity corresponds better to the state of contemporary knowledge.

- -> **What happens when we leave the acquired mental box?**



- The quantum Space-time structure is conceptually challenging for a transdisciplinary future development of knowledge because we must allow for the startling idea that there is more reality than what can be contained within the observable spacetime.

The open research for a new formulation of quantum space-time must be continued by sharing an initial mode divergent thinking in search of new creative hypotheses able to find by convergent solutions to new problems and dilemmas not yet solved by science.

- -> We mention among them, the Gravity that in the new framework of the structure of the two-dimensional model of quantum S / T is to have a reason of simultaneity' interaction. The idea of an instantaneous gravity that interconnects all that exists in the universe, is not new. Newton's law of universal gravitation implies an "action at a distance" simultaneously ". This immediate connection, not was more conceived this because Gravity was think as a result of transmission though " gravitons " which like photons can not exceed the speed of light.

The space-time in the quantum level of probability 'indicated as  $(X, Y, t_1, t_2)$  has in it a chance to generate a S / T two-dimensional information field, and therefore can 'recreate the concept of "simultaneous communication at a distance" in a gravitational field than in other necessarily simultaneous events, such as magnetism, and also the 'empathy etc ..

- It is useful to remember that in two-dimensionality' of time is not something new '.The ancient Greeks had two words for time, χρόνος (**chronos**) and καιρός (**kairos**). While the former refers to the time sequence, the second means an indeterminate period of time in which "something" special happens.

-> This ancient tradition can be continued and enhanced in the new structure of the matrix of the quantum S/T, e.g.  $(X, T, t_1, t_2)$ , so that through it we can find innovative solutions to the presence of "dark matter" in' Universe which to date is not measurable precisely when we refer only to a Euclidean space-time.

(\*) CROSS PRODUCT: -<http://www.camelsoftware.com/firetail/blog/c/imu-maths/>

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