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Time as a Hologram

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Abstract: Constructing the granular form of time in the 2-D closed loop for the simultaneous happening of events; it has been shown that a matrix or spacetime mesh can be originated in a hologram where superposition and entanglement with transportation holds for the spatiotemporal meshwork.

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INTRODUCTION

The extreme mathematical domain has seen the space as a hologram in AdS with a conformal correspondence (CFT) called the AdS/CFT. The conformal mapping is easy: it's just to translate a metric to another metric provided the manifolds have different curvatures and the angles between the grid of the metric must be the same. Thus angle-preserving mapping or conformal mapping is satisfied. The infinitesimal distance when measured by a metric is a transition from Euclidean Line Elements to metric tensor but in general: the metric tensor is a Scalar. Thus, in the extreme domain if space as a hologram can be mapped and space can be split into frequencies depending on the curvatures and units in Pixelated forms for the conservation of information in cm^3 of a hologram by Morse code (in binary bits): Then the same principle should hold for Time. The temporal dimension in essence is the non-linear inertial frame that goes on and on and everything is happening simultaneously in a 2-Dimensional circular time. Thus, it's necessary to split time into granules and name them as $'t-ons'$ where each granule represent a fragment of space in the two dimensional loop of time and if each fragments of space can be copied using a 'photocopier or transportation generator of the '$t-ons'$ then there'll be a duplicate time which is a granular time carrying a bit of granular space which when corresponds to a spacetime entity then if than $'t-ons'$ can be send from one portion of the loop to the other portions in 2D simultaneous time then there's no need of time travel, every civilization can photocopy each bit of 't-ons' by a 'temporal transporter named as $\chi_{\mathrm{r,v}}$" in a temporal manifold having the norms (U,t) where $'t'$ is the metric of $'t-ons'$ and $'U'$ represents the 2D circle - Everyone can see past, present and future provided every $'t-ons'$ should combine to form a matrix "M" where the spatial and temporal loops having signature (s,t) can in essence creates a hologram to depict every possible symmetries and ways to generate the function of time travel where (s,t) with $\langle S\rangle$ is a superposition of the events that the other non-inertial or inertial observers are observing in the matrix M.

METHODOLOGY

For the simultaneous happening of events, it is needed to consider time as a closed loop where events occur in one time is occurring continuously and will happen irrespective of any difference with other temporal evolutions that is occurring. Thus, for the temporal evolution it is required to make an orbit which will capture the essence of 2D time being represented as[1,2],

$$\mathcal{O}_\Delta \equiv \partial \sum\nolimits_{\mathcal{I}_\ell}$$

Here four parameterizations, has been made which indicates the orbit $\mathcal{O}$ for the dimension Δ taking three values with each representing each domain of time,

$$\Delta \xrightarrow{\Rightarrow} \begin{cases} \Delta \longrightarrow dimension\ 2D \cong n \\ \Delta \longrightarrow dimension\ 1D \cong (n-1) \\ \Delta \longrightarrow\ (\varepsilon \times \epsilon) \times (\epsilon \times \varepsilon) \end{cases}$$

1. The first point where there is n is the depiction of the two-dimensional time which is a closed loop satisfying the equation for the spacetime coordinates (σ, ρ),

$$\oint_\rho$$

2. The second point is the representation of the hologram that projects in 'one dimension lesser than n' is indeed,

$$\mathcal{O}_\Delta, U, t \equiv \bigcup\nolimits_{m \in (U,t)} \beta_m$$

For Δ taking the value $n-1$ In the orbit,

$$\mathcal{O}_\Delta\ for\ \Delta = \beta_m$$

Where for projection $\beta: m$ satisfies the granular nature in the loop manifold (U, t)

$$\exists\ \beta \Longrightarrow (\varepsilon \times \epsilon) \times (\epsilon \times \varepsilon)$$

for another value of $\Delta\ in\ \mathcal{O}_\Delta$ where [Point 3] can be stated as,

3. Considering the entire 2D loop as (U, t) where one can get a 2D circle the signature must take the form in (s, t) where this implies the spacetime upon which the events are being played with the events having the form,

$$(\varepsilon \times \epsilon) \times (\epsilon \times \varepsilon)$$

Where one can constantly perceives a single event ε taking place in an infinitesimal time ϵ which is perceived as a 1D and that when goes spontaneous after each single repeat as per the equation,

$$\partial \sum_{\mathcal{J}_{\ell}}$$

For a constant pace of temporal flow representation ∂, the summation of $\mathcal{J}_{\ell}$ Includes two following factors[3,4],

A. Taking $\mathcal{J}$ over the limit of the multiplication cycle of

$$(\varepsilon \times \epsilon) \times (\epsilon \times \varepsilon) \xrightarrow{\times} (\varepsilon \times \varepsilon)$$

   a. Where the composition product gives the infinitesimal space element $(\varepsilon \times \varepsilon)$ such that $\ell \ni (\varepsilon \times \varepsilon)$ represents ι,

$$\bigotimes^{\mathcal{J}} \mathcal{J}_{\ell} \cong \iota$$

B. Where ι acts as the parameter called the '$t - ons$' as stated earlier which is a fragment of the granular time in the way such that for every ι there exists a '$lift\ up\ time$' ϵ_{∇} for the limit,

$$\lim_{\nabla \xrightarrow{\Delta} \partial \sum_{\mathcal{J}_{\ell}} \times \langle S \rangle} \nabla$$

Which lifts the infinitesimal space ℓ in a constant pace ∂ taking the nature of simultaneity of the 2D time curve ι for a generator Δ which acts on multiple spaces over the closed timeline being parameterized κ such that,

$$\kappa \equiv (U, t)$$

The relation satisfies lifting of from multiple places as the evaporating time for the generator Δ to provide the relation of a summation of '$t - ons$' being superpositioned through $\langle S \rangle$ satisfies a unique domain,

$$\{\kappa\}_{\langle S \rangle, \vee}$$

For the value of $\vee$ taking the relations,

$$\begin{cases} \vee \approx S_{(s,t)} \\ \beta := \vee_{\kappa} \\ \quad \downarrow \\ \quad \downarrow \end{cases}$$

$$[\xi, \dot{\xi}, M] \equiv \beta \prod \zeta \tau_{\iota} \, \forall \iota \approx \oint_{\rho}$$

Where, three properties can be satisfied taking the perspective of time from each aspect of the hologram ξ which when got differentiated by means of the granular spatiotemporal formation τ arises a superposition $\langle S \rangle$ for each piecewise hologram that in essence when combined formed the matrix M to generate the specified index M_{ij} for the relation[5],

$$\int_{\xi} \int_{\dot{\xi}} \rightrightarrows M_{ij} \begin{cases} \text{for } i = j \text{ there exists } [\xi, \dot{\xi}, M] \\ \text{for } i \neq j \text{ there exists } [\xi, \dot{\xi}, M]^{i^2}, \varphi \end{cases} (\sigma, \rho)_{\tau_{\iota}}$$

To represent the entanglement φ when there is a complete two-way mapping between them in the domain $(\sigma, \rho)_{\tau}$ to be given by,

$$\forall \varphi \xrightarrow{generates} i^2$$

This can be shown,

$$\begin{array}{ccccccccccc} \xrightarrow{\zeta\tau_\iota} & \xrightarrow{\zeta\tau_\iota} & [\xi, \dot{\xi}, M] & \xrightarrow{\zeta\tau_\iota} & \xrightarrow{\zeta\tau_\iota} & [\xi, \dot{\xi}, M]^{i^2}, \varphi & \xrightarrow{\zeta\tau_\iota} & \xrightarrow{\zeta\tau_\iota} \\ \uparrow & & & & & & & \downarrow \\ \uparrow & & & & & & & \downarrow \\ \xleftarrow{\zeta\tau_\iota} & \xleftarrow{\zeta\tau_\iota} & [\xi, \dot{\xi}, M]^{i^2}, \varphi & \xleftarrow{\zeta\tau_\iota} & \xleftarrow{\zeta\tau_\iota} & [\xi, \dot{\xi}, M] & \xleftarrow{\zeta\tau_\iota} & \xleftarrow{\zeta\tau_\iota} \end{array}$$

Thus, the equation can be satisfied through,

$$\Psi^{m,n}\left(\left[\xi,\dot{\xi},M\right],\left[\xi,\dot{\xi},M\right]^{i^2},\left((\sigma,\rho)_{\tau_\iota}\right)\right)$$

Where the functor $\Psi^{m,n}$ satisfies the infinite looping of granular time through a $m \times n$ matrix where any specific moment in spacetime can be denoted by taking the specific parameters of m and n in $\Psi^{m,n}$.

Thus, for simplicity we can denote the whole equation over a single parameter[6-8],

$$\Psi^{m,n}\left(\left[\xi,\dot{\xi},M\right],\left[\xi,\dot{\xi},M\right]^{i^2},\left((\sigma,\rho)_{\tau_\iota}\right)\right) \cong \omega_{\Gamma,(m,n)}$$

Here one specific property to be examined as of $\omega_{\Gamma,(m,n)}$ where Γ denotes the spatiotemporal location of the spacetime coordinate (σ,ρ) with respect to the matrix which in essence is a hologram ξ for the matrix criterion $M_{ij}\ \exists i \neq j$ that in essence corresponds to the entanglement generator i^2 for a denoted value $\left[\xi,\dot{\xi},M\right]^{i^2}, \varphi$ that corresponds to sub 2 units of the 2D loop,

$$\Gamma_{(2)}\dot{\gamma} \xrightarrow{\quad\sim\quad} \langle S\rangle$$

and sub 1 units of the 2D loop for,

$$\Gamma_{(1)} \iint_{\langle S\rangle} \xrightarrow{\quad\sim\quad} \left(\left[\xi,\dot{\xi},M\right] \longleftrightarrow \left[\xi,\dot{\xi},M\right]^{i^2}\right)$$

with sub 1 unit of the 2D loop for the granular $'t-ons'$ being represented by γ can in essence make a transporting reality where one granular element can be send to the other portions of the temporal manifold (U,t) through the possibility of 2 criterions which again has two classifiers defined by[9,10],

For every $\omega_{\Gamma,(m,n)}$: There holds $4 - Positions$,

$\omega_{\Gamma,(m,n)}$

$\searrow$

$\searrow$

Either $m = n$ or $m \neq n$

$\downarrow$

$\downarrow$

For every $\omega_{\Gamma,(m,n)}$ $\longrightarrow$ $\longrightarrow$ When $(m,n) \neq (m,n)$

$\downarrow$

$\downarrow$

For $\Gamma_{(0)} \exists 0 \ni 0^f, 0^{f-1}$

$\swarrow$

$\swarrow$

In dimension f for a hologram $f-1$

$\downarrow$

$\downarrow$

$$\Gamma_{(0)}\delta \bigcup (U,t)_r \xleftrightarrow{\chi} (U,t)_v \ \exists$$

In case of $\Gamma_{(0)}$ for the transportation factor δ: temporal granular transportation occurs from one place of temporal manifold to another place via $\chi_{r,v} \exists r \neq v$ in $(U,t)_r$ to $(U,t)_v$

CONCLUSION:

The nature of 2D time with respect to split of the time to temporal granules being considered over the fact that; there is a temporal meshwork which with the space coordinates together makes a spatiotemporal foam or a meshwork that determines the properties of the locality in granules, non-locality factor in the summation of the granules with its inversion in the form of entanglement and the superposition principle to justify the functor $\Psi^{m,n}$ for each values of m and n taking each local points. Thus, for three values of Γ as $\Gamma_{(2)}$, $\Gamma_{(1)}$, $\Gamma_{(0)}$: 3 classes have been satisfied for superposition, entanglement and transportation while representing time as a hologram.

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