

- Reuse, mod of System of systems engineering framework, Syntax Lexicon Library data elements  
**- STRUCTURED DATA EXCHANGE**  
 Reuse brevity codes mapped to 2525D symbol sets comprised of 300 + message sets for A.I. - machine Block-Time DLT arbitrage among Trade Federations </Org\_ID> {“URN”} </URN> = COMMODITY



Reuse adaptive procedural template guides from Battlefield Digitization among a federated systems of systems improving synergy, synchronicity to achieve shared sustainable goals

DOD SITUATION AWARENESS PROGRAM  
**SWORDS TO PLOWSHARES OOTW IDEA**  
 BY GERMAN MILITARY CIRCA 2003



# Humanitarian Assistance Networked Donor System

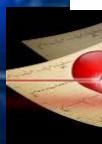
H.A.N.D.S: "Based on the need to speed up the processes of influencing an adversary, new concepts result in the adaptation of military doctrine, organization, training, material, infrastructure, interagency interaction, leadership, personnel and facilities" ... German Bundeswehr concept of "OOTW Operations Other Than WAR or "Vernetzte Operationsführung" circa 2003



"Shared situational awareness enables collaboration synchronization, and enhances sustainability, speed of command"



Reuse adaptive procedural template guides from Battlefield Digitization among a federated systems of systems improving synergy, synchronicity to achieve shared sustainable goals



DOD SITUATION AWARENESS PROGRAM  
SWORDS TO PLOWSHARES OOTW IDEA  
BY GERMAN MILITARY CIRCA 2003



## Beacon Communities

Vernetzte Operationsführung



Proximity Beacons



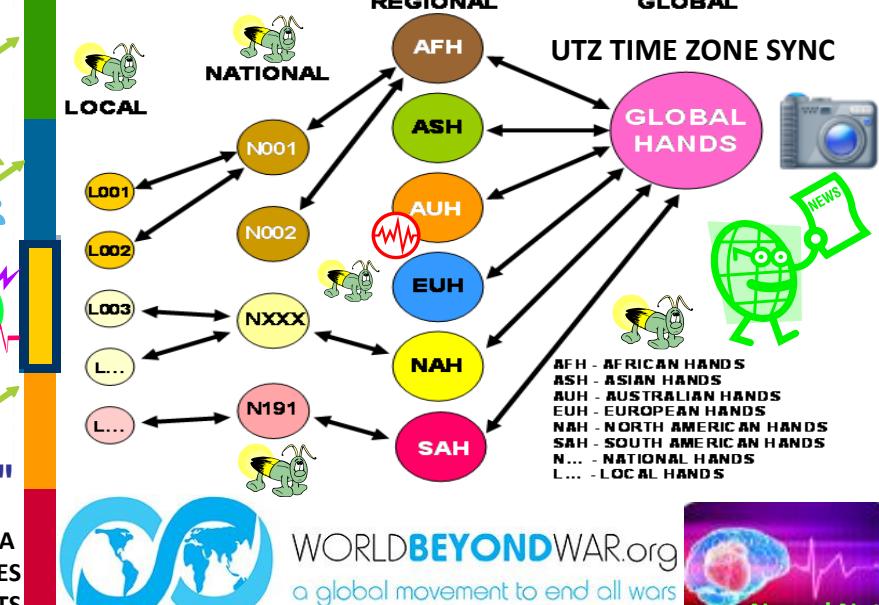
JAEGERS



Closer < \$\$\$ < FUEL

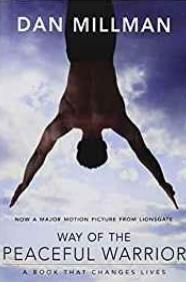


SYSTEM Of SYSTEMS



AFH - AFRICAN HANDS  
ASH - ASIAN HANDS  
AUH - AUSTRALIAN HANDS  
EUH - EUROPEAN HANDS  
NAH - NORTH AMERICAN HANDS  
SAH - SOUTH AMERICAN HANDS  
N... - NATIONAL HANDS  
L... - LOCAL HANDS

WORLD BEYOND WAR.org  
a global movement to end all wars



KAIJU

# Adaptive Procedural Template (checklist): Foundation tech for programmable \$\$\$, Economy / DeFI



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## Eco Economic Epoch GDP Heartbeat signals and telemetry framework



**USE CASE:** Banks - Tech firms are forming teams to assert foundation tech as a legal basis for IP intellectual property claims for programmable \$\$\$ DeFI

**Use Case:** Tokenize Europe 2025 initiative: reuse DoD / NATO's structured data brevity OPSCODES mapped to 2525A, B, C, D symbols needed for A.I. man-machine interface Reuse, modify 300 + Use Case message set templates data element FFIRNs FFUDNS or, redo a time, people intensive process that took decades to create, test and refine.



Net of \$\$\$ formed with:

1 EPOCH TIME CYCLES

2 {"Syntax"} "The Word"

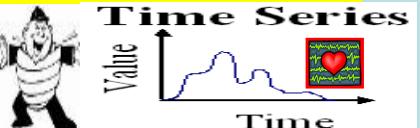
"In the Beginning" Genesis Block

"All things internet, Internet of money are formed using time epoch cycles to process, parse, syntax as instructions"

"A blockchain is a consensus-based system. It only works if all nodes reach an identical state"

"A smart contract is a piece of code stored on a blockchain, triggered by blockchain transaction reads / writes data in the blockchain's Dbase"

## NAMED DATA NETWORKING



"Blockchain consortiums are working less on distributed ledgers and more on Contract Description Languages CDL, DAML Digital Asset Modeling Language" Coindesk Article



SYNTAX LEXICON  
Library

1<sup>st</sup> Compiler



STRUCTURED DATA EXCHANGE  
TEMPLATE FORMS  
300+ USE CASES  
LOGIC / FILTERS



Alpha Numeric Brevity Codes



Coder Guide  
Rosetta Stone

SYNTAX / SYMBOL LEXICON LIBRARY



"BITCOIN MAKES MONEY PROGRAMMABLE.  
MONEY IS SIMPLY DATA"

"BITCOIN'S VALUE = TIME ITSELF"

"Time is specified in units of block transaction confirmation times"



ALICE CORP VS CLS BANK

"claims may not be directed towards an abstract idea"

US SC 573 US 134 2347



BITCOIN BLOCKCHAIN BLOCKS, AGENTS, MOTES, BOTS, PACKETS, FRAMES, HEARTBEAT, PINGS, HOPS, BEACONS ARE METAPHORS / MEMES

USPTO 13/573,002 BASEBALL MEME PHYSICAL = OPPOSITE OF ABSTRACT



CLOCK FACE 360°  
90 / 90 / 90 / 90



MACRO CYCLES

RULES / ROLES

INSTRUCTIONS

WORKFLOW

UMPIRE

COACH

3rd Base

STATISTICIAN

Metrics, Meters

Stat Mean Value Index

3 X 5 HASH TABLES

STATE META DATA SHARDS

SETTLEMENTS / EXCHANGES

= TAXABLE EVENTS

AKIN TO PROPERTY

IRS #1421

State Meta Data Snapshots

Survey Point

MICRO CYCLES

BASEBALL "DIAMOND"  
A diamond Is a square Is a block in 3D  
2nd Base

Satoshi Nakamoto:  
"The solution we propose begins with a TIME STAMP SERVER"



90 feet

Blockchain BLOCK in 3D = CUBE

Cube has Length, Depth, Height, Volume

90 feet

SETTLEMENTS / EXCHANGES

= TAXABLE EVENTS

AKIN TO PROPERTY

IRS #1421

State Meta Data Snapshots

Survey Point

MICRO CYCLES

90 feet

SETTLEMENTS / EXCHANGES

= TAXABLE EVENTS

AKIN TO PROPERTY

IRS #1421



90 feet

Blockchain BLOCK in 3D = CUBE

Cube has Length, Depth, Height, Volume

90 feet

SETTLEMENTS / EXCHANGES

= TAXABLE EVENTS

AKIN TO PROPERTY

IRS #1421

State Meta Data Snapshots

Survey Point

MICRO CYCLES

90 feet

SETTLEMENTS / EXCHANGES

= TAXABLE EVENTS

AKIN TO PROPERTY

IRS #1421



BANK SC 573 US 134 2347

CLAIMS MAY NOT DIRECT TOWARDS ABSTRACT IDEAS

Physical = Opposite of abstract = ALICE

HEART BEACON CYCLE

TIME – SPACE METER

USPTO 13/573,002

first base

RUNNER Message Bus

Firefly – Heartbeat Algo

Stochastic Harmonization

X EVENTS

FLASH MESSAGE EVENT BUS

FIX {"108"}

TIME STAMP SERVER

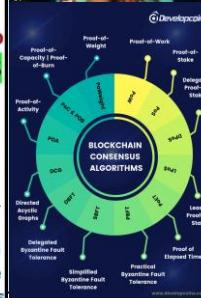
Epoch Time Cycles

Δδ

Time Stamp Server

Time Stamp Server

Time Stamp Server





# Eco Economic Epochs

# Distributed Event Processing

# Distributed State Machine

# DEFI FINTECH IP WARS / Litigation Foundation Tech



# SWORDS to PLOWSHARES

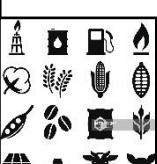
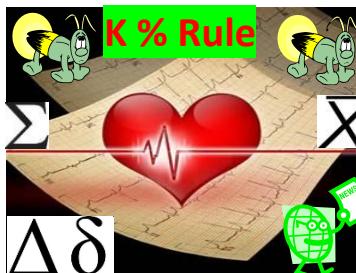


 USPTO 13/573,002  
573 U.S. 134 SCt 2347  
Alice in Wonderland Ruling



**Symbols  
Rule  
The World  
OPSCODE  
BREVITY  
CODES  
Mapped  
To symbols  
2525A,C D**

- Battlefield Digitization, Net Centric Warfare for OOTW Operations Other Than War
  - Net, Net of \$\$\$ Foundation Tech
  - Structured Data Exchange with 300 + use cases
  - Use Cases: A.I., Big data, Quantum
  - Blockchain, Distributed Ledger Tech
  - DAO Distributed Autonomous Organization
  - Consensus, Signals, Telemetry, Standards



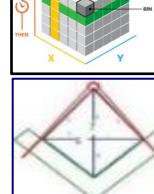
Federation  
Gateway

## In the beginning (of time).. There was the word (syntax)



Net, Net of \$\$\$ money consists:

- 1) Epoch Time Cycles
- 2) Syntax used / not in epochs

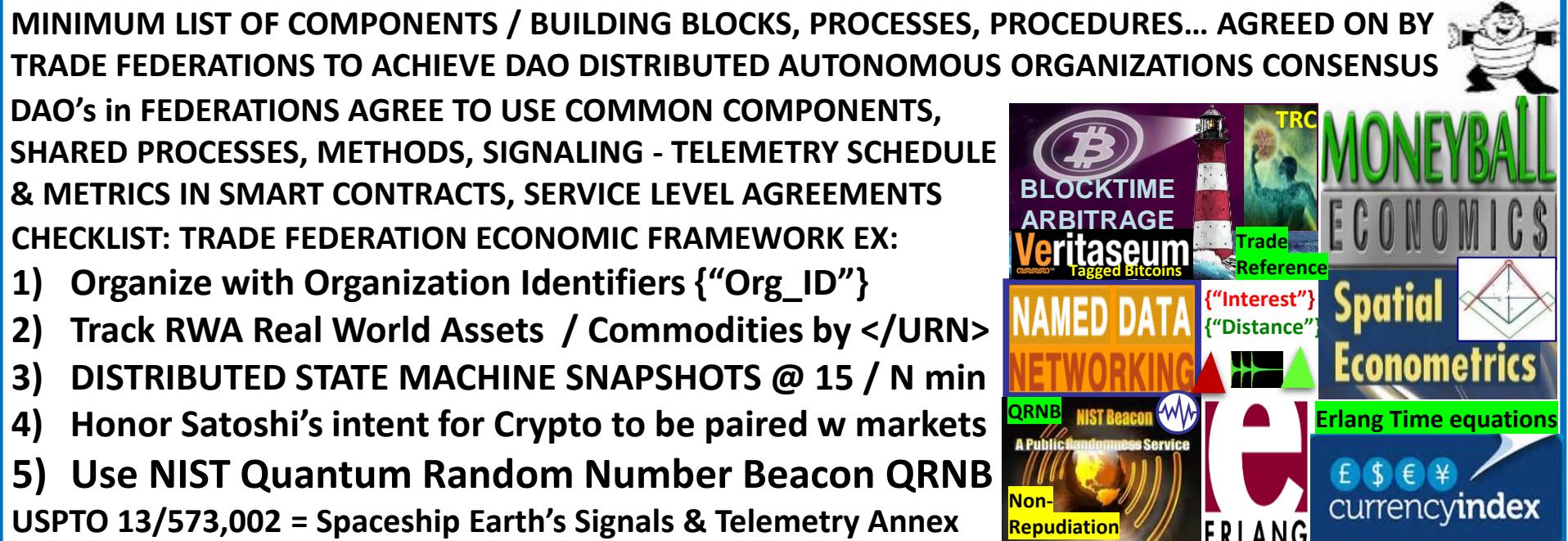
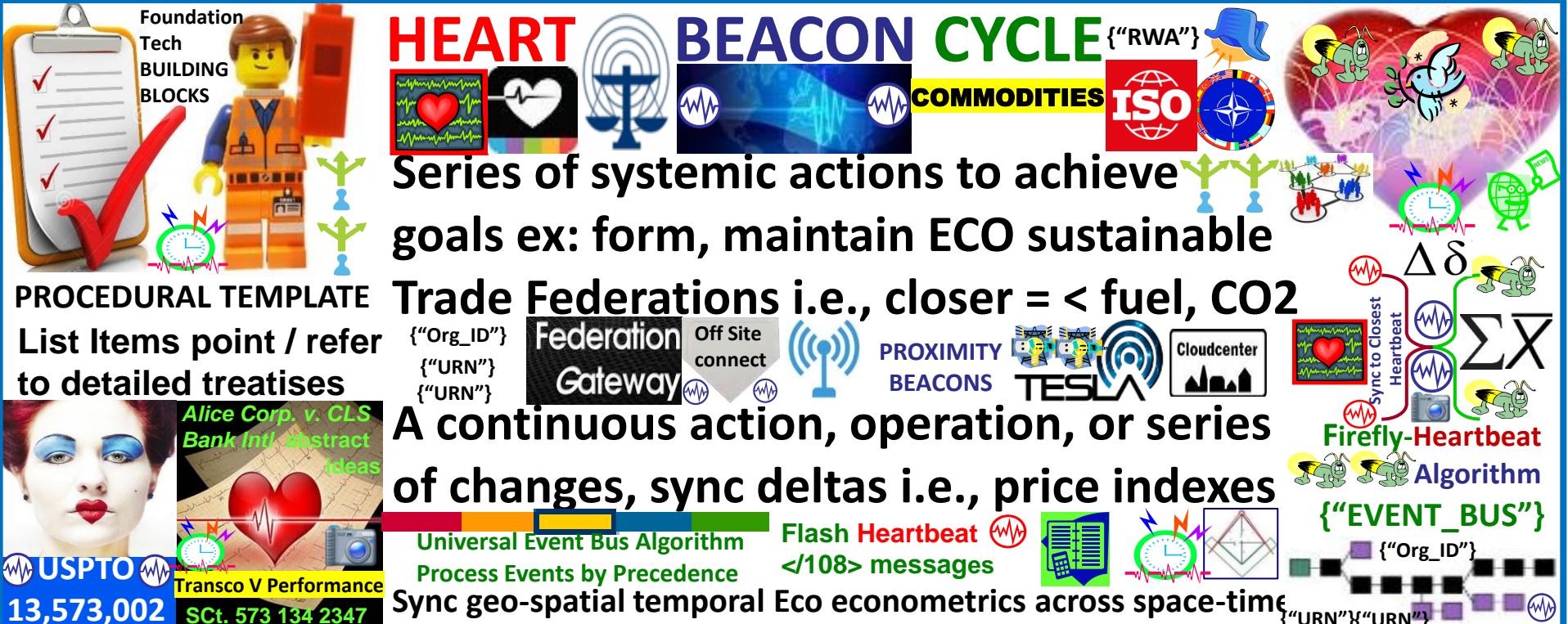


# CBDC STABLE COINS



**MEMO #1421**





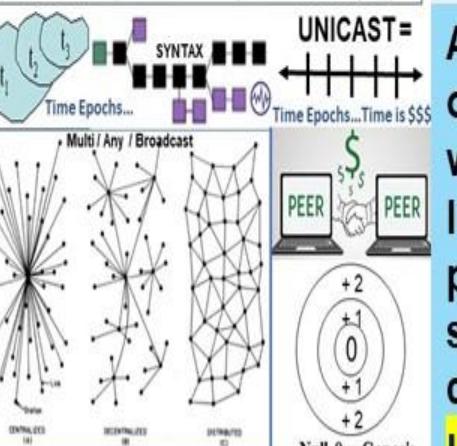
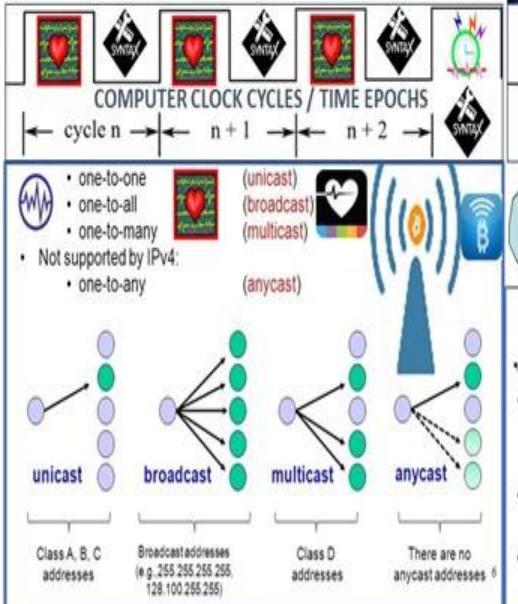
# Foundation Technology Trinity:

1. EPOCH (s) = Time intervals, cycles
2. SPACE (land use meme) ex: IRS memo #1421 "Bitcoin transaction akin to land"
3. SYNTAX structured data mapped to symbols for A.I. / man - machine interface

THESIS: All net artifacts, net of \$ are formed with:  
 1) Epoch time cycle intervals ex: chip oscillations  
 2) Syntax parsed, processed in epoch time intervals

## Time Epochs / Syntax:

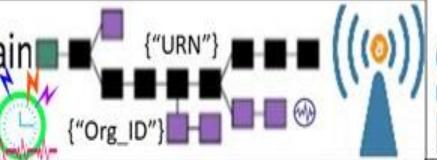
How the net, net of \$ actually work...



## Epoch Time Cycles / Syntax

Internet / Internet of Money building blocks

Satoshi Bitcoin Blockchain  
Time Stamp Server



Semantic blockchain

OPSCODE
Brevity
Codes
Mapped
To
Symbol Sets
AI



Artificial intelligence (AI) syntax refers to the set of rules, principles governing the arrangement of words and phrases in a programming language. In the context of AI and natural language processing, syntax ensures that language is structured in a systematic way, for effective communication and comprehension.

Understanding syntax is essential for developers to write readable, maintainable, and scalable code

All things internet, programmable net of money are formed using:  
 1) Epoch Time Cycles to 2) process (not) syntax as instructions







**USPTO 13/573,002**



**573 U.S. 134 S.Ct 2347**

# **“Alice in Wonderland Ruling”**

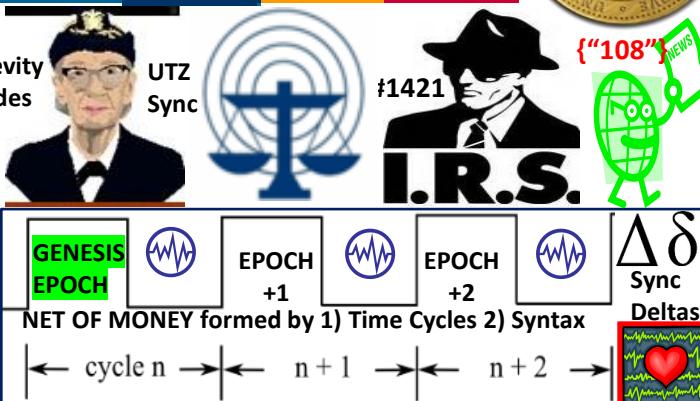
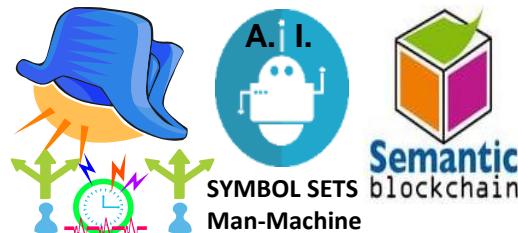
# World Game Great Reset

## Signals Telemetry Annex K



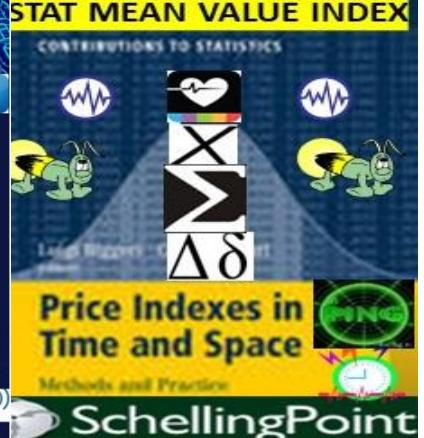
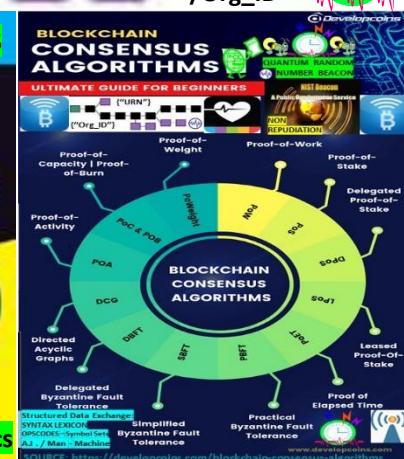
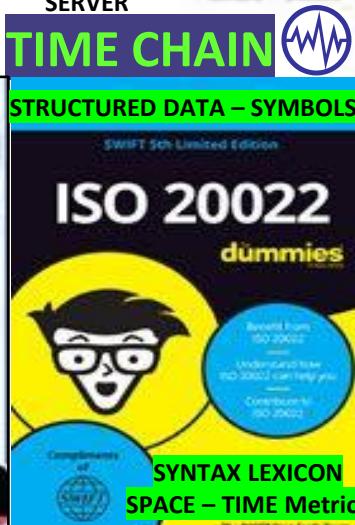
**Net, net of money \$\$\$ formed w:**

1. Epoch time cycles created by silicon chips
  2. Syntax code instructions in epoch time cycles
  3. Time Stamp Server w/event message bus



**Syntax lexicon comprised of 300 + Structured data messages, message sets = Comprehensive list of use cases, data elements supporting Internet of Everything IoE net of value. Reference guide, data dictionary standards support**

## Data elements mapped to SYMBOL SETS



# World Game Annex K

## Signals & Telemetry



INTERNET, NET of \$\$\$ =  
1. Epoch Time Cycles  
2. Syntax instructions



300 + Use Case message sets  
OPSCODE BREVITY CODES  
- Symbols, symbol sets



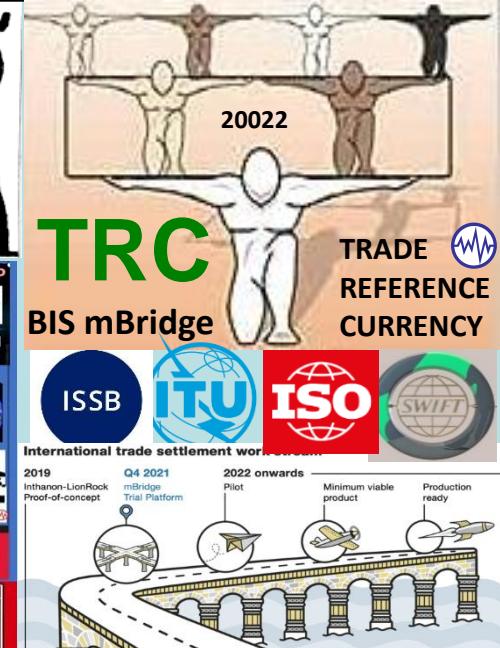
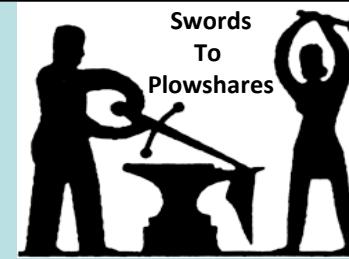
Eco Economic Epoch Heartbeat: reuse of DoD / NATO signal, telemetry syntax - symbol set structured data exchange system of systems engineering framework for DAO Trade Federations, programmable money / Economy. It is time to stand on the shoulders of giants.



SLA Service Level Agreement Eco incentives: closer = < time, cheaper, < fuel, < CO2  
“Build a new model that makes the old model obsolete” Buckminster Fuller



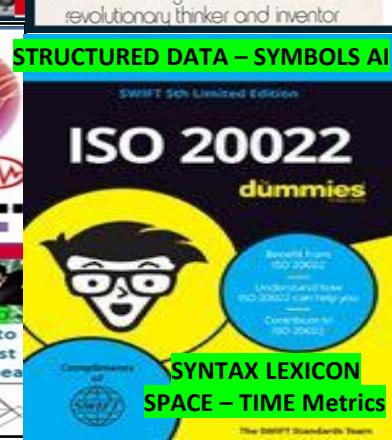
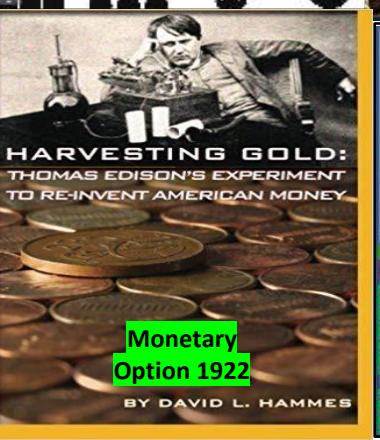
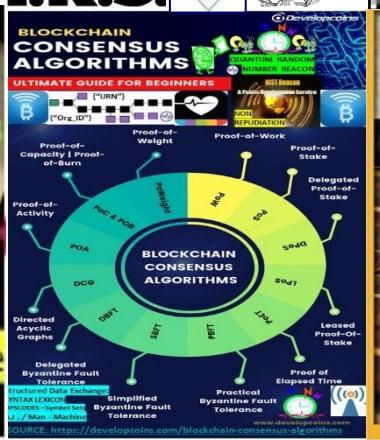
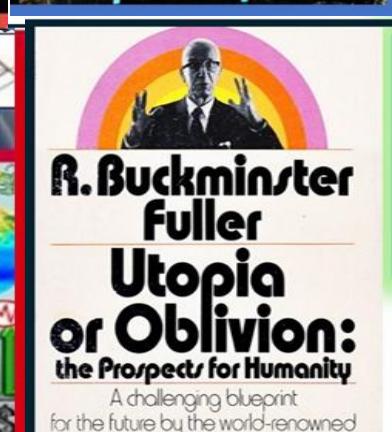
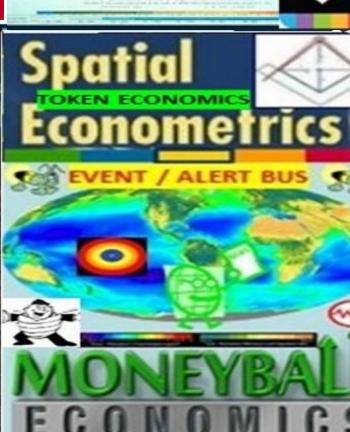
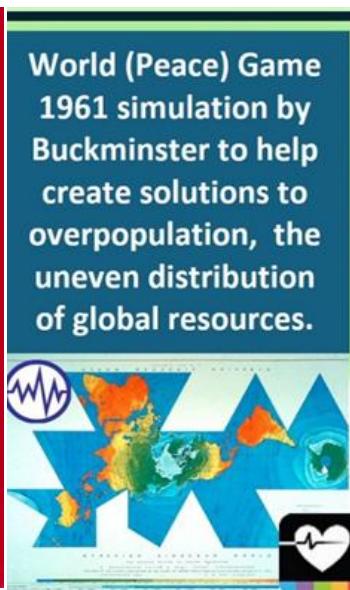
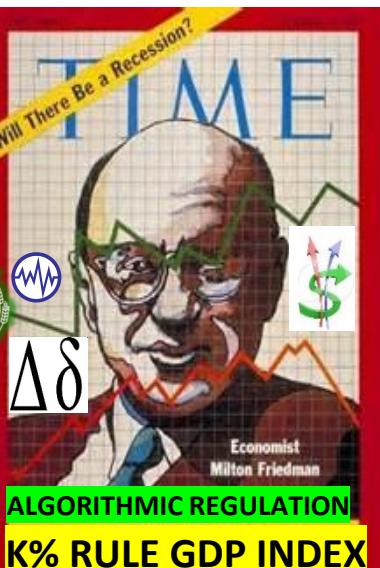
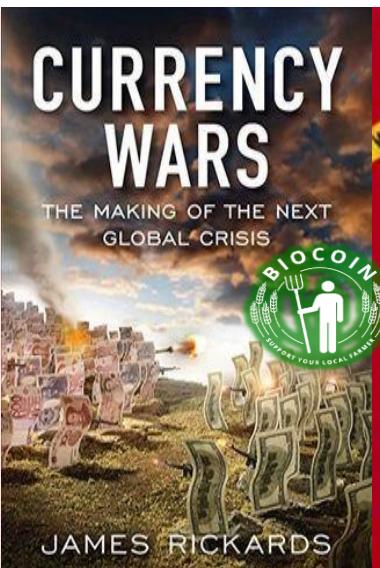
DISTRIBUTED STATE MACHINE  
FIREFLY Inspired  
Heartbeat Algorithm  
Message Event Bus



“Build a new model”  
Standing on the shoulders of giants



Eco Economic Epochs  
For Programmable \$\$\$  
Programmable Economy  
Re Monetize (Crypto) Currency  
Symbol / Message Sets A.I.  
FIREFLY Inspired  
Heartbeat Algorithm  
Message Event Bus





UTOPIA ?  $\Delta\delta$  OBLIVION ?

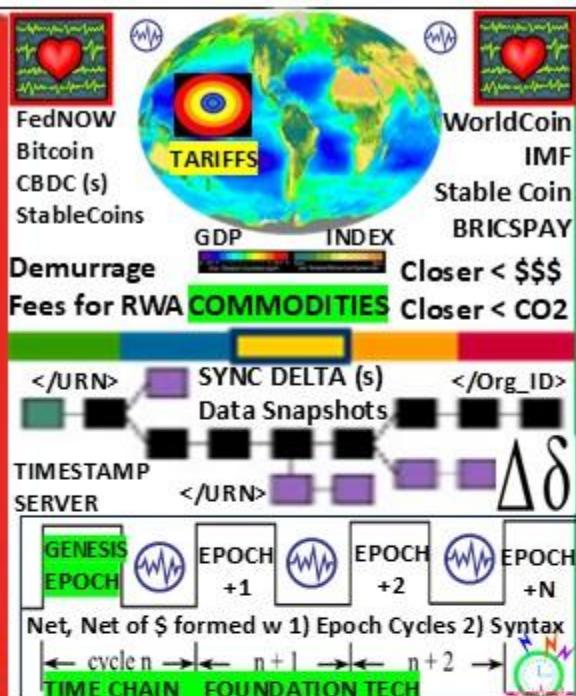
TradeFi TRC Trade Reference Currency

E \$ € ¥ currency index #20022

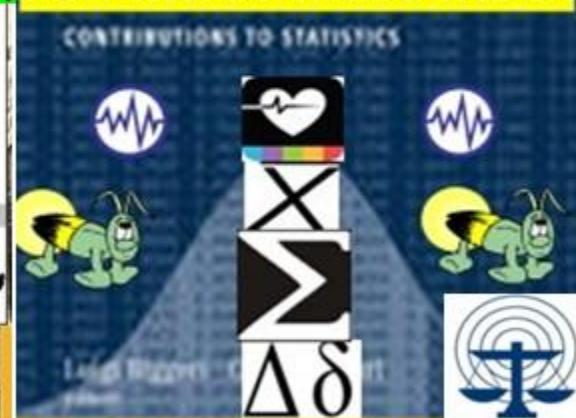
I.R.S. #1421 ISO CLOSER = CHEAPER < FUEL < CO2

BLOCKCHAIN CONSENSUS ALGORITHMS

HARVESTING GOLD: THOMAS EDISON'S EXPERIMENT TO RE-INVENT AMERICAN MONEY... Monetary Option 1922 BY DAVID L. HAMMES



STAT MEAN VALUE INDEX



Price Indexes in Time and Space Methods and Practice SchellingPoint



DeFi TIME- SPACE METRICS METERS Eco Econ Incentives HEARTBEAT % REAL GDP ("108") ALGORITHMIC REGULATION





# Commodities Index Basket / FIAT PRICE Discovery Algo / MEDIATION



ALGORITHMIC STABLE COIN    EQUILIBRIUM ALGORITHMS  
COMMODITY INDEX BASKET    PRICE DISCOVERY ALGOS



COMMODITY FUTURES TRADING COMMISSION



SLA Service Level Agreement  
CLOSER = CHEAPER = CLOSER

**FIREFLY – HEARTBEAT ALGORITHM CHINA:** nature-inspired metaheuristic optimization algorithm developed by Xin-She Yang flashing behavior of fireflies (Yang, 2008), adapted to solve continuous optimization problems (Lukasik and Žak) 2010, 2013



Edison's Monetary Option  
Cambridge University Press 2009

"Crops hold their value best over time"

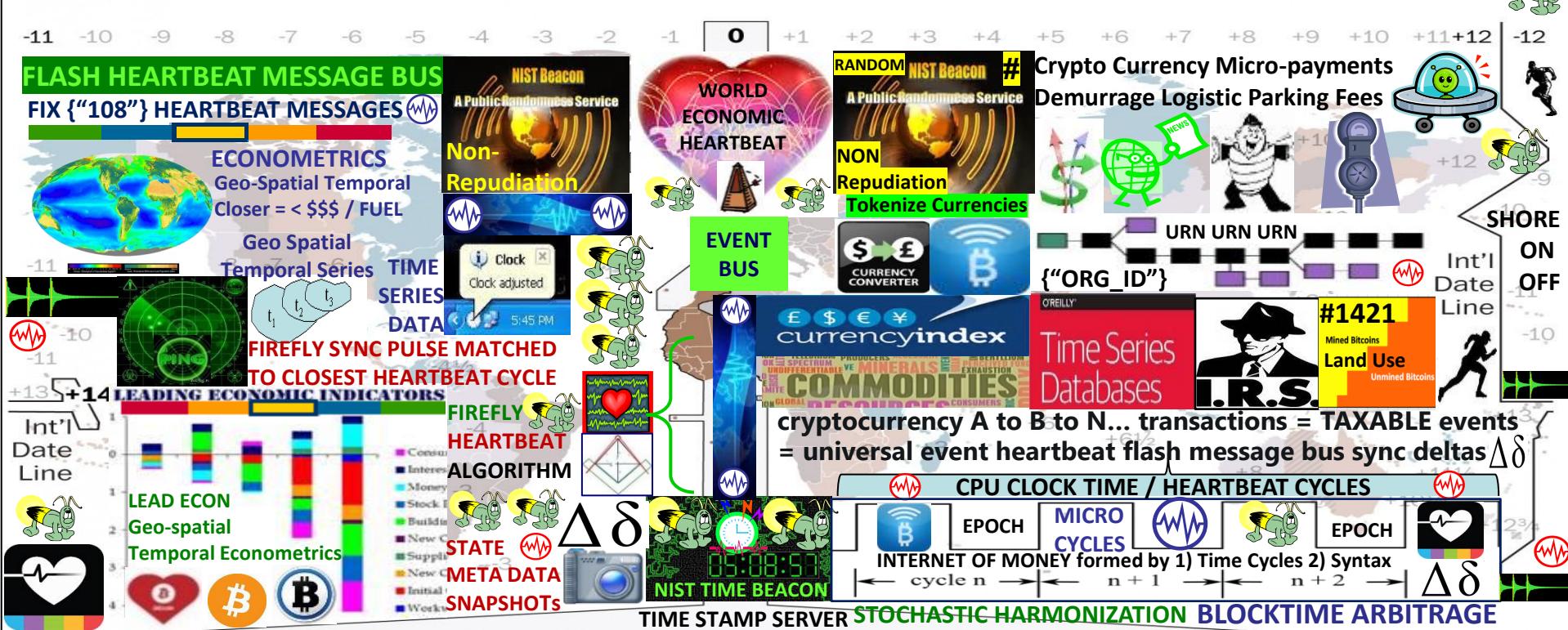
"Thomas Edison publicly introduced his latest invention: a new type of money, a crop index commodity-backed currency that he believed was the long-term solution to America's monetary woes. "I want to cast the variable out of money. This gold money is not good enough. It's a fiction" "New York Times 1922



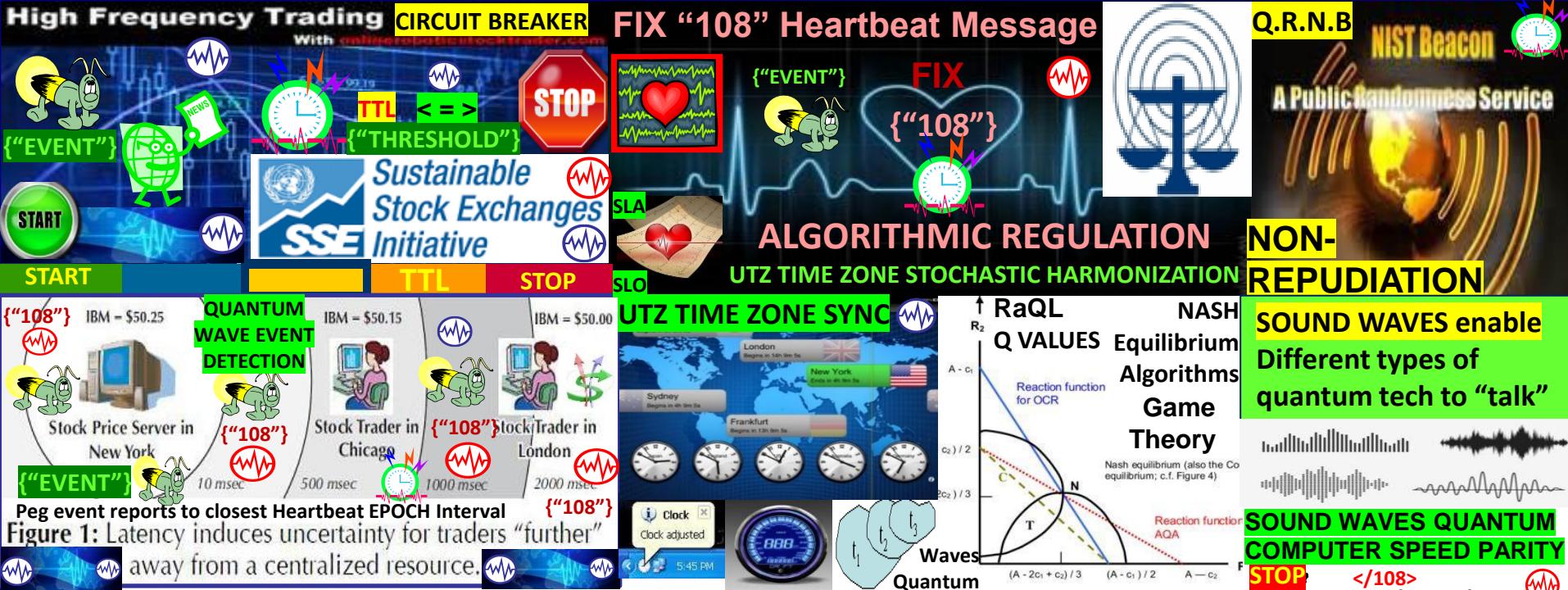
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USPTO 13/573,002 The Heart Beacon Cycle Time – Space Meter



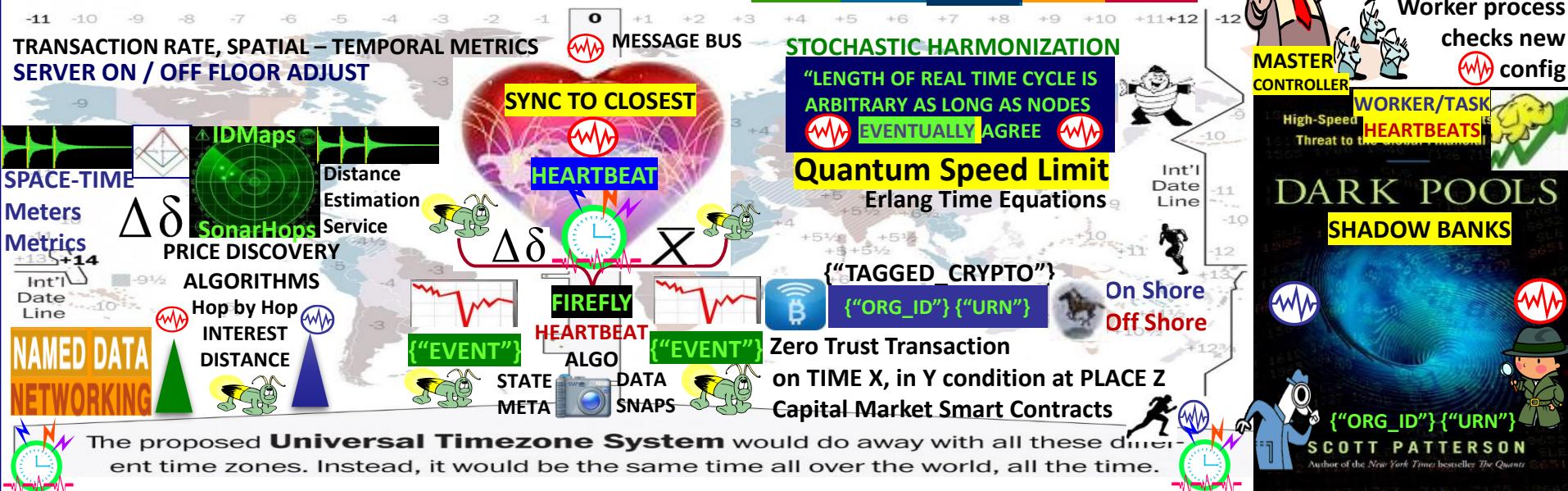
The current standard time common throughout the world is based on a 24-hour clock, with zones that are either 12 hours ahead or behind **Coordinated Universal Time (UTC)**. However, these time zones are decided upon by individual governments, without overall coordination and can even extend fourteen hours ahead UTC. **UTZ TIME ZONE SYNC STOCHASTIC HARMONIZATION**



The proposed **Universal Timezone System** would do away with all these different time zones. Instead, it would be the same time all over the world, all the time.

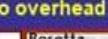
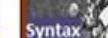


The current standard time common throughout the world is based on a 24-hour clock, with zones that are either 12 hours ahead or behind **Coordinated Universal Time (UTC)**. However, these time zones are decided upon by individual governments, without overall coordination and can even extend fourteen hours ahead UTC.



**USE CASE:** standards adherence support for IEEE, ITU, ISO international data, internet, internet of money, IoT, Artificial Intelligence A.I ... standards

Systemic, signaling, synchronization of state  
meta data encoded as brevity OPS CODE  
tokens stochastically harmonized over the UTZ

FROM	TO				CODE GUIDE		
	GCCS-A	TAIS	ASAS	AMDPCS	AFATDS	MCS	
ASAS	C002 C203 F002 F014 F015 F541 S201 S309	C002 C203		C002 C203	C002 C203 F014 F541 S305 S309	C002 C203 E400 F002 F541 F015 F541 S201 S309 S507	
TOKENS	<b>USMTF / XML MTF FORMATTED MESSAGE CATALOG = 300 + messages info exchange sets using common, CONSENSUS Message Text Formats MTFs. MTFs specify &lt;/CONTENT&gt; / info agreed by group consensus presenting information in a logical, well specified unambiguous layout resulting in a highly efficient info payload to overhead ratio</b>				F002 F015 S201	C203 C400 D630 E500 F002 F014	
AMDPCS	OPSCODE BREVITY CODES					A.I.	
AFATDS	F002 F014 F015 F541 S201					INFOCON 5 4 3 2 1 INFORMATION CONDITION	
MCS	 	A423 C203 C505 F002 F014 F015 F541 S201	A423 A659 C002 C203 C400 C443 C447 C488 C501 C503 C504 C505 C506 C507 C508 E400 F002 F014 F015 F541 F658 F756 G489 K01.1 S201 S303 S507	A423 A659 A656 A690 C002 C203 C400 C505 F002 F014 F015 F541 S201	  	  	<b>"SYMBOLS RULE THE WORLD"</b>  

MESSAGE CATALOG  
300 + Use Cases

**Data Elements:** entity, attribute, relationship equivalents

**PULSE MESSAGE =**  
0.99 </108> {"108"}

300+ Use Cases		Information Categories and Examples						
Object Categories	Examples	Location	Movement	Identify	Status	Activity	Intent	
OOB	<b>SYNTAX LEXICON</b>	STRUCTURED DATA lat/long	EXCHANGE spd/hdg	Message country / alliance, type/class	Sets readiness	targeting, recentering	COA {"Java JS"}	
Infrastructure	Comm, power, transportation, water/sewer	Machine Trust Language MTL	Machine Trust Language MTL	Machine Trust Language MTL	CDL Contract Description Language	YAML		
Sociological	Culture, religion, economic, ethnic, government, history, languages	network, grid	throughput, flow rates,	name, part-of relationships	BDA, op results	repair, enhancement	expansion	
Geophysical	Terrain, weather, climatology, oceanography, astrometry	temples, historic structures	feature lat/long, alt/dpth	E-R Model Class Diagram	Relational Database Table	Object DBMS Class	XML/JSON Schema Element	TADLs Message
				Attribute	Field / Column	Attribute	Child Element or Element Attribute	DFTI FFRN / FFN / FUN
				Domain Value	PURCHASE CODES Instance, Value		TOKENS	DUI RUD



Information Elements Roles

- 



**DN: Field Format Unit Designator #**

N Field Format Index Reference #

ctured military messaging ID's  
ssages, message sets, data  
ent symbol fields </108>

A screenshot of a mobile application titled "Form Field Position & NUMBER". The screen displays a form with several input fields, including a dropdown menu set to "1 - Confidence Level", a date field set to "2014-01-01", and a text field containing "108". Below the form is a navigation bar with icons for "Friend", "Neutral", and "Partner". At the bottom of the screen, there is a status bar with icons for signal strength, battery level, and connectivity.

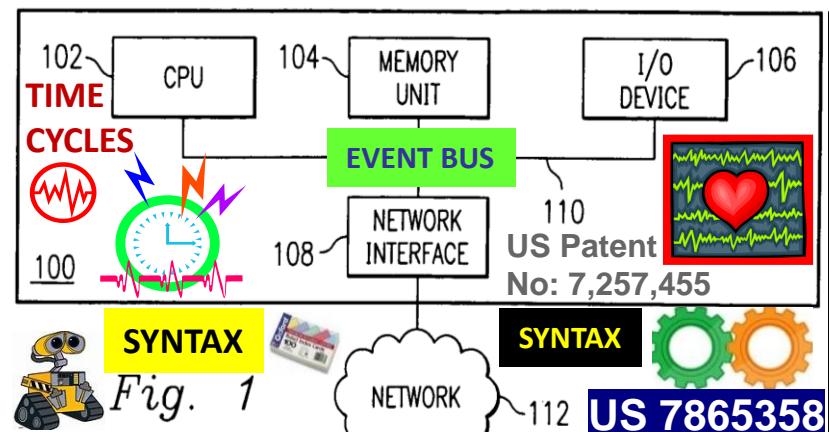
**PROCESS MESSAGE BY PRECEDENCE**  
**UNIVERSAL EVENT / ALERT MESSAGE BUS**

#### OPERATIONAL NODES / ACTIVITIES

SYSTEM FUNCTIONS		PERFORMANCE	
Classification		11.6 - Kinematics	
1 - Category		11.6.1 - Pos / Vel / Acc (PVA)	
11.4.1.1 - Confidence Level		11.6.1.1 - Acceleration	
11.4.1.2 - Estimate Type		11.6.1.1.1 - Angular	
11.4.1.2.1 - Alternative		1.1.2 - Linear	
11.4.1.2.2 - Evaluated PURCHASE		1 - Estimate Type	
11.4.1.3 - Value CODES		1.2 - Estimated	
BOL	Friend	Neutral	Hostile
25C	Partner		
11.4.1.3.5 - Surface		Competitor	
2 - Platform / Point / Feature Type		- Velocity	
3 - Specific Type		1.4.1 - Horizontal	
4 - Type Modifier		1.4.2 - Vertical	
5 - Unit		VA Confidence	



x code language parsed,  
ssed during silicon chip  
ated epoch time cycles  
all things internet, net of  
y. state meta data sync delta  
beat snapshots during  
n temporal micro-cycles



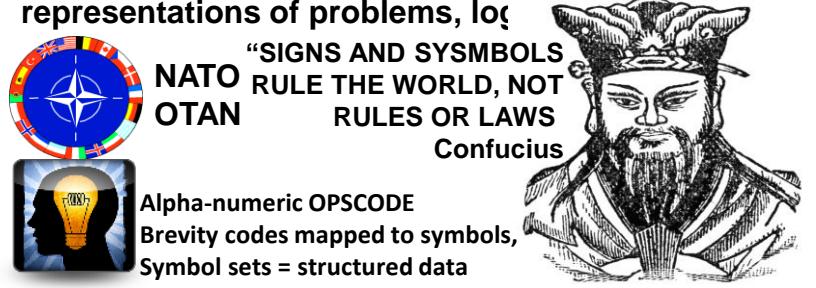
Machine-based system for transforming data from a source form to a target form, a tool is provided for sharing information established in developing a transformation model. The shared information may relate to rules for mapping source collection terms to standardized terms, rules for ordering or **SYNTAX**, rules for classifying terms or other transformation rules.



**US 7865358 CLAIM 1. method converting  
textual data from source form to target  
forms, where target form differs from  
source form's linguistics, syntax**

**Multi-user functionality for converting  
data from a first form to a second form**

**Symbolic artificial intelligence:** collection of all methods in artificial intelligence research that are based on high-level symbolic (human-readable) representations of problems, logic, and knowledge.



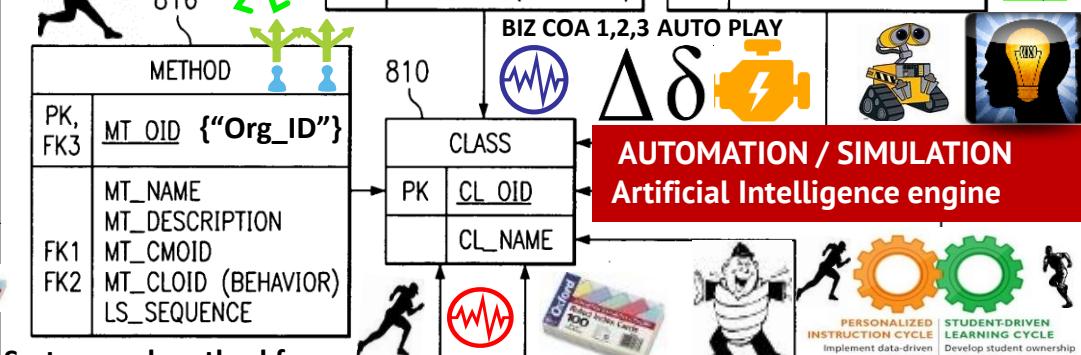


## Alpha-numeric OPSCODE Brevity codes mapped to symbols, Symbol sets = structured data

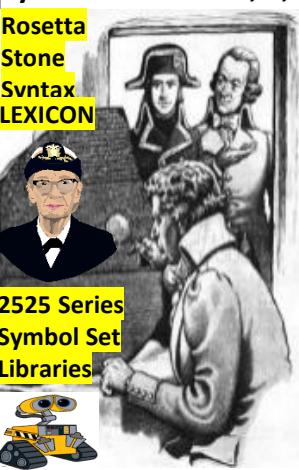
US Patent No: 7,257,455 Fig. 8 Discovery Machine® Inc.  
DISCOVERY MACHINE Inc. AI ARTIFICIAL 820

**Williamsport PA  
Little League  
Baseball Capital  
the World**

The logo features the text "Williamsport PA Little League Baseball Capital of the World" in a serif font. The number "818" is placed below "Baseball Capital of". To the left is a silhouette of a baseball player throwing a ball. A blue circle contains a white ECG-like waveform. To the right is a green globe with a face, holding a red speech bubble that says "NEWS". A blue arrow points from the globe towards a table. The table has a header row with "TASK" and a row for "PK" with columns for "TK\_OID" and {"Org\_ID"}. Below this are rows for "TK\_NAME", "TK\_DESCRIPTION", "TK\_CONDITION", "TK\_CMOID", and "TK\_CLOID (FUNCTION)". A blue icon of a person with arms raised is on the right.



**System and method for collecting, representing knowledge using task-method-knowledge with structure-behavior function in a computer system.. BIZ COA 1, 2, 3**



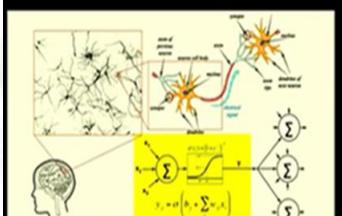
**System and Method for collecting, representing knowledge using task-method-knowledge with structure-behavior function in a computer system.. BIZ COA 1, 2, 3**

**Rosetta Stone**

COMPONENT			CONNECTION	
PK	CP_OID	{"URN"}	PK	CN_OID
FK1	CP_NAME		FK1	CN_TYPE (CLASSES ONLY)
FK1	CP_SUBSTANCE (BOOL)		FK2	CN_FROM
FK2	CP_PRIMTYPE		FK3	CN_TO
FK2	CP_CLASSTYPE		FK4	CN_SUBSTAN
FK2	CP_CLOID		FK5	CN_PARENT
FK2	CP_COLLECTION			CN_NAME

# Neuro-Symbolic AI

## Neural Networks (Deep Learning)



Breaking the world into symbols (rather than

## Symbolic (human-readable) representations

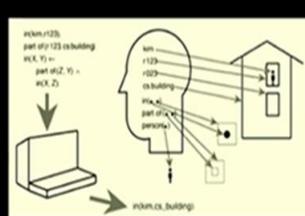
Symbolic AI

## Brevity



## Symbols

symbol



Incorporate common sense reasoning and

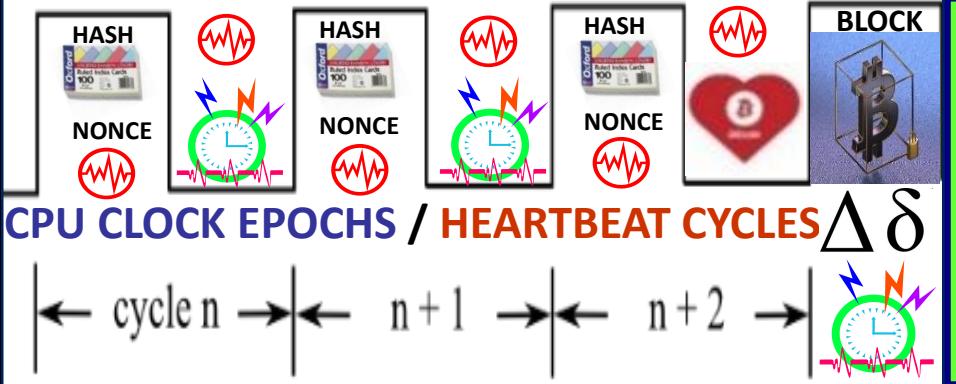




The current standard time common throughout the world is based on a 24-hour clock, with zones that are either 12 hours ahead or behind **Coordinated Universal Time (UTC)**. However, these time zones are decided upon by individual governments, without overall coordination and can even extend fourteen hours ahead UTC.



The proposed **Universal Timezone System** would do away with all these different time zones. Instead, it would be the same time all over the world, all the time.



"Heartbeat Synchronization strives to have nodes in a distributed system generate periodic local "heartbeat" events approximately at the same time. It differs from classical clock sync in that Nodes are not interested in counting cycles and agreeing on the ID of the current clock cycle. There is no requirement regarding the length of a cycle with respect to real time as long as the length is bounded and all nodes agree on it eventually"



# Firefly - Heartbeat Algo



University of Bologna Italy / Hungary

LENGTH OF REAL TIME CYCLE IS ARBITRARY AS LONG AS NODES EVENTUALLY AGREE



## ECO ECONOMIC HEARTBEAT



("108")



K%



TIME-SPACE SYNC

ECONOMIC MACRO CYCLES



K% GDP ECONOMIC PULSE FEDCOIN WORLDCOIN

Luxor Temple Egypt:  
"The shortest path towards knowledge of truth is nature"

Temple of Man



**LUXOR**  
EGYPT

FIREFLY inspired Heartbeat Sync Algo

PRECEDENCE UTZ SYNC SYNC  
PROCESSING PULSE DELTAS



NEURAL NET  
EMULATION

NIST Beacon  
A Public Randomness Service

NON REPUDIATION

BLOCKCHAIN  
PARSING Erlang  
TIME EQUATIONS

{"Org\_ID"}  
{"URN"}

Crypto Currency  
TIME STAMP  
SERVER / SERVICE

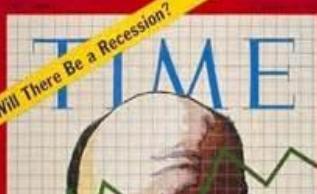


TERRA  
TRC

LEAD  
ECONOMIC  
INDICATORS

currencyindex

{"URN"} {"URN"}  
{"DAO\_ORG\_ID"}



Will There Be a Recession?  
TIME  
Economist Milton Friedman

FRIEDMAN's K% RULE  
ETF

DEMURRAGE  
PARKING  
MICRO  
Payments

LOGISTIC FEES  
INCENTIVES

\$\$

STAT MEAN VALUE INDEX  
SCHELLING POINT TRUTH



Price Indexes in Time and Space  
Methods and Practice

ALGORITHMIC REGULATION  
TOKEN ECONOMICS

COMMODITIES  
GLOBAL PRODUCERS CONSUMERS

DEMURRAGE  
PARKING  
LOGISTIC FEES  
INCENTIVES

\$\$

The current standard time common throughout the world is based on a 24-hour clock, with zones that are either 12 hours ahead or behind Coordinated Universal Time (UTC). However, these time zones are decided upon by individual governments, without overall coordination and can even extend fourteen hours ahead UTC.

UTZ TIME ZONE SYNC

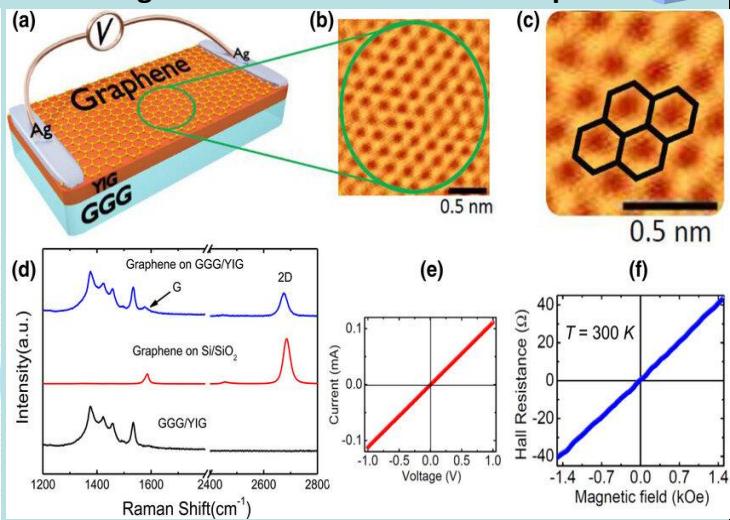
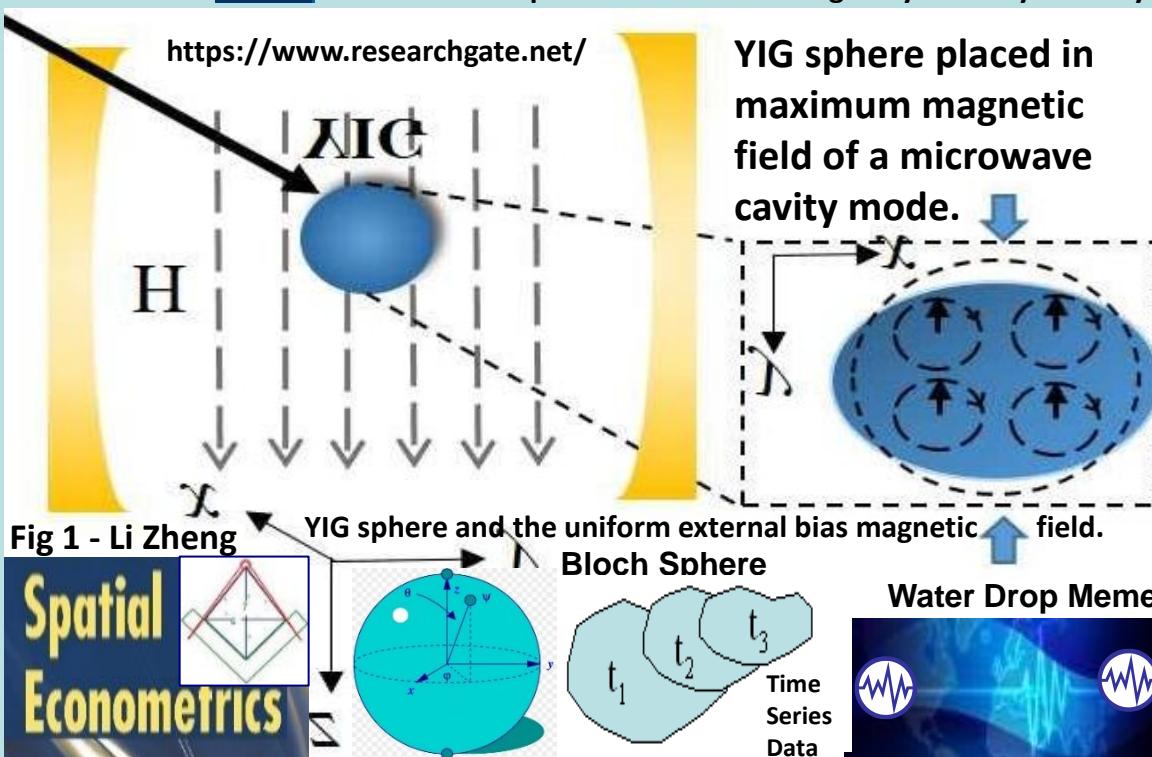




**"When space-time spins, it creates mass. It produces energy in space that radiates. This radiation is what we call mass". Nassim Haramein**

Nassim Haramein's work is geometrically based, at the fundamental level spacetime = honeycomb of overlapping spheres of energy each having a singularity at its center.

Yttrium iron garnet spheres serve as magnetically tunable filters and resonators for microwave frequencies. YIG filters are used for their high Q factors, typically between 100 and 200. Sphere made from a single crystal of synthetic yttrium iron garnet acts as a resonator. Wikipedia



YIG/graphene structures and the electrodes used to measure the dc voltage due to the IREE charge current in the graphene layer resulting from the spin currents generated by microwave FMR spin pumping.

IEEE 802.1AG HOP BY HOP DETECTION  
IEEE 802.11 HbH HOP BY HOP CONTROL

The creation of spinlogic devices, which allow the control and transport of the spin current over long distances, is one of the major research challenges in spintronics. In this regard, graphene-a single atomic layer of carbon atoms in a honeycomb lattice [see Fig. 1(c)]-has attracted great attention as a promising material for spin-based devices due to its exceptional electronic transport properties, excellent charge carrier mobility, quantum transport, long spin diffusion lengths, and spin relaxation times [42]



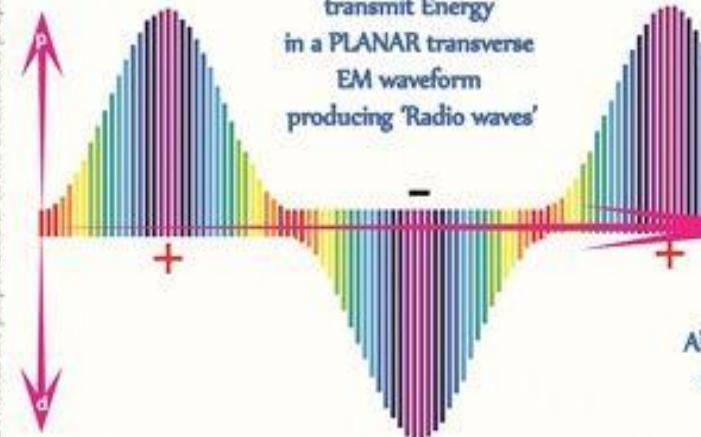
CLOSER = < Infrastructure  
= CHEAPER SLA

# ElectroMagnetic waveforms



ENERGY / DATA  
Over  
Transmission  
Lines / Airwaves

Hertzian waves  
transmit Energy  
in a PLANAR transverse  
EM waveform  
producing 'Radio waves'



All Photons and EM waves  
can have various directions  
of polarisation with respect to  
their direction of propagation



Teslian waves  
transmit Energy  
in a LONGITUDINAL waveform  
producing  
'Action at a Distance'

In 1887, Heinrich Hertz demonstrated the reality of  
Maxwell's electromagnetic waves by experimentally  
generating radio waves in his laboratory.

Although they utilise the same EM energies,  
different EM waveforms can be produced  
where the Electric fields are in 90°  
opposition to each other thus  
leading to conflicting theories  
of EM wave propagation

The E fields are co-linear with the direction of propagation

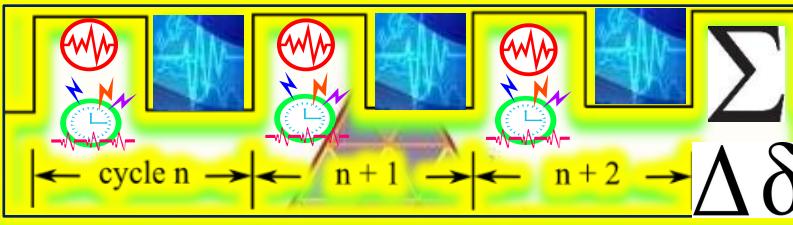
Through longitudinal waves, Tesla transferred energy to receiving devices.  
He sent electrostatic forces through the air, transferred electrical energies  
and noted the lethal forces produced by these waves.

Heinrich Hertz

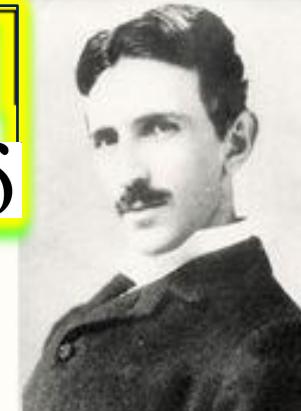


(22 February 1857 - January 1 1894)

INTERNET = 1. TIME EPOCH CYCLES 2. Syntax (not) Processed in cycle



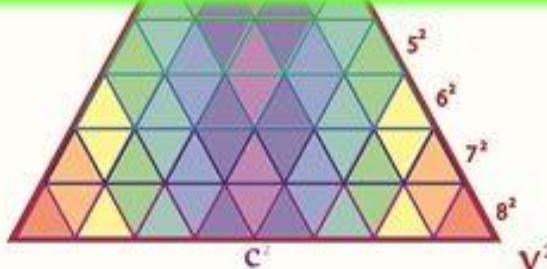
Nikola Tesla



(10 July 1856 - 7 January 1943)

Cycles per Second

Soon after Hertz's claim of discovering Maxwell's transverse EM waves Tesla visited him and personally demonstrated the experimental error to him.  
Hertz agreed with Tesla and had planned to withdraw his claim, but varying agendas intervened and set the stage for a major rift in the 'accepted' theories  
that soon became transformed into the fundamental "laws" of the electric sciences that have held sway in industry and the halls of academia to the present day



Volts per Second

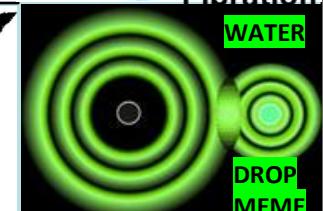
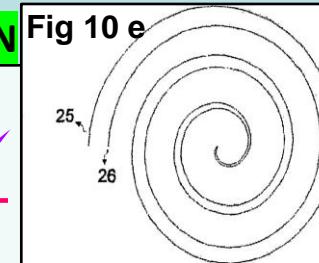
V



# PROPELLION SYSTEM USING THE ANTIGRAVITY FORCE OF THE VACUUM

## ENERGY PRODUCTION

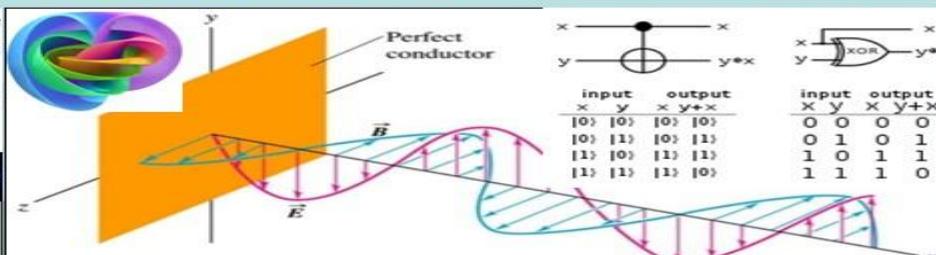
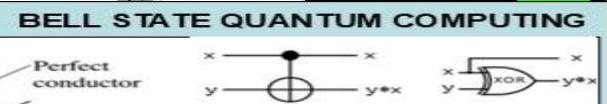
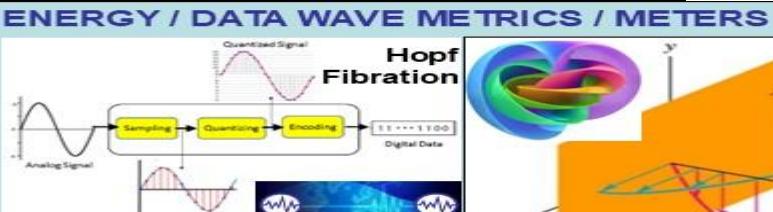
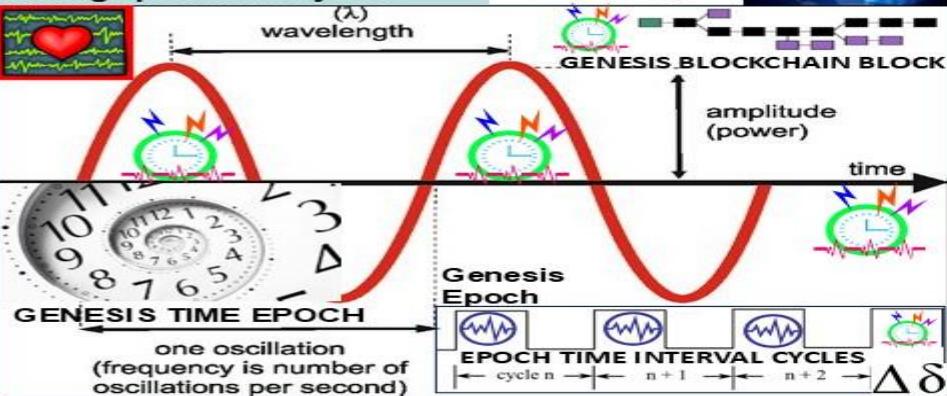
**ABSTRACT:** A propulsion system for aerial, terrestrial, underwater or space propulsion, through manipulation (or engineering) of the vacuum with proper electromagnetic interactions. Vacuum manipulation.. new form of propulsion, and has applications in ENERGY production and on CHANGE of TIME decay of radioactive elements. Opposing magnetic or electric fields create a mass repelling force, while attracting magnetic or electric fields create a mass attracting force. This vacuum manipulation process.. used to propel a mass that contains field sources that perturb the vacuum. .. the creation of a repulsion point in space through the interference of two or more longitudinal ELECTRO dynamic (micro) waves



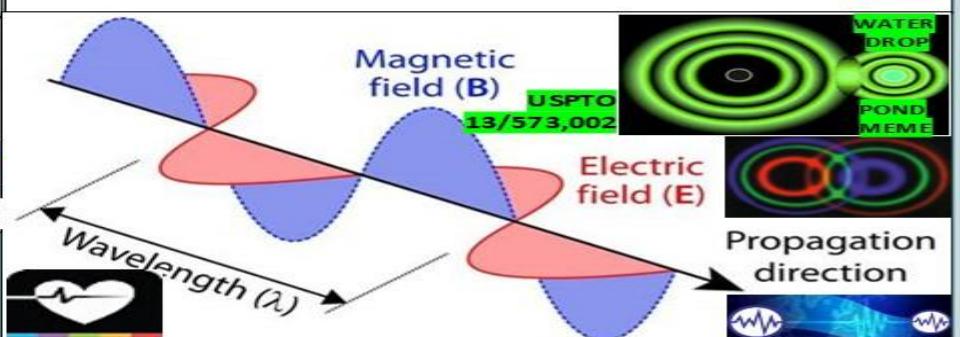
WATER DROP MEME

**THESIS:** All things net, net of programmable \$\$\$ are formed using:

- 1) Time epochs created by quartz crystal silicon chips
- 2) Syntax used / not used as programming instructions during epoch time cycles



A standing electromagnetic wave does not propagate along the x-axis; instead, at every point on the x-axis the E and B fields simply oscillate.

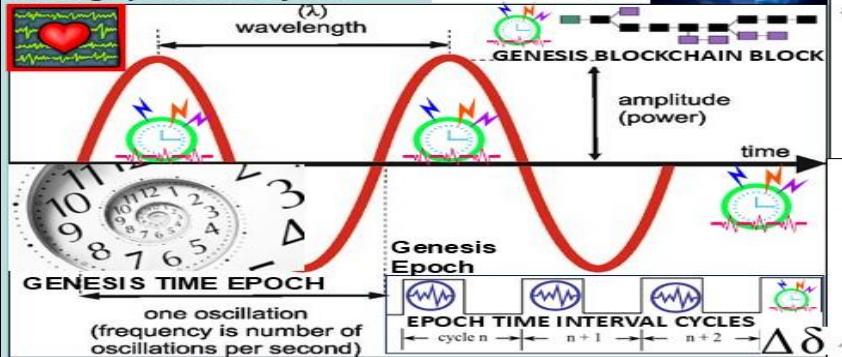


"Nature may reach the same result in many ways. Like a wave in the physical world, in the infinite ocean of the medium which pervades all.. Nikola Tesla

Link: [https://phys.org/news/2018-06-quantum\\_1.html](https://phys.org/news/2018-06-quantum_1.html)

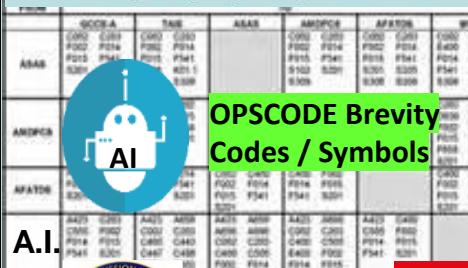
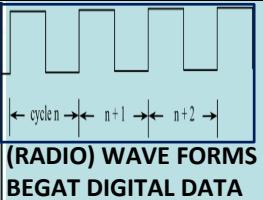
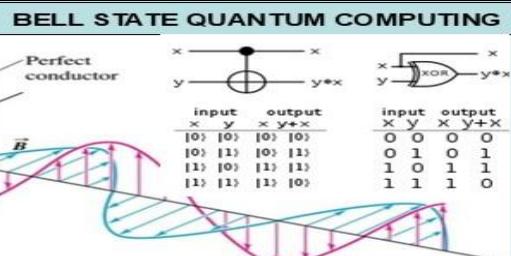
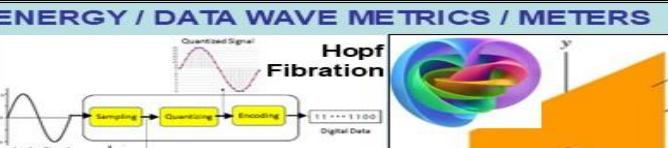
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Quantum Computing Vibrations encode, process data like quantum computers. A simple mechanical system built from aluminum rods uses vibrations to encode information, mimicking quantum computing in a non-quantum system. "Light is made from photons, the quantum of light. mechanical vibrations or sound waves can be described in a quantum-mechanical manner i.e., composed of phonons: the smallest possible units of mechanical vibration"

Link: [https://phys.org/news/2018-06-quantum\\_1.html](https://phys.org/news/2018-06-quantum_1.html)

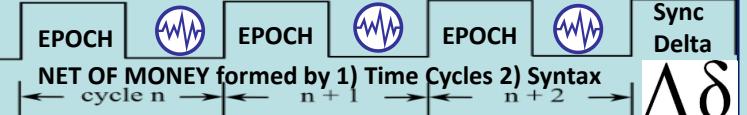


**USPTO 13/573,002**  
573 U.S. 134 SCt 2347  
“Alice in Wonderland Ruling”

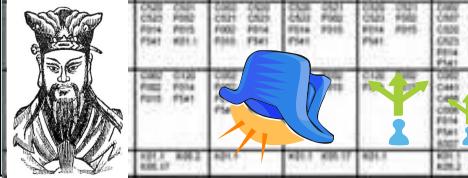
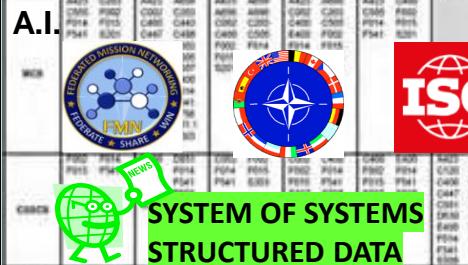
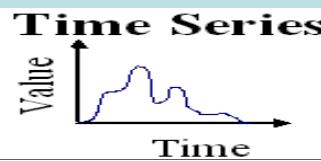
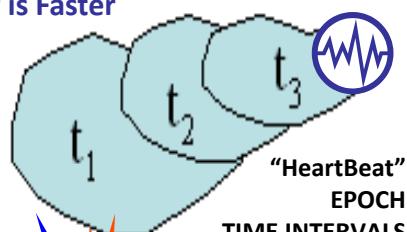


</Org\_ID> TIME CHAIN

{"URN, URN, URN"}



WATER DROP PHYSICAL NATURAL MEME USPTOb13/573,002





Fisher information flux flows are generated and stored in wave packets as they propagate. This temporal aspect is crucial for understanding how information builds up in a system over time

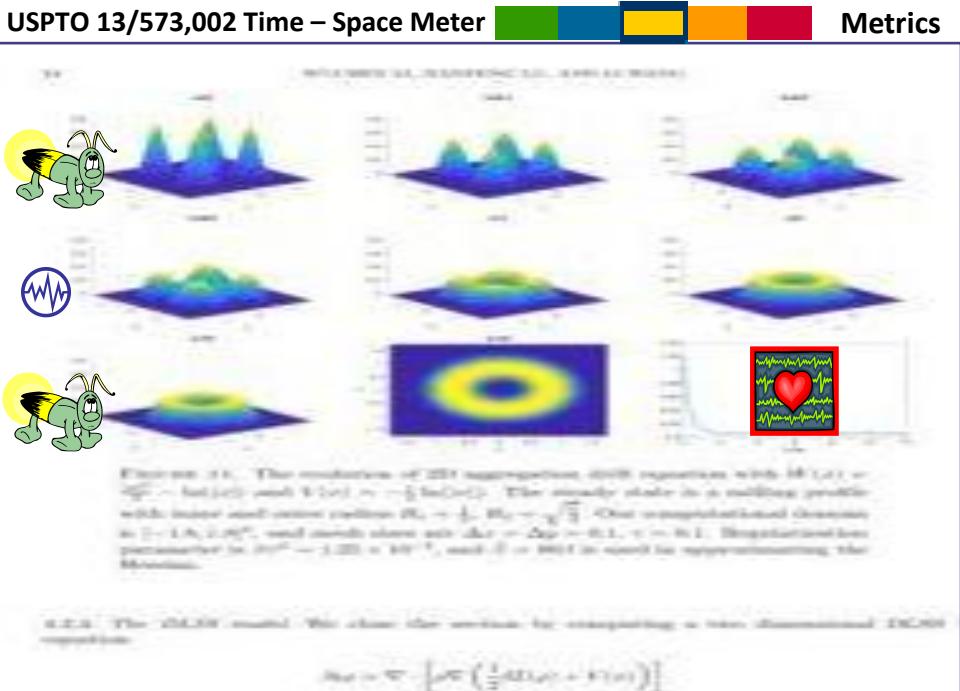


## The Variance of...

the partial  
derivative  
w.r.t.  $\vartheta$  of...

the log-likelihood  
function of  $\theta$   
given observed  
value of  $X$

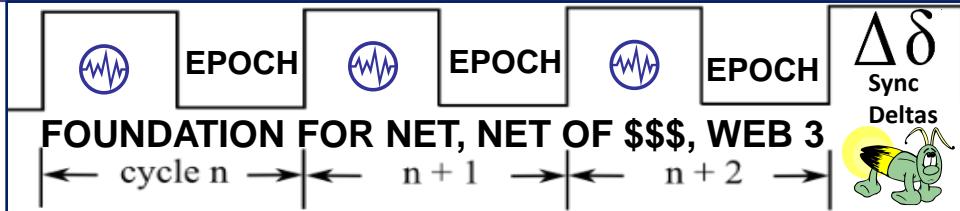
$$\Delta\delta = \mathcal{I}(\boldsymbol{\theta}) = Var\left(\frac{\partial}{\partial\boldsymbol{\theta}}\ell(\boldsymbol{\theta} | \mathbf{X})\right)$$



# Continuity equation for flow of Fisher information in wave scattering: Nature / ISF International Space Federation



An electromagnetic wave scattered at an object carries locally defined and conserved information about all of the object's constitutive parameters. Specifically, we introduce the density and flux of Fisher information for general types of wave fields and identify the corresponding sources and sinks of information through a fundamental continuity equation. Our theoretical predictions involve a movable object embedded in a disordered environment by measuring the corresponding **Fisher information flux** at microwave frequencies. Our results improve the understanding of the generation, propagation of information supports tracking and designing the flow of information in complex system of systems environments.



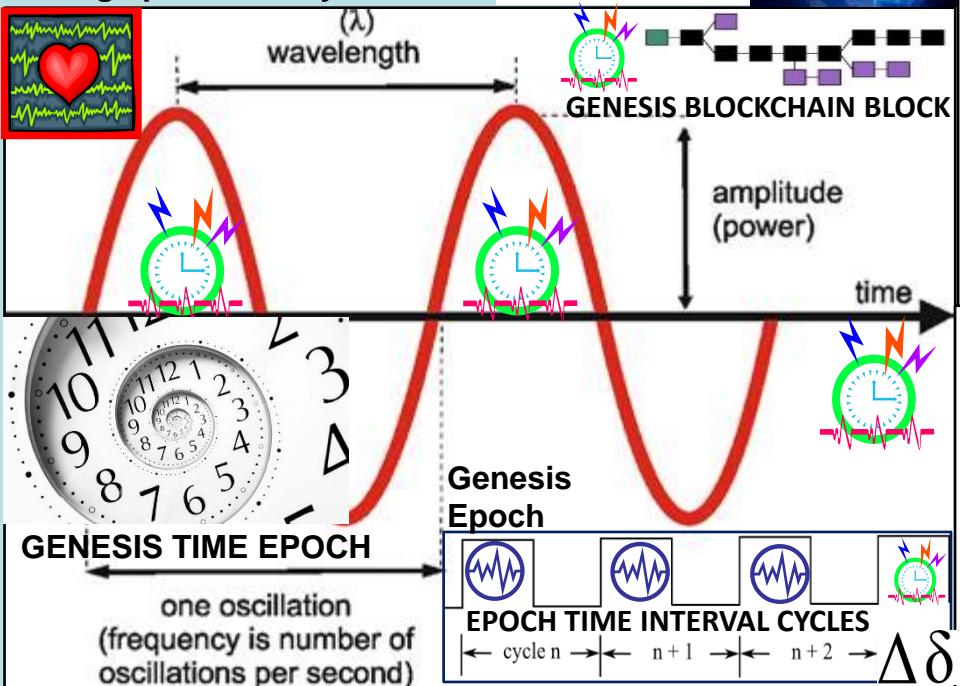
THESES: All things net, net of programmable \$\$\$ are formed using:

## ENERGY / DATA WAVE METRICS / METERS

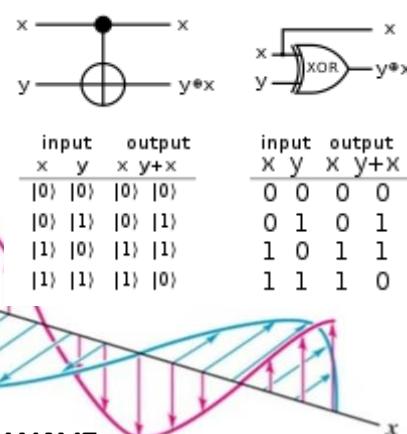
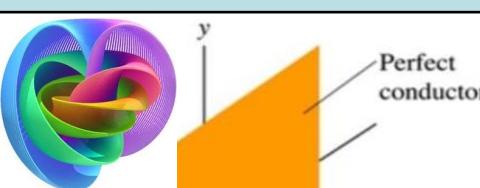
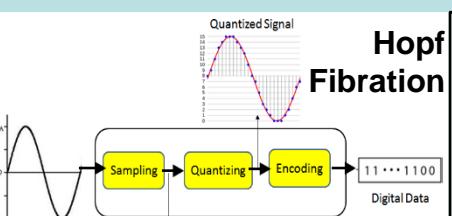
## BELL STATE QUANTUM COMPUTING

1) Time epochs created by quartz crystal silicon chips

2) Syntax used / not used as programming instructions during epoch time cycles

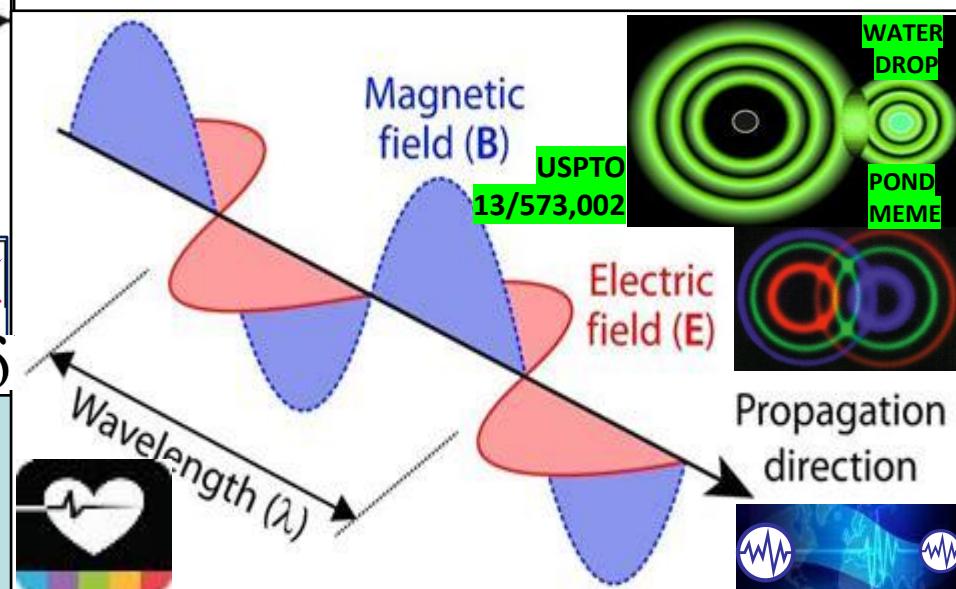


Quantum Computing Vibrations encode, process data like quantum computers. A simple mechanical system built from aluminum rods uses vibrations to encode information, mimicking quantum computing in a non-quantum system. "Light is made from photons, the quantum of light." mechanical vibrations or sound waves can be described in a quantum-mechanical manner i.e., composed of phonons: the smallest possible units of mechanical vibration" Link: [https://phys.org/news/2018-06-quantum\\_1.html](https://phys.org/news/2018-06-quantum_1.html)



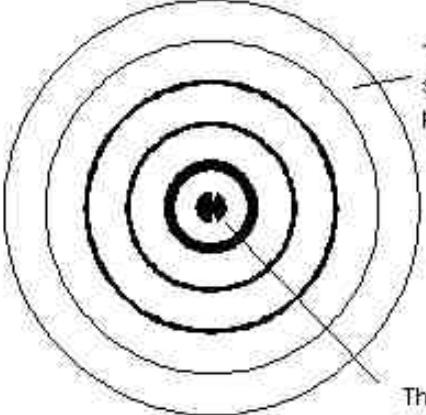
### STANDING ELECTRO- MAGNETIC WAVE

A **standing** electromagnetic wave does not propagate along the  $x$ -axis; instead, at every point on the  $x$ -axis the  $E$  and  $B$  fields simply oscillate.



"Nature may reach the same result in many ways. Like a wave in the physical world, in the infinite ocean of the medium which pervades all.. Nikola Tesla

Water drop in pond meme <https://www.spaceandmotion.com/>



The IN and OUT waves form standing waves about the central point

### On Truth & Reality The Wave Structure of Matter (WSM) in Space

The pointlike Particle effect at the Wave Center

Paul Revere Linear, sequential meme

And as I shall explain in Einstein's relativity, when we apply this one law, where the wave velocity changes the wavelength also has a corresponding change such that we can never observe this change. This relates to the Lorentz transformations, the negative solution of the Michelson Morley experiment, and why we always measure a constant velocity of light even when it changes, thus why we cannot measure our motion through absolute space.

With respect to time, physics was always telling us that time is caused by frequency (and fundamentally by motion as the wave motion of space), since time equals the inverse of frequency  $t=1/f$ .

From our wave equation we see that while the velocity and wavelength change, the frequency remains constant, giving rise to an absolute time in the universe. This was one central problem of Einstein's relativity, he changed time and maintained a constant velocity of light, when the opposite is true. (Yes, this one property of waves from this simple wave equation has caused us so much confusion!).

"What we observe as material bodies and forces are nothing But Shapes and variations in the structure of space" Schrodinger

**Physical Reality:** 1. One Substance. Space exists with properties of an elastic solid wave medium, propagating longitudinal waves in all directions, thus forming standing waves in all directions. When these standing waves are in-phase (coherent) around a central point then a spherical standing wave naturally forms - space vibrates in and out around the central point, which we call the particle. There are two opposite phase spherical standing waves, which create the electron and positron (matter and antimatter),

2. One Law. The velocity of the waves is proportional to the wave amplitude (bigger waves travel faster). Where these waves are coherent, forming spherical standing wave 'particles', the wave amplitude is higher, and the waves travel faster. This, as i shall explain, is the foundation of all matter interactions, the source of causal connection and absolute truth.

Why matter and energy are equivalent, since a wave is a flow of energy between two states of the wave medium Space - kinetic energy (vibratory motion of space) and potential energy (elastic deformation of a nearly rigid space). Why matter and antimatter annihilate, due to destructive wave interference. How matter and antimatter can be created from apparently 'empty' space. How science can exist, since the spherical in and out waves provide continuous two way communication between matter in space (empirical knowledge), and the waves behave in a necessary manner due to this one law (logical knowledge).

Wave velocity is the velocity of light,  $\sim 3 * 10^8$  m/s, the wavelength is the Compton wavelength  $\sim 10^{-12}$  m, and the frequency  $\sim 10^{20}$  Hz. So in a pin head there are roughly a billion billion billion standing waves, each vibrating a billion trillion times a second. i.e. These standing waves are very small, and vibrate very fast, thus explaining how such complex standing wave structures (like us) can evolve in space. The fundamental equation of the universe is the simple wave equation; Velocity (C) = Frequency (f) \* Wavelength (y)

Combined with the equation of the sphere (which is also Pythagoras' Theorem and the metric equation of Special Relativity), and explains the geometric foundations of reality, why space is three dimensional.  $x^2 + y^2 + z^2 = r^2$

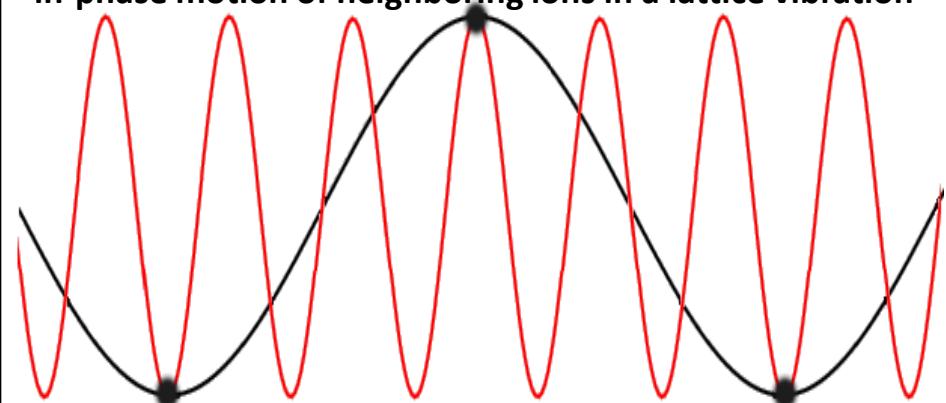


"Simplicity is the ultimate sophistication".  
(Leonardo da Vinci)

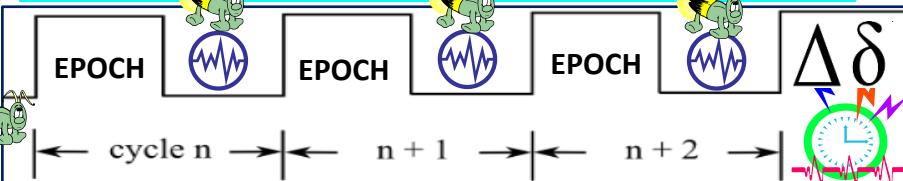
# ACOUSTIC PHONON

USPTO 13/573,002

in-phase motion of neighboring ions in a lattice vibration

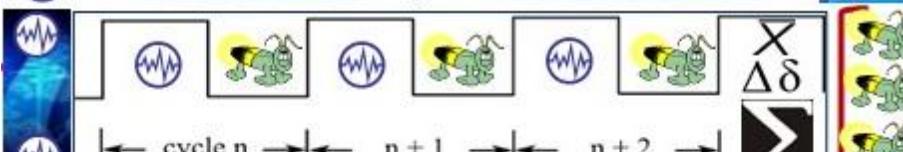
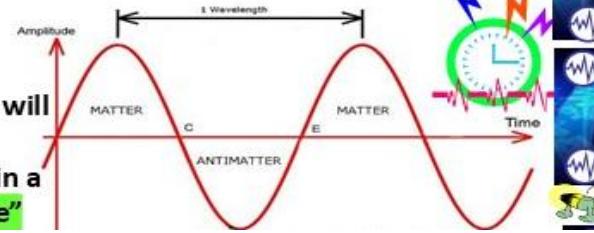


Phonons: A phonon is a quantum of the lattice vibration, the collective motion of atoms constituting a crystal. There are two types of phonons: optical and acoustic. The optical phonon has high-frequency oscillation in the THz range and the unit cell center of mass does not move. It undergoes a dipole interaction with light. The acoustic phonon propagates at sound velocity, which is the first derivative of the phonon dispersion curve at the  $\Gamma$ -point (wave vector  $k \approx 0$ ) in the first Brillouin zone. A simple example is a one-dimensional diatomic chain, in which the unit cell contains two atoms. In a crystal of  $N$  unit cells, there are  $2N$  atoms and  $2N$  degrees of freedom of motion. The displacement of an atom from its equilibrium position is expressed using plane waves with reduced wave vectors, defined within the first Brillouin zone. The oscillations are approximated by  $2N$  harmonic oscillators of different wave vectors. The vibrational frequency is related to the wave vector through the phonon dispersion relation. Phonons are created and annihilated in the harmonic oscillators. SOURCE: SCIENCE DIRECT: <https://sciedirect.com/topics/engineering/acoustic-phonon>



"nodes eventually agree" stochastic harmonization temporal sync

"Similarly, the electromagnetic force will also be found to vary continuously and retain a TIME-AVERAGED value"



FIREFLY - INSPIRED HEARTBEAT SYNCHRONIZATION ALGORITHM



THESIS: All things net, net of programmable \$\$\$ are formed using: 1. Time epochs created by quartz crystal silicon chips 2) Syntax used / not used as programming instructions during epoch - temporal time cycles

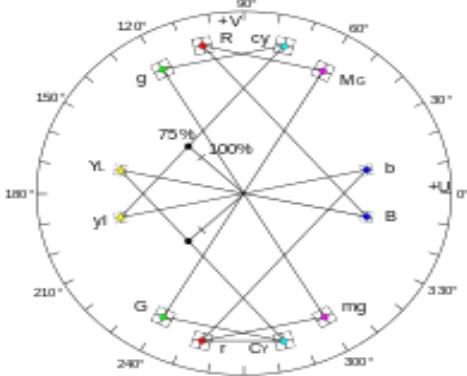
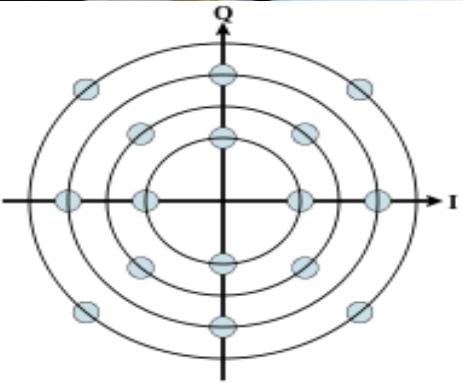


SOUND WAVES enable Different types of quantum tech to "talk"





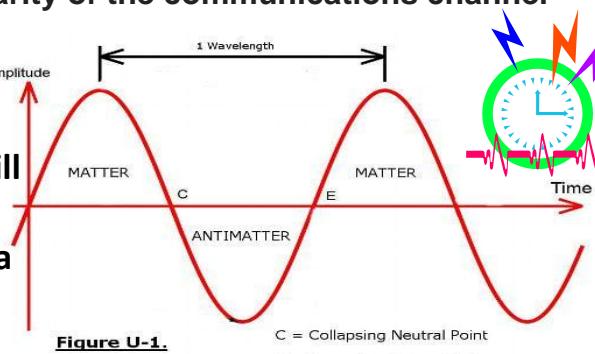
[www.RLighthouse.com](http://www.RLighthouse.com)



### Quadrature amplitude modulation

QAM by setting a suitable constellation size, limited only by the noise level and linearity of the communications channel

“Similarly, the electromagnetic force will also be found to vary continuously and retain a TIME-AVERAGED value”

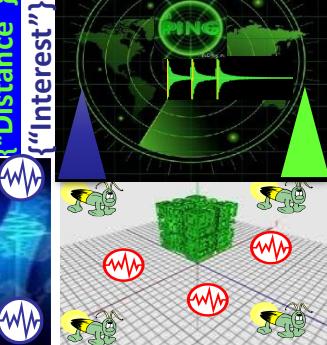


Sine wave of our blinking universe. The 4 fundamental forces will all be found to vary continuously when sampled at 2x the blinking frequency, per Nyquist-Shannon theory



USPTO 13/573,002  
[sawconcepts.com/index](http://sawconcepts.com/index)

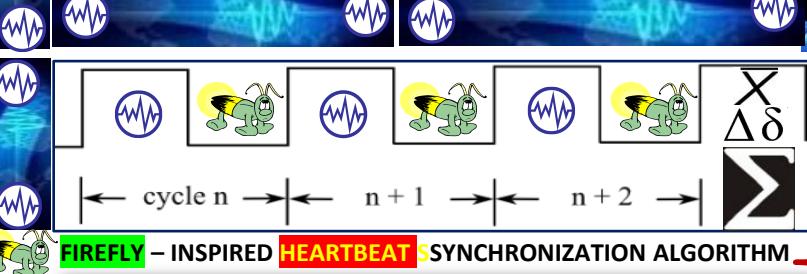
NDN {“Distance”} {“Interest”}  
IDMaps SonarHops



Heart Beacon Cycle Time – Space Meter  
Geo-Spatial Temporal Intensity Metrics

vector

IDMaps assists Network Time Protocol (NTP) servers establish long term peering relationships



“LENGTH OF REAL TIME CYCLE IS ARBITRARY AS LONG AS NODES EVENTUALLY AGREE”



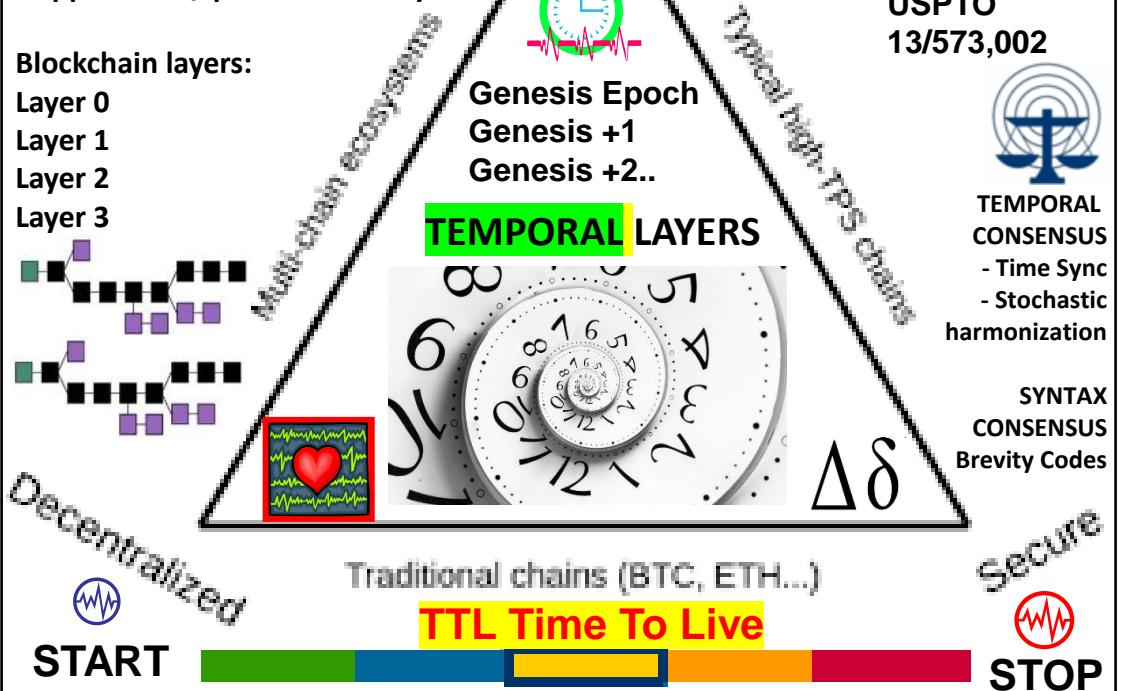
# Blockchain Quad-lemma

"five layers of blockchain tech:

- Infrastructure hardware layer
- Data layer
- Network layer
- Consensus layer
- Application / presentation layers

Blockchain layers:

- Layer 0
- Layer 1
- Layer 2
- Layer 3



Blockchain = series of hashed blocks carrying transactional records. The first block of the blockchain is the **Genesis block**. After that, every new block added to the blockchain is linked to the Genesis block through a (temporal) iterative process.

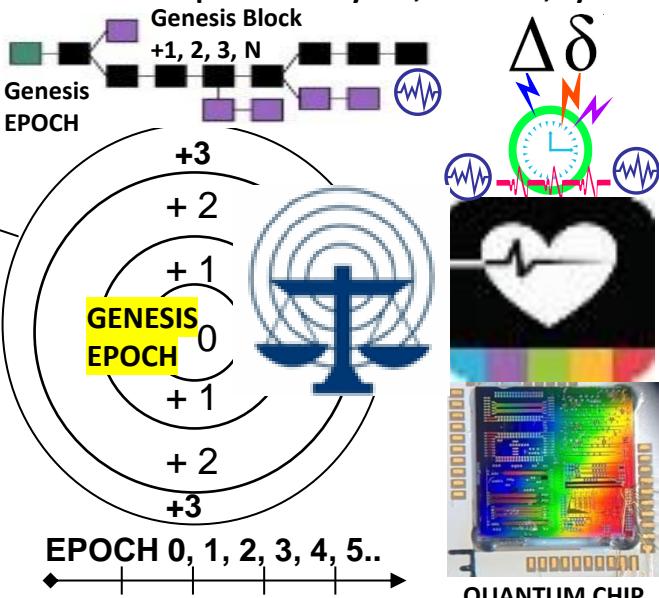
Database Flat File

**"BLOCKCHAIN" = LEDGER / Database**

Database flat file sama dengan file data pada spreadsheet (misal MS Excel™), berupa satu file berisi baris-baris dengan jumlah kolom tetap yang disimpan berurutan dalam file.

NIP	Nama	Nama Depan	Telp
123-45-6789	Santoso	Heru	021-316-1234
987-65-4321	Purnama	Widya	022-543-9876
987-65-4321	Jackson	Michael	021-234-5678
567-89-0123	Iskandar	Dodi	021-987-6431

**NET, Net of programmable \$\$\$ Programming Reality Ground Truth**  
No Layers L0, L1, L2... only GENESIS EPOCH, Follow on Epoch time cycles, intervals, cycles



**THESIS:** All things internet, net of programmable money are formed using:

1. Time epochs created by oscillating quartz crystal silicon chips
2. Syntax used / not used as programming instructions during epoch time cycles

All things internet, internet of money, blockchains are formed by unicast, multicast, anycast protocols. Programmable money's improvements are in cryptography. The internet consists of unicast, multicast broadcast, anycast and workflow filters, publish – subscribe paradigms..

All things internet of money are formed w CPU time cycles used to process instructions / code sym

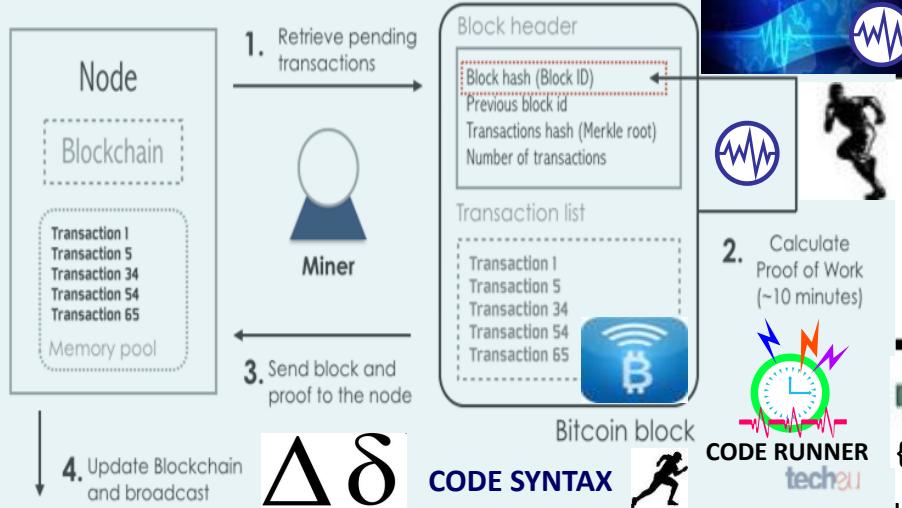


Bitcoin is a language”

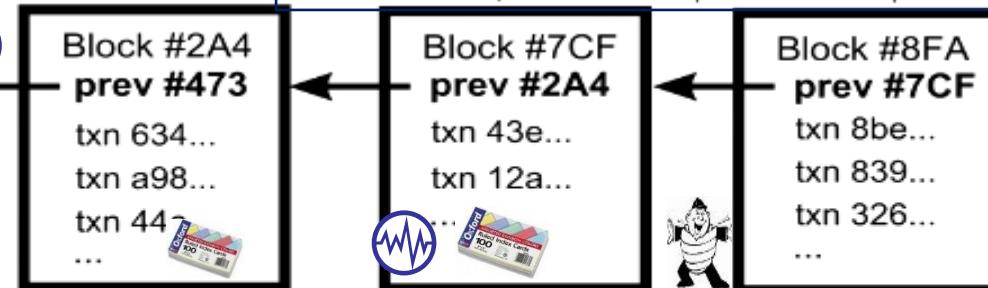
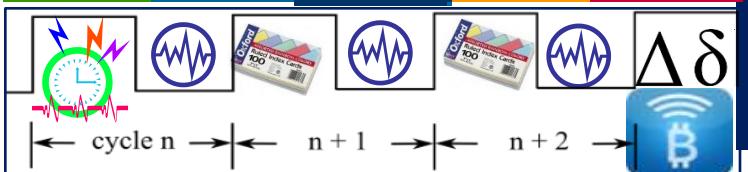
**WIRED**

**BITCOIN MAKES USPTO 13/573,002  
MONEY HEART BEACON CYCLE  
PROGRAMMABLE. TIME – SPACE METER  
MONEY IS STRUCTURED DATA  
SIMPLY DATA” EXCHANGE**

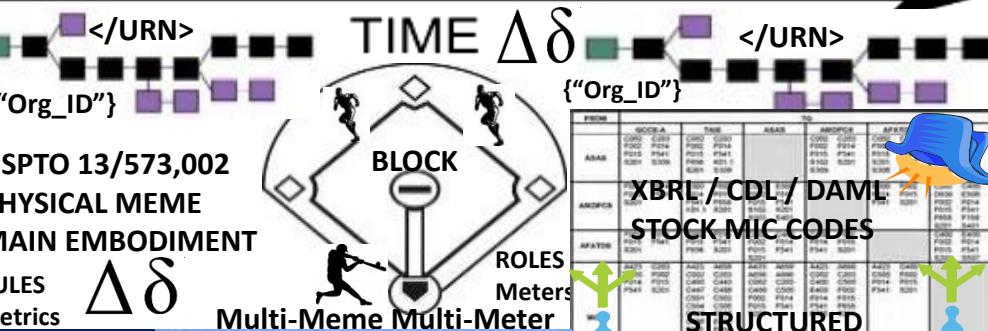
Alice Corp. v. CLS Bank International, 573 U.S. 134 SCt 2347 (2014) is a 2014 decision of the United States Supreme Court about patentable subject matter (patent eligibility).<sup>[2]</sup> The issue in the case was whether certain claims about a computer-implemented, electronic escrow service for facilitating financial transactions covered abstract ideas ineligible for patent protection. The patents were held to be invalid because the claims were drawn to an abstract idea, and implementing those claims on a computer was not enough to transform that idea into patentable subject matter.



**"BITCOIN IS A LANGUAGE / BITCOIN'S VALUE IS TIME ITSELF"**



# **BLOCKCHAIN = TIME / SYNTAX**



# THE BITCOIN BLOCKCHAIN FOR DUMMIES



What is needed is an electronic payment system based on cryptographic proof instead of trust, allowing any two willing parties to transact directly with each other without the need for a trusted third party e.g., a bank.

Satoshi Nakamoto Bitcoin Paper



Satoshi Nakamoto



Craig WRIGHT  
a.k.a.  
Satoshi Nakamoto



"Bitcoin is a LANGUAGE"



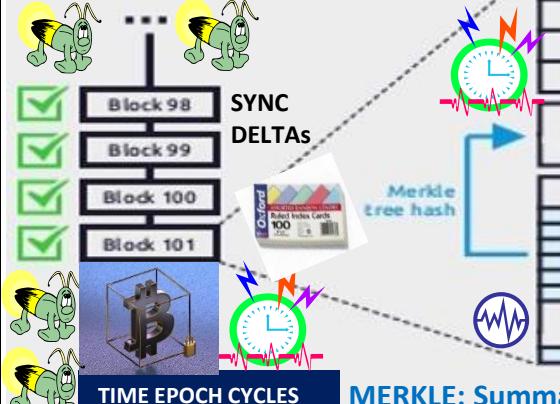
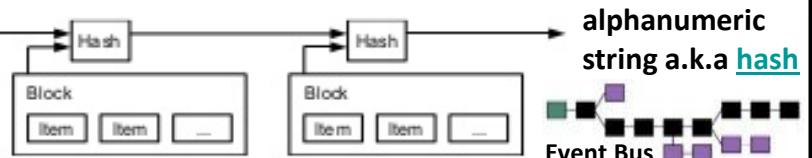
Wright Brother's 1<sup>st</sup> Flight  
Cape Hatteras Outer Banks

## "THE SOLUTION WE PROPOSE BEGINS WITH A TIME STAMP SERVER"

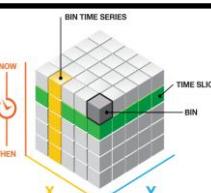
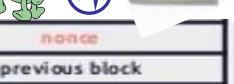
### 3. Timestamp Server

The solution we propose begins with a timestamp server. A timestamp server works by taking a hash of a block of items to be timestamped and widely publishing the hash, such as in a newspaper or Usenet post [2-5]. The timestamp proves that the data must have existed at the time, obviously, in order to get into the hash. Each timestamp includes the previous timestamp in its hash, forming a chain, with each additional timestamp reinforcing the ones before it.

**Bitcoin Protocol  
for Dummies**  
Part 4 Timestamp  
Server



JapanNet Crypto Time  
Authentication Service  
(Timestamp Service)



CLOCK FACE 360°  
90 / 90 / 90 / 90  
300 330 360 30 60°  
270 240 210 180 150 90  
MACRO CYCLES

RULES / ROLES  
INSTRUCTIONS  
WORKFLOW  
UMPIRE  
COACH

3rd Base  
STATISTICIAN  
Metrics, Meters  
Stat Mean Value Index

3 X 5  
HASH TABLES  
STATE META  
DATA SHARDS

State Meta  
Data Snapshots

Survey Point

MICRO CYCLES

Settlements / Exchanges  
= Taxable Events  
Akin to Property

IRS #1421

Fix {"108"}  
Flash Message Event Bus

Time Stamp Server

# What happens if we think about Bitcoin through the lens of *land*?

HEART BEACON CYCLE  
USPTO 13/573,002  
SURVEY METHODS

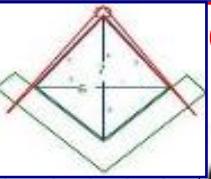
## SC ALICE CORP VS CLS BANK: “claims may not direct towards abstract ideas”

UTXO: unspent transaction output’. bitcoins that have been sent somewhere but not yet themselves been spent. The set of all unspent transaction outputs (UTXOs) can be thought of as the latest STATE of every bitcoin that has ever been mined.



Memo #1421: Purchased Bitcoins are treated akin to property

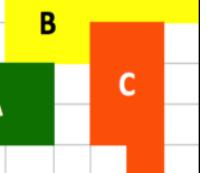
Plots A, B, C represent 3 unspent transaction outputs controlling N Bitcoins



## Mined Bitcoins



BLOCKS / COINS PENDING ISSUE



$\Delta\delta$

## Unmined Bitcoins



Un-mined coins -- think of them as parcels of land on “Bitcoin Island” not yet released:

IDMaps-SONARHOPS distance estimation query-reply service

- End-state Bitcoin quantity will be fixed like land

“Bitcoin as protocol of ownership, not transfer”

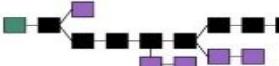
Coin never travel, but simply switch owners”

Step 1: prove coin ownership <Org\_ID> Coin Issuer

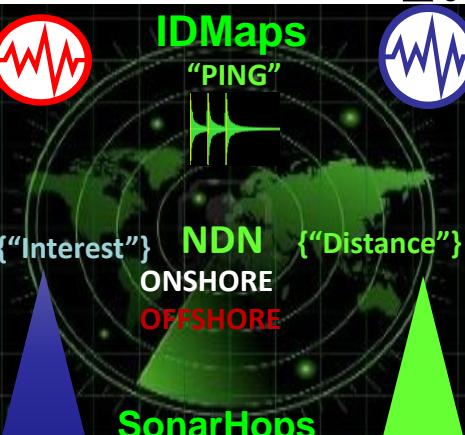
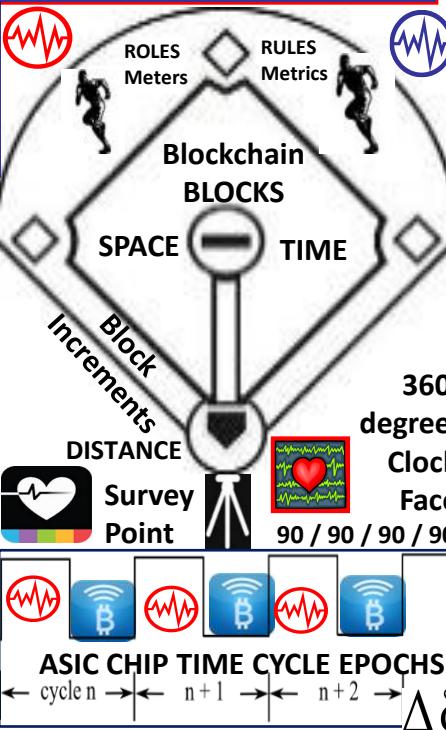
Step 2: coins sent where, when Lat-Long, time stamp

Step 3: specify ownership <Org\_ID> issuing agent

Step 4: Issuing Org of Record adjudicates w buyer



$\Delta\delta$



## TRIANGULATION



## DISTANCE ESTIMATION

## EUCLIDIAN GEOMETRY



IDMaps assists Network Time Protocol (NTP) servers establish long term peering relationships



IDMaps / SonarHops collects distance data & builds virtual Internet distance maps & estimates distance between IP address pairs

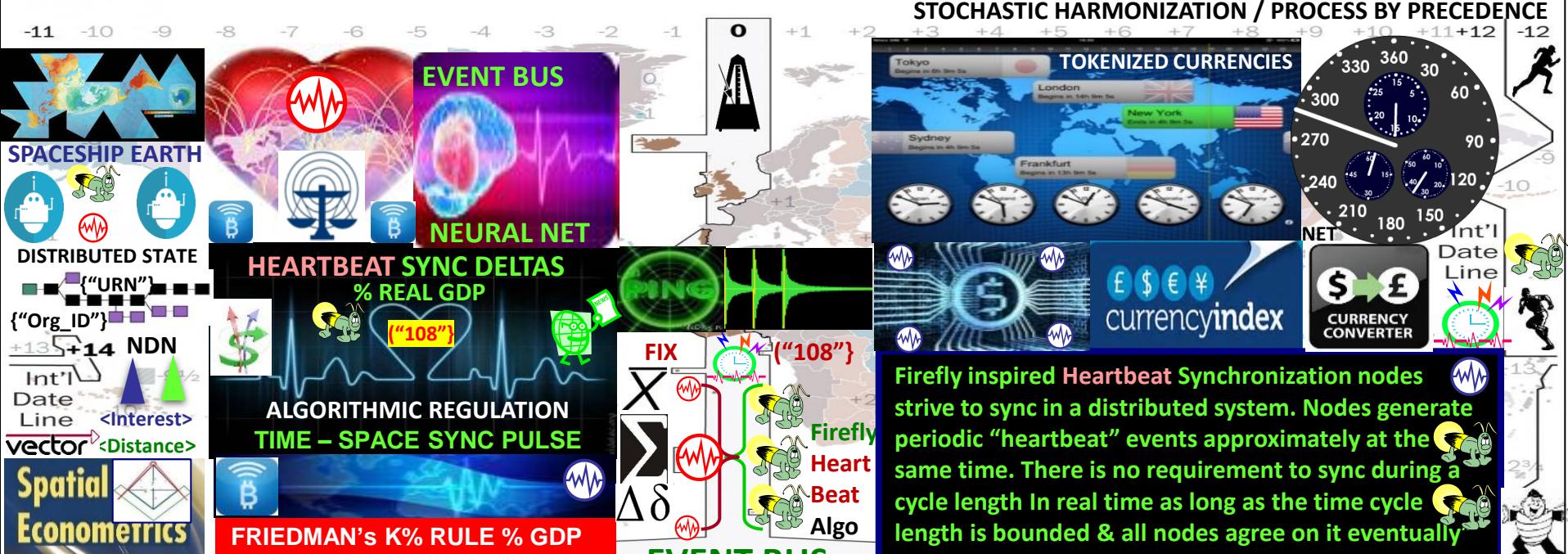


IDMaps Distance Metrics:  
latency (round-trip delay)  
available bandwidth estimation

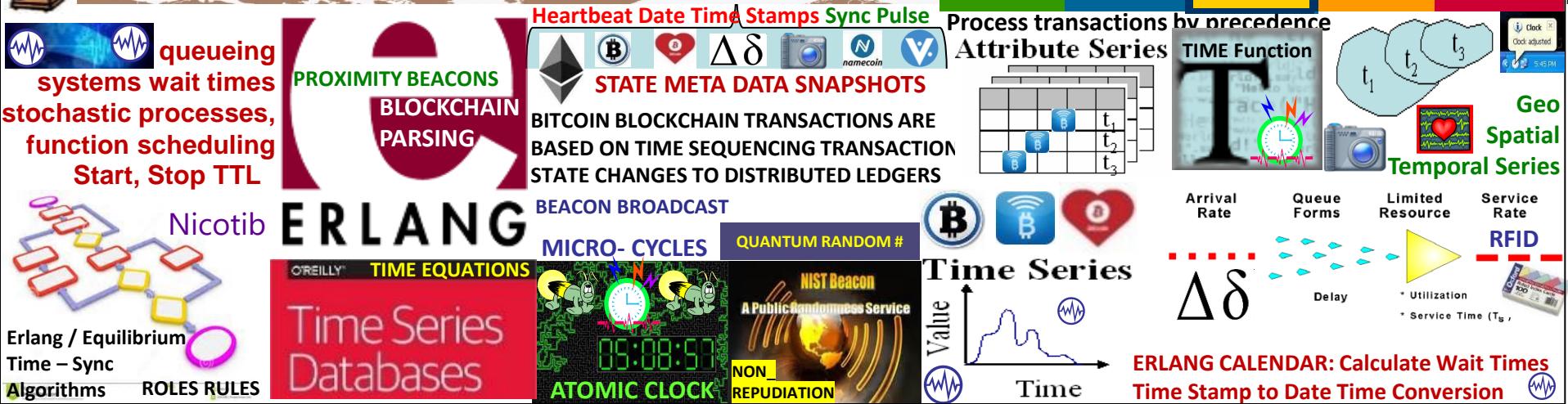




The current standard time common throughout the world is based on a 24-hour clock, with zones that are either 12 hours ahead or behind **Coordinated Universal Time (UTC)**. However, these time zones are decided upon by individual governments, without overall coordination and can even extend fourteen hours ahead UTC.



The proposed **Universal Timezone System** would do away with all these different time zones. Instead, it would be the same time all over the world, all the time.



Structured Data Exchange



SYNTAX LEXICON  
ROSETTA STONE

Coder's Guide lexicon.

STRUCTURED  
<CONTENT>  
EXCHANGE  
TEMPLATES

MIL STD 2525ABC

ASSET TOKENS

"SYMBOLS RULE THE WORLD"

11.8 - Kinematic  
11.8.1 - Pos  
11.8.1.1 -  
11.8.1 -

STRATML XAML

XBRL  
THE BUSINESS REPORTING STANDARD  
BINARY XML  
Decision

UBL  
1.1 - Observers  
1.2.3 - Predicted  
1.2.4 - Smoothed Data  
3 - Position  
1.3.1 - Bearing Angle  
1.3.2 - Location; 2D Hor  
1.3.3 - Vertical  
4 - Velocity

DDL DATA  
DEFINITION  
LANGUAGE  
1 - Horizontal  
2 - Vertical  
TOSCA  
Confidence  
Bearing Angle  
Bearing Angle Rate  
Covariance Matrix

Signal operating instructions (SOI): technical control coordination of signaling, telemetry Current situational awareness, data dictionary, network identification, channels, network directory, brevity code-words, signals. Units maintain 2 SOI copies: PEACE TIME version "Go-To-War" version = BIZ COA (s) <Org\_ID1><Org\_ID2><Org\_ID3>



NATO MESSAGE TEMPLATES USE DATA SETS FOR STRUCTURED DATA EXCHANGE // POSITION FIELD IN MESSAGE PROCESSED BY TABLE, FIELD # IN A CONSISTENT, PREDICTABLE ORDER = AI FRIENDLY M2M AI

GOAL: vide a common lexicon / syntax / term library used among FEDERATIONS identified by Federated ID  
GOAL: Provide a common, consistent, reliable schedule to share signaling and telemetry within federations.

MTL Machine Trust Language



vector

{"TRANSACTION ID"}

MESSAGE TEXT FORMAT :

SEG RPT OCC CLASSNAME SETID SEQ FIELD OCCURRENCE SET FORMAT NAME

O 11NUPRES EXER 1 /M /O // (NU) EXERCISE IDENTIFICATION

C 11NUPRES OPER 2 /M /O /O /O // (NU) OPERATION CODEWORD

M MIOPV1 1 MSGID 3 /M /M /O /O /O // (NU) MESSAGE IDENTIFIER



M MIP OUT ORDPLAN 4 /M /O /O /O // (NU) PLAN ORDER REFERENCE



SIOP POUT MSGREF 5 /M /M /M // (NU) REFERENCED MESSAGE

NUPRES DTG 6 /M // (NU) DATE-TIME GROUP



0 ORGID 7 /M /M /M /M /M /M /M /C // (NU) ORGANIZATION DESIGNATOR

M 11NUPRES GENTEXT 8 /M /M // (NU) 1.A ENEMY FORCES / COMPETITORS

M 11NUPRES GENTEXT 9 /M /M // (NU) 1.B FRIENDLY FORCES / TRADE FEDERATION

M 11NUPRES GENTEXT 10 /M /M // (NU) 1.C ATTACHMENT / DETACHMENT



O 11NUPRES GENTEXT 11 /M /M // (NU) 1.D COMMANDERS EVALUATION

O 11NUPRES GENTEXT 12 /M /M // (NU) 1.E ENVIRONMENTAL INFORMATION

M 11NUPRES GENTEXT 13 /M /M // (NU) 2. MISSION </108>K00.99 / FIX / SWIFT / E-911 Heartbeat Message

M 11NUPRES GENTEXT 14 /M /M // (NU) 3.A CONCEPT OF OPERATION

O 11NUPRES GENTEXT 17 /M /M // (NU) (3) RECONNAISSANCE SURVEILLANCE

O 11NUPRES GENTEXT 21 /M /M // (NU) (5) INFORMATION OPERATIONS

O 11NUPRES GENTEXT 28 /M /M // (NU) (5) COMMS INFORMATION SYSTEMS

O 11NUPRES GENTEXT 35 /M /M // (NU) 3.D COORDINATING INSTRUCTIONS

M 11NUPRES GENTEXT 36 /M /M // (NU) 4.A SUPPORT CONCEPT (Logistics)

M 11NUPRES GENTEXT 37 /M /M // (NU) 4.B MATERIEL AND SERVICES

SYMBOLS	Friend	Neutral	Hostile	DICAL EVAC & HOSPITALISATION
	Partner		Competitor	L - MILITARY OPERATIONS

TOKENIZED ECONOMY BREVITY CODE OPSCOSE MAPPET TO SYMBOLS



INDEX REFERENCE #:

M015 STATUS :

EFFECTIVE: 14-DEC-99



PURCHASE CODES



{"ASSET\_CLASS"}



{"ASSET\_TYPES"}

ISO 10383 – MIC



Market Identifier Codes



{"URN"}



{"Org\_ID"}



108 Heartbeat Message



STOCK NDN NAMED DATA



EXCHANGE NETWORKING



MIC CODES PRECEDENCE



FILTERS PROCESSING



BLOCKTIME



ARBITRAGE



ERLANG



TIME



EQUATIONS



FROM	TO					CODE GUIDE				
	GCCS-A	TAIS	ASAS	AMDPCS	AFATDS	MCS				
ASAS	C002 C203 F002 F014 F015 F541 S201 S309	C002 C203	<b>USMTF / XML MTF FORMATTED MESSAGE CATALOG = 300 + messages info exchange sets using common, CONSENSUS Message Text Formats MTFs. MTFs specify &lt;/CONTENT&gt; / info agreed by group consensus presenting information in a logical, well specified unambiguous layout resulting in a highly efficient info payload to overhead ratio</b>			C002 C203 F014 F541 S201 S309 S305 S507				
AMDPCS	<b>TOKENS</b> <b>OPSCODE BREVITY CODES</b>					F002 F015 S201				
AFATDS	F002 F014 F015 F541 S201					C203 C400 D630 E500 F002 F014				
		A423 C203 C505 F002 F014 F015 F541 S201	A423 A659 C002 C203 C400 C443 C447 C488 C501 C503 C504 C505 C506 C507 C508 E400 F002 F014 F015 F541 F658 F756 G489 K01.1 S201 S303 S507	A423 A659 A656 A690 C002 C203 C400 C505 F002 F014 F015 F541 S201	 <b>ASSET TOKENS</b> <b>Syntax Lexicon</b> <b>Token Economy</b> <b>Coder's Guide</b>	A423 C505 F014 F541 S201	<b>A.I.</b> 	<b>INFOCON</b> 5 4 3 2 1 <b>INFORMATION CONDITION</b>		
							<b>M2M</b>	<b>"SYMBOLS RULE THE WORLD"</b> 		
<b>MESSAGE CATALOG</b> <b>300 + Use Cases</b>				<b>Data Elements: entity, attribute, relationship equivalents</b>			<b>HEARTBEAT MESSAGE =</b> <b>K00.99 &lt;/108&gt; {"108"}</b>			
Object Categories		Examples	Location	Movement	Identify	Status	Activity	Intent		
OOB		<b>SYNTAX LEXICON</b>	STRUCTURED DATA lat/long	spd/hdg	EXCHANGE country / alliance, type/class	Message readiness	Sets targeting, reconitering	COA {"Java JS"}		
Infrastructure		Comm, power, transportation, water/sewer	network, grid	throughput, flow rates,	name, part-of relationship	BDA, op levels	repair, broadcasts	<b>YAML</b> expansion plans		
Sociological		Culture, religion, economic, ethnic, government, history, languages	temples, historic structures	E-R Model	Class Diagram	Relational Database	Object DBMS	XML DTD / Schema	TADILs	MTF
Geophysical		Terrain, weather, climatology, oceanography, astrometry	feature lat/long, alt/dpth	Entity	Class	Table	Class	Element	Message	Message
				Attribute	Attribute	Field / Column	Attribute	Child Element or Element Attribute	DFI	FFIRN / FFN / FUDN
				Domain Value	PURCHASE CODES	Instance, Value		<b>TOKENS</b>	DUI	FUD

# Information Elements Roles

- COI Determination Org Interaction
  - Search and Discovery
  - Ontologies STANDARDS
  - Taxonomies REFERENCE
  - Metadata Attributes / Filters



# FFUDN: Field Format Unit Designator #

# FIRN Field Format Index Reference #

# Structured military messaging ID's messages, message sets, data element, symbol fields <108>

# BY Form Field Position & NUMBER



# PROCESS MESSAGE BY PRECEDENCE

## UNIVERSAL EVENT / ALERT MESSAGE BUS

# OPERATIONAL NODES / ACTIVITIES

DATA SYSTEM FUNCTIONS PERFORMANCE

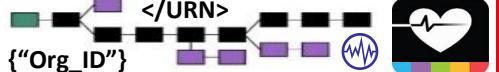
1.4 - Classification	11.8 - Kinematics
11.4.1 - Category	11.8.1 - Pos / Vel / Acc (PVA)
11.4.1.1 - Confidence Level	11.8.1.1 - Acceleration
11.4.1.2 - Estimate Type	11.8.1.1.1 - Angular
11.4.1.2.1 - Alternative	1.1.2 - Linear
11.4.1.2.2 - Evaluated D	2 - Estimate Type
11.4.1.3 - Value	1.2.1 - Estimated
	1.2.2 - Observed
	1.2.3 - Predicted
	PURCHASE CODES

**SYMBOL** Friend Neutral Hostile

Symbol	Friend	Neutral	Hostile
2525C	Partner		Competitor
11.4.1.3.4 - Substance			1 - Velocity
11.4.1.3.5 - Surface			1.4.1 - Horizontal
11.4.2 - Platform / Point / Feature		Type	1.4.2 - Vertical
11.4.3 - Specific Type			VA Confidence
11.4.4 - Type Modifier			1 - Bearing Angle
11.4.5 - Unit			2 - Bearing Angle Rate
			3 - Covariance Matrix



# MIL STD 2525A, B, C, D



20022

SYNTAX LEXICON  
ROSETTA STONE

Coder's Guide lexicon

STRUCTURED <CONTENT> EXCHANGE TEMPLATES	
MIL	STD 2525ABC
MIL	ASSET TOKENS
MIL	"SYMBOLS RULE THE WORLD"
MIL	STRATML
MIL	XAML

11.8 - Kinematics  
11.8.1 - Pos.  
11.8.1.1 - Position11.8.1.2 - Acceleration  
11.8.1.1.1 - Angular

11.8.1.2.1 - Linear

11.8.1.2.2 - Horizontal

11.8.1.2.3 - Vertical

11.8.1.2.4 - Smoothed Data

11.8.1.2.5 - Predicted

11.8.1.2.6 - Observed

11.8.1.2.7 - Estimated

11.8.1.2.8 - Covariance Matrix

11.8.1.2.9 - Bearing Angle

11.8.1.2.10 - Bearing Angle Rate

11.8.1.2.11 - Covariance Matrix

11.8.1.2.12 - Velocity

11.8.1.2.13 - Acceleration

11.8.1.2.14 - Angular Velocity

11.8.1.2.15 - Angular Acceleration

11.8.1.2.16 - Linear Acceleration

11.8.1.2.17 - Horizontal Acceleration

11.8.1.2.18 - Vertical Acceleration

11.8.1.2.19 - Smoothed Data

11.8.1.2.20 - Predicted

11.8.1.2.21 - Observed

11.8.1.2.22 - Estimated

11.8.1.2.23 - Covariance Matrix

11.8.1.2.24 - Bearing Angle

11.8.1.2.25 - Bearing Angle Rate

11.8.1.2.26 - Covariance Matrix

11.8.1.2.27 - Velocity

11.8.1.2.28 - Acceleration

11.8.1.2.29 - Angular Velocity

11.8.1.2.30 - Angular Acceleration

11.8.1.2.31 - Linear Acceleration

11.8.1.2.32 - Horizontal Acceleration

11.8.1.2.33 - Vertical Acceleration

11.8.1.2.34 - Smoothed Data

11.8.1.2.35 - Predicted

11.8.1.2.36 - Observed

11.8.1.2.37 - Estimated

11.8.1.2.38 - Covariance Matrix

11.8.1.2.39 - Bearing Angle

11.8.1.2.40 - Bearing Angle Rate

11.8.1.2.41 - Covariance Matrix

11.8.1.2.42 - Velocity

11.8.1.2.43 - Acceleration

11.8.1.2.44 - Angular Velocity

11.8.1.2.45 - Angular Acceleration

11.8.1.2.46 - Linear Acceleration

11.8.1.2.47 - Horizontal Acceleration

11.8.1.2.48 - Vertical Acceleration

11.8.1.2.49 - Smoothed Data

11.8.1.2.50 - Predicted

11.8.1.2.51 - Observed

11.8.1.2.52 - Estimated

11.8.1.2.53 - Covariance Matrix

11.8.1.2.54 - Bearing Angle

11.8.1.2.55 - Bearing Angle Rate

11.8.1.2.56 - Covariance Matrix

11.8.1.2.57 - Velocity

11.8.1.2.58 - Acceleration

11.8.1.2.59 - Angular Velocity

11.8.1.2.60 - Angular Acceleration

11.8.1.2.61 - Linear Acceleration

11.8.1.2.62 - Horizontal Acceleration

11.8.1.2.63 - Vertical Acceleration

11.8.1.2.64 - Smoothed Data

11.8.1.2.65 - Predicted

11.8.1.2.66 - Observed

11.8.1.2.67 - Estimated

11.8.1.2.68 - Covariance Matrix

11.8.1.2.69 - Bearing Angle

11.8.1.2.70 - Bearing Angle Rate

11.8.1.2.71 - Covariance Matrix

11.8.1.2.72 - Velocity

11.8.1.2.73 - Acceleration

11.8.1.2.74 - Angular Velocity

11.8.1.2.75 - Angular Acceleration

11.8.1.2.76 - Linear Acceleration

11.8.1.2.77 - Horizontal Acceleration

11.8.1.2.78 - Vertical Acceleration

11.8.1.2.79 - Smoothed Data

11.8.1.2.80 - Predicted

11.8.1.2.81 - Observed

11.8.1.2.82 - Estimated

11.8.1.2.83 - Covariance Matrix

11.8.1.2.84 - Bearing Angle

11.8.1.2.85 - Bearing Angle Rate

11.8.1.2.86 - Covariance Matrix

11.8.1.2.87 - Velocity

11.8.1.2.88 - Acceleration

11.8.1.2.89 - Angular Velocity

11.8.1.2.90 - Angular Acceleration

11.8.1.2.91 - Linear Acceleration

11.8.1.2.92 - Horizontal Acceleration

11.8.1.2.93 - Vertical Acceleration

11.8.1.2.94 - Smoothed Data

11.8.1.2.95 - Predicted

11.8.1.2.96 - Observed

11.8.1.2.97 - Estimated

11.8.1.2.98 - Covariance Matrix

11.8.1.2.99 - Bearing Angle

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11.8.1.2.248 - Estimated

## **Symbolic artificial intelligence: collection of all methods in artificial intelligence**

research that are based on high-level symbolic (human-readable) representations of problems, logic and search.[1] Symbolic AI used tools such as logic programming, production rules, semantic nets and frames, and it developed applications such as knowledge-based systems (in particular, expert systems), symbolic mathematics, automated theorem provers, ontologies, the semantic web, and automated planning and scheduling systems. The Symbolic AI paradigm led to seminal ideas in search, symbolic programming languages, agents, multi-agent systems, the semantic web, the strengths, imitations of formal knowledge and reasoning systems.

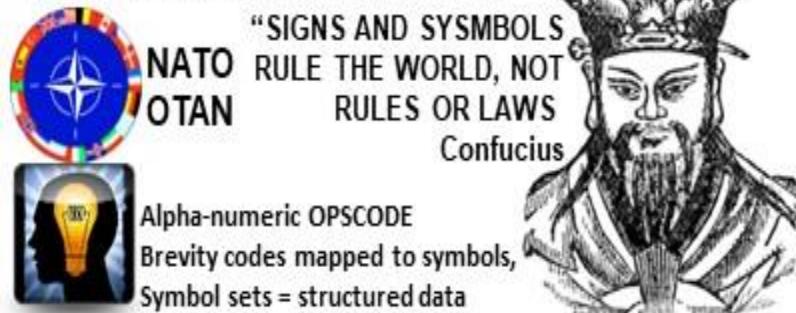
**Physical symbol system** (also called a **formal system**) takes physical patterns (symbols), combining them into structures (expressions) and manipulating them (using processes) to produce new expressions. The **physical symbol system hypothesis (PSSH)** is a position in the philosophy of artificial intelligence formulated by Allen Newell and Herbert A. Simon. They wrote: A physical symbol system has the necessary and sufficient means for general intelligent action."<sup>[2]</sup> —Allen Newell and Herbert A. Simon

This claim implies both that human thinking is a kind of symbol manipulation (because a symbol system is necessary for intelligence) and that machines can be intelligent (because a symbol system is sufficient for intelligence).[3] The idea has philosophical roots in Hobbes (who claimed reasoning was "nothing more than reckoning"), Leibniz (who attempted to create a logical calculus of all human ideas), Hume (who thought perception could be reduced to "atomic impressions") and even Kant (who analyzed all experience as controlled by formal rules).[1] The latest version is called the computational theory of mind, associated with philosophers Hilary Putnam and Jerry Fodor.[4]

**Source:** Wikipedia: [https://en.wikipedia.org/wiki/Physical\\_symbol\\_system](https://en.wikipedia.org/wiki/Physical_symbol_system)

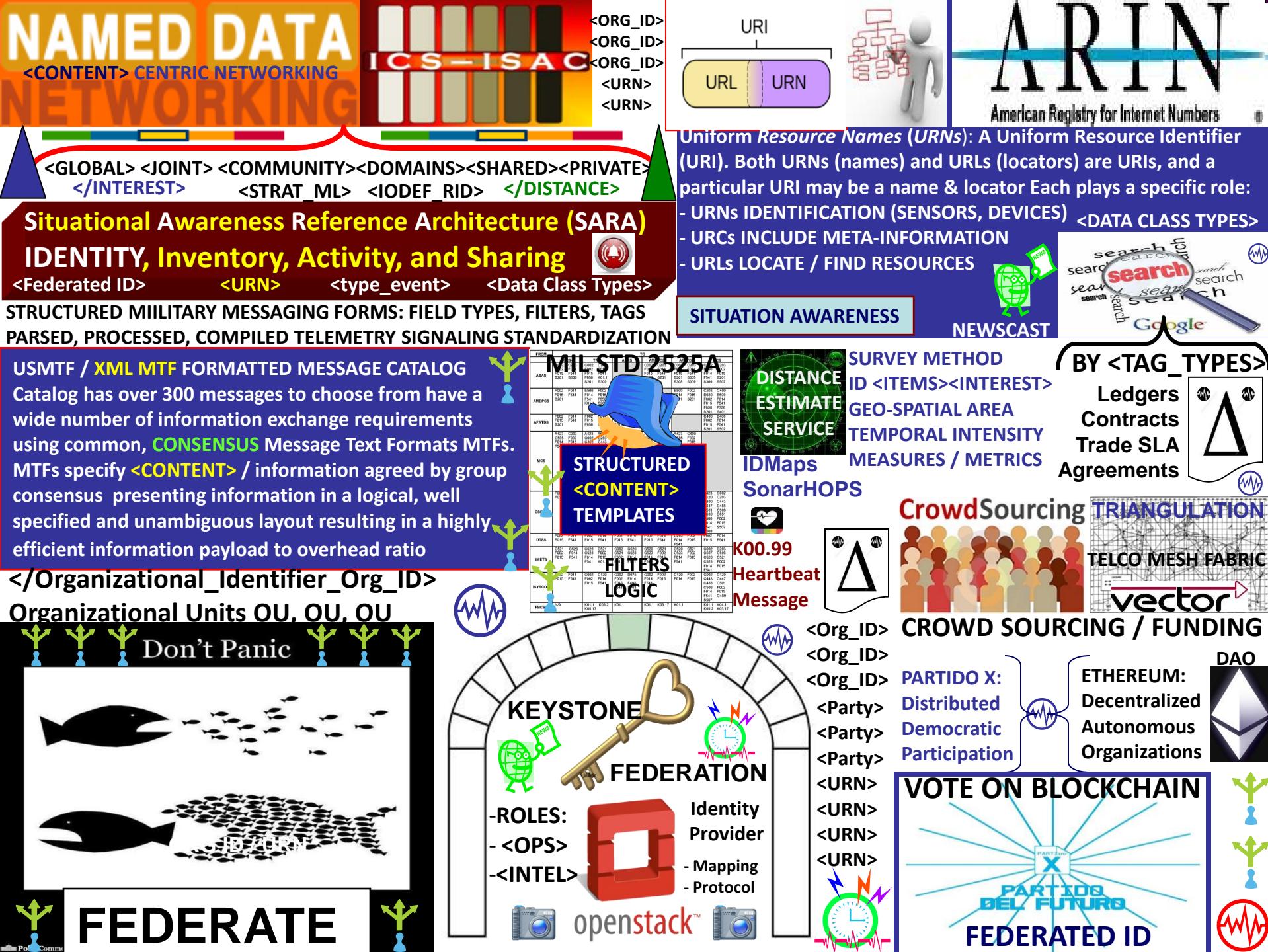
#### **data from a first form to a second form**

**Symbolic artificial intelligence:** collection of all methods in artificial intelligence research that are based on high-level symbolic (human-readable) representations of problems, log



The image is a collage of several black and white illustrations. At the top left, the word 'CONDITION' is written in large, bold, yellow letters. To its right, a yellow box contains the text 'Rosetta Stone Syntax LEXICON'. Below this, there are three separate portraits: one of a man in a tuxedo and bowler hat, another of two men in top hats, and a third of a man in a tuxedo and bowler hat. In the bottom right corner, there is a small illustration of a robot with a head like WALL-E.

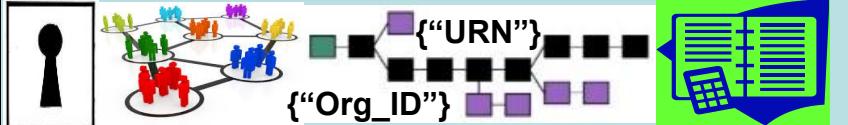
The diagram illustrates the integration of Neuro-Symbolic AI. It shows the flow from Neural Networks (Deep Learning) on the left, through Brevity Codes, to Symbols, and finally to Symbolic AI (human-readable representations) on the right. The process involves common sense reasoning and learning.





# Heart Beacon Cycle

## FEDERATE / TRADE FEDERATIONS



ECONOMIC HEARTBEAT



K %



DAO

BITNATION

FEDERATE  
SHARE  
WIN

1. **FEDERATION:** Latin: **foedus, foederis, covenant, union** of partially self-governing states or regions under a central (federal) government
2. A league or confederacy. Individuals / groups retain **AUTONOMY**
3. A federated body formed by nations, states, and... **unions**  
**each retaining control of internal affairs**

Net joins, drops, splits, merges, moves

Agile, adhoc NETOPS Vs acquisition preserves the **CHANNEL**Federation  
Gateway

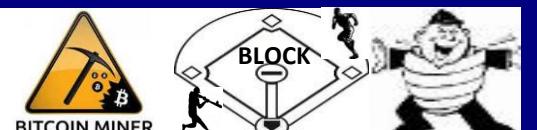
{“GLOBAL”}  
 {“SHARED”}  
 {“DOMAIN”}  
 {“COMMUNITY”}  
 {“PRIVATE”}

{“GROUP ID”}



Bitcoin **Group Signatures** Dynamic Membership Multi-party Signature DMMS:  
 independent interest within group signatures – **FEDERATED ID** {“Org\_ID”}

Bitcoin Mining Pools  
 MEME / METAPHOR MEDIATION



DISTRIBUTED AUTONOMOUS ORGANIZATION = DAO RAND Corp

term coined circa 1991 now in use by Blockchain tech corporations

Uniform\_Resource\_Name



FIREFLY FLASH HEARTBEAT MESSAGES

</RESOURCE> {“URN”}  
 {“Asset\_Class”} </URN>

Office 365 Groups

Microsoft Teams

IeT DEVICE / PLATFORM  
 IoT SENSOR DEVICE



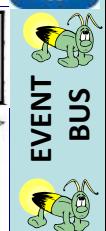
STOCK EXCHANGE

MIC MARKET IDENTIFIER  
 CODES / BREVITY CODES

UUID 123e4567-e89b-12d3-a456-426655440000  
 UUID 123e4567-e89b-12d3-a456-426655440001  
 UUID 123e4567-e89b-12d3-a456-426655440002



{“DUNS #”}{“Org\_ID”} Heartbeat Snaps  
 QR CODE  
 {“URN”}{“URN”}{“URN”} MICRO-CYCLES



EVENT

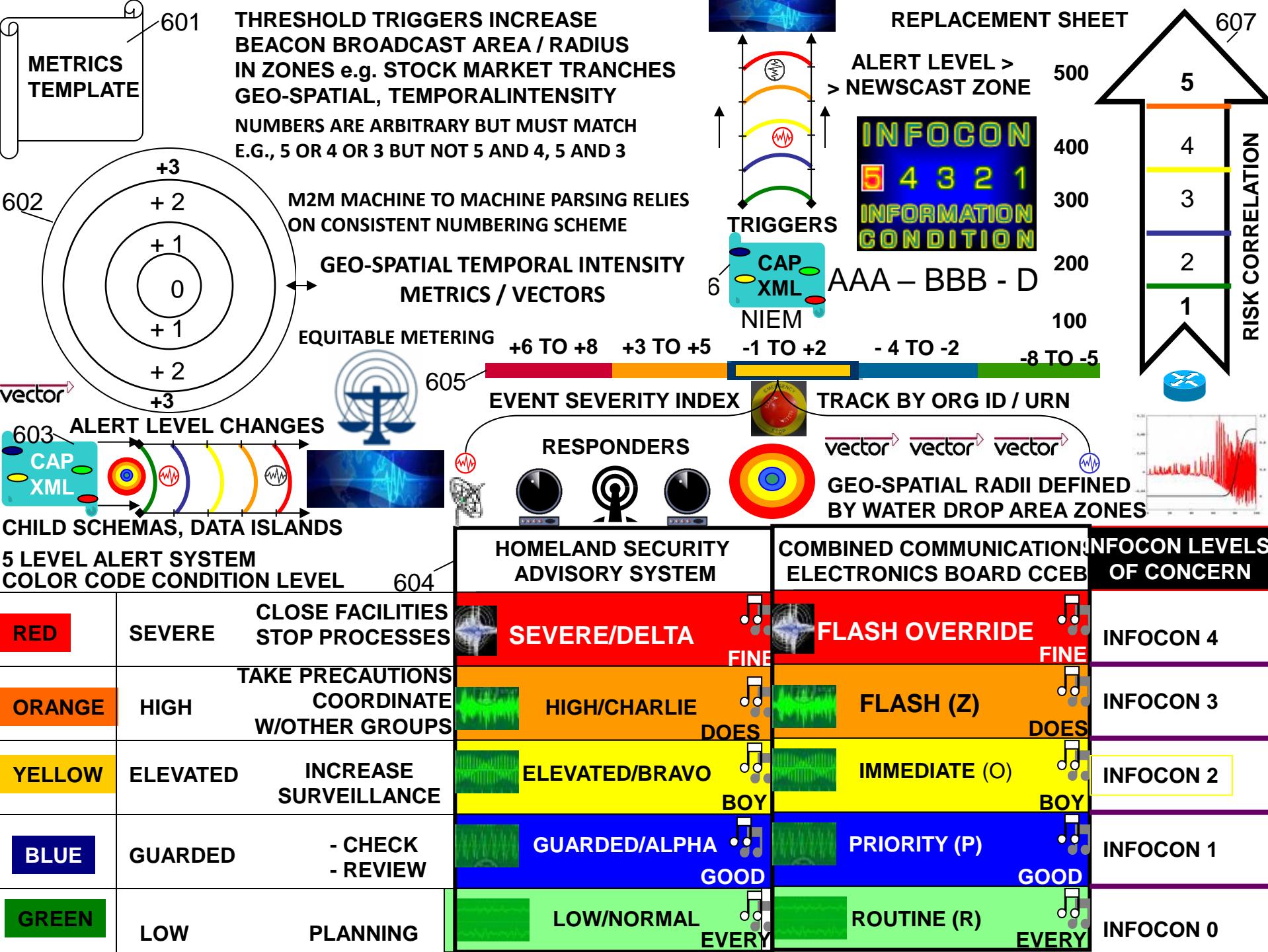
BUS

Signalling, Telemetry



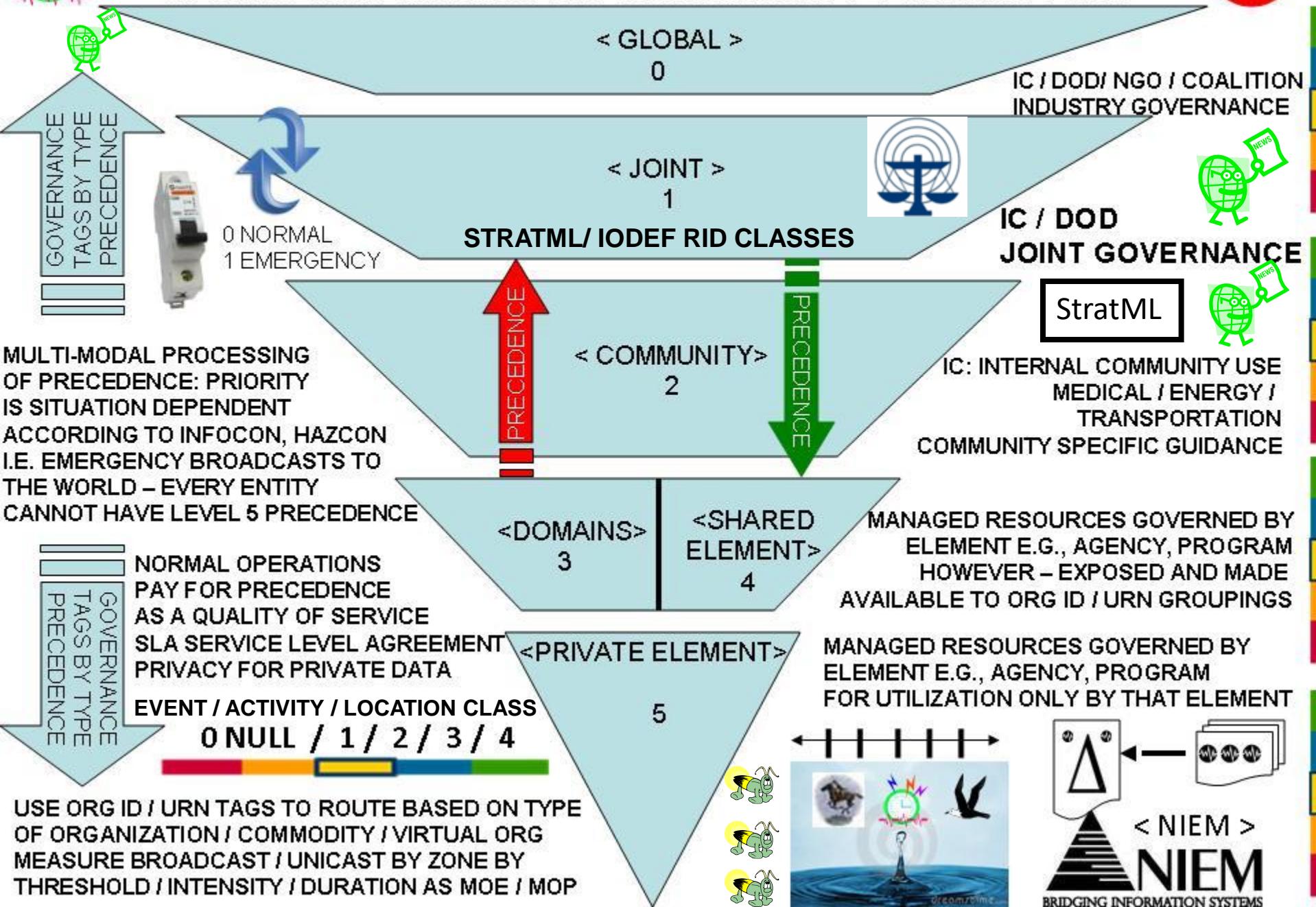
## FEDERATE: COMMON GOALS SYNCHRONIZED IN SPACE - TIME







# ENABLE MAPPING OF GOVERNANCE / MANAGEMENT RESOURCES BY PRECEDENCE SHOWN IN GEO-SPATIO INTENSITY DASHBOARD VIEWS





The current standard time common throughout the world is based on a 24-hour clock, with zones that are either 12 hours ahead or behind **Coordinated Universal Time (UTC)**. However, these time zones are decided upon by individual governments, without overall coordination and can even extend fourteen hours ahead UTC. **UTZ TIME ZONE STOCHASTIC HARMONIZATION**



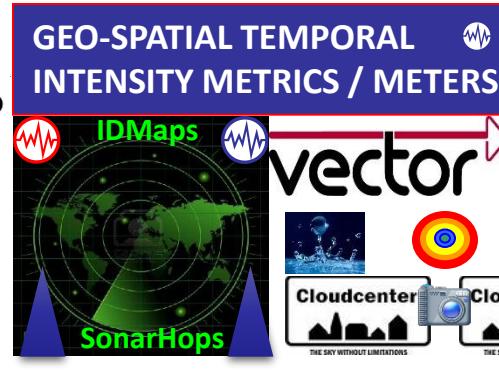
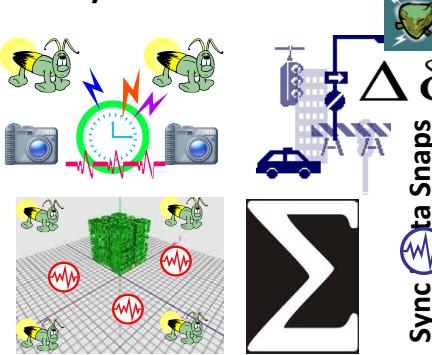
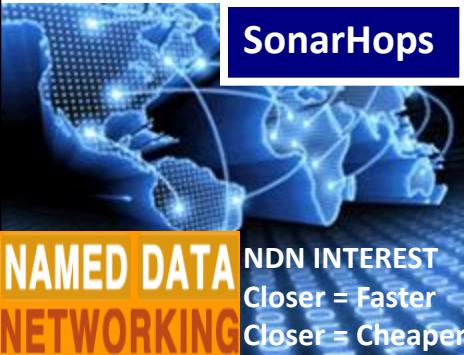
The proposed **Universal Timezone System** would do away with all these different time zones. Instead, it would be the same time all over the world, all the time.



# IDMaps: Global Internet Host Distance Estimation Service



NDN: CONTENT ROUTING / <StratML> NDN INTEREST = Time / Distance



**vector**



IDMaps scalable Internet-wide architecture measures, disseminates distance information  
`/localhost/nfd/fib/add-nexthop`



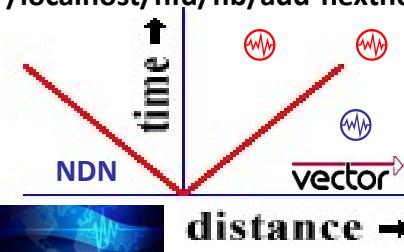
**HOP COUNTS**



**REACHABILITY**



Higher-level services collect distance information to build a virtual distance map of Internet & estimates distance between any IP address pair



IDMaps provides distance information used by SONAR/HOPS query/reply service

Name Prefix  
<Org\_ID> Trie (NPT)



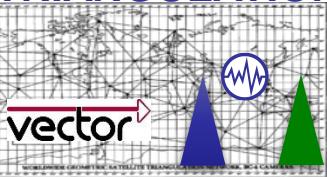
**NDN NAMES**

**NDN NAMED DATA NETWORK RIB / FIB Datasets event notification**

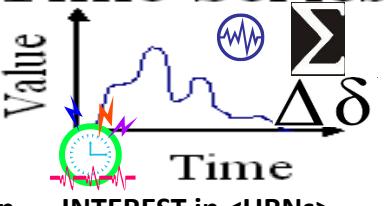
Distance information adjusts to “permanent” topology changes e.g., splits, joins, adds, moves, drops, merges in lieu of formal merger / acquisition



**TRIANGULATION**



**Time Series**



NDN STRATEGY CHOICE MANAGER – RIB Routing Information Base add-nexthop

Datasets and Event Notification

IDMaps assists Network Time Protocol (NTP) servers establish long term peering relationships



Distance Metrics: latency (e.g., round-trip delay) and, where possible, bandwidth.



**MICRO-CYCLES**



NDN INTEREST LIFETIME = TTL Time To Live  
HEARTBEAT STATE META DATASNAPSHOTS

# GEO-SPATIAL TEMPORAL INTENSITY METRICS, METERS, VECTORS



INFOCON / DEFCON ALERT EVENTS INFORM STAKEHOLDERS OF STATUS CHANGE i.e., NORMAL TO ELEVATED, HIGH OR SEVERE. ALERT LEVELS ARE ARBITRARY BUT MUST BE CONSISTENT e.g., 3 OR 5 FOR MACHINE TO MACHINE PROCESSING



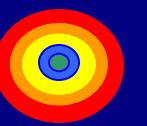
## Geo-Spatial Temporal Intensity NOVEL METRICS / METERS:



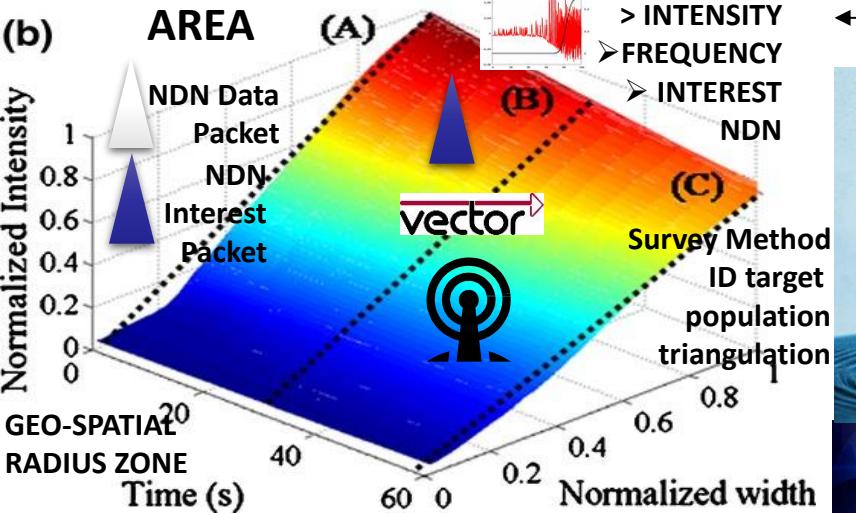
Paul Revere = linear, sequential



TCP/IP hop by hop counts, by hop controls



Water Drop = AREA / INTENSITY Cyclic Frequency



# NAMED DATA NETWORKING

<INTEREST>  
MQTT



NIST TIME BEACON

Hop Count

SOURCE NETWORK 172.16.0.0/16

omnisecu.com.R1

omnisecu.com.R2

omnisecu.com.R3

omnisecu.com.R4

DESTINATION NETWORK 172.27.0.0/16

START

INSTRUCTIONS TO MASTER CONTROLLER

Number of Hops = 3

TTL = Time To Live

STOP

CLOSER = FASTER, CHEAPER > CYCLE => INTEREST NAMED-DATA NETWORKING

IDMAPS  
SONARHOPS  
INTERNET TRIANGULATION

vector

WirelessHART

time synchronized, self-organizing, mesh Net

ALERT LEVEL > NEWSCAST ZONE

vector

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ALERT level > NEWSCAST ZONE

vector

WirelessHART

# 13/573,002 HEART BEACON CYCLE

Time -Space meter, metrics / Universal data event, alert bus  
Internet of Everything "ability to hear the world's heartbeat"

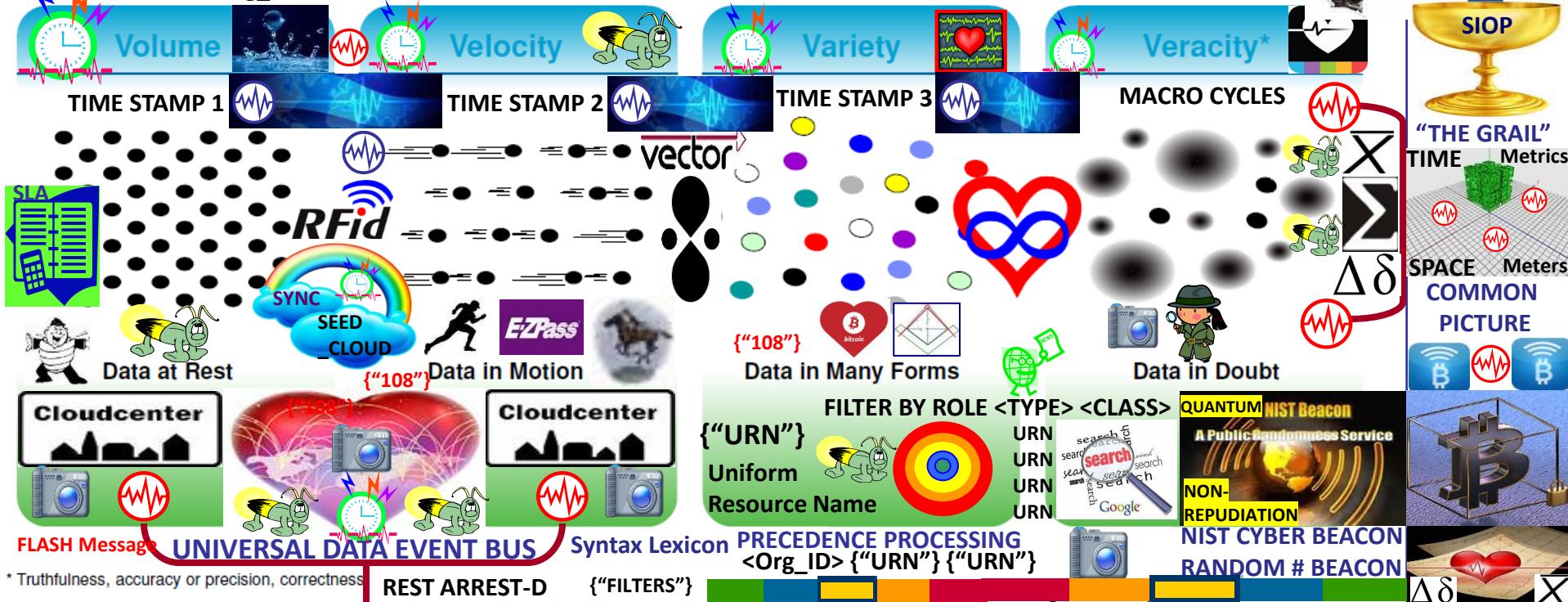


## The four dimensions of Big Data

vector

VECTOR: quantity having direction and magnitude  
position of a point in space relative to another point

TIME STAMP BY Org\_ID, URN Before FUSION CENTER



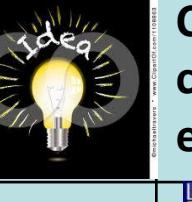
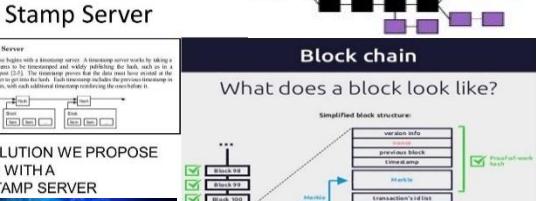
Heartbeat synchronization strives to have nodes in a distributed system generate periodic, local "heartbeat" events approximately at the same time with a goal of all nodes starting and ending cycles at the same time eventually = map to closest OPTEMPO HEARTBEAT

State Meta Data  
Heartbeat Snaps

MICRO

CYCLES

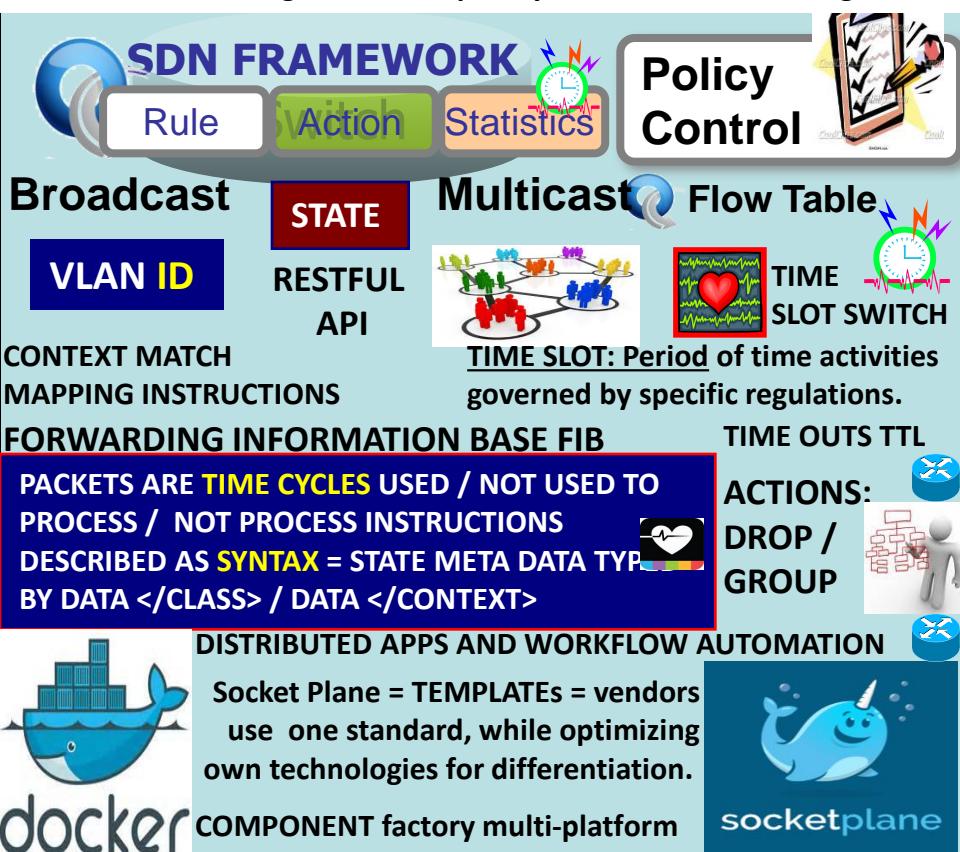
ERLANG

Interface Name	HEARTBEAT Administration Interface [SCOP]		
Documentation URL	<a href="http://scop.sourceforge.net/">http://scop.sourceforge.net/</a> <a href="http://linuxvirtualserver.org/software/index.html">http://linuxvirtualserver.org/software/index.html</a>		
API Information	 <p>#leT</p>  <p>#Big_Data</p>		
Programmable Money World Computer / Blockchain	  <p>Cloud Interface Management configuration, start, stop cloud services, edit configuration (heartbeat messages)</p>	API Operation Count	
Interface Characteristics	<p>Web service access type Network Effects / A.I.</p> <p>LANGUAGE / PLATFORM BINDINGS</p>	<p>Web application, front end to [network, device, system, blockchain] heartbeat</p> <p>PHP Java Erlang...</p>	 
"The external environment could update resources at random... One solution is a heartbeat: defining a default lease duration delaying updates until the next cycle"	 	<p>QubitCoin Interval: Every 30 Seconds</p> <p>Epoch Time Cycles E0 E1 E2 E3...</p>	



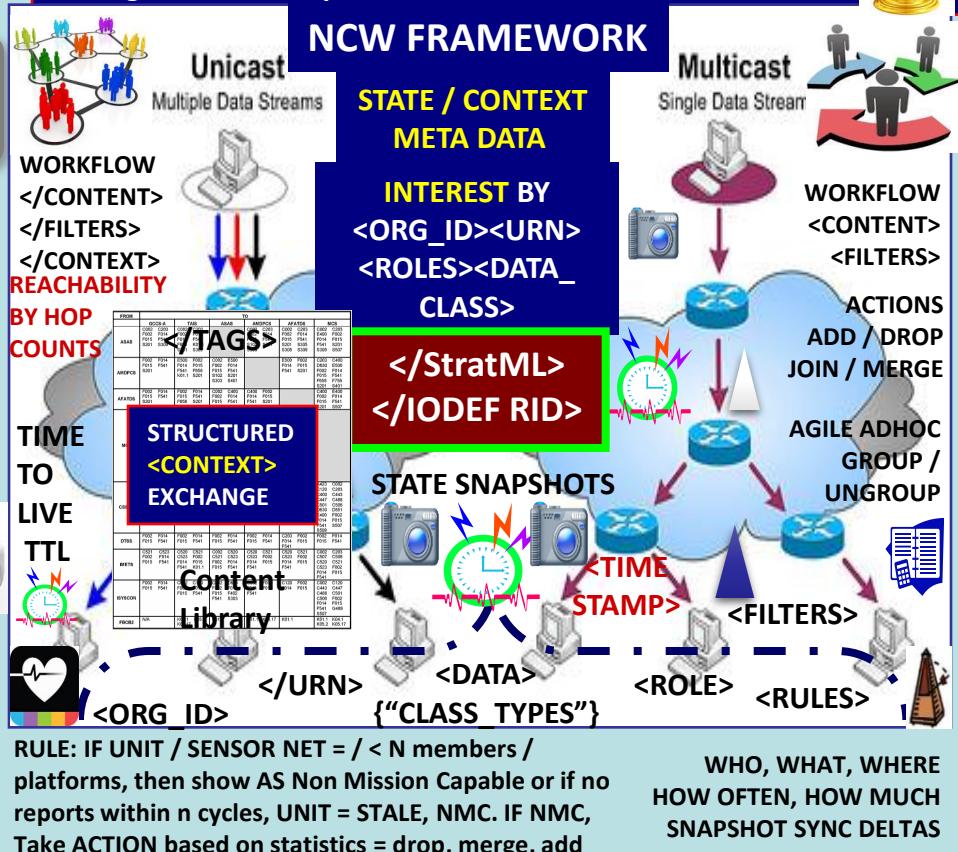
- SDN is a *framework* to allow network administrators to *automatically* and dynamically manage and control a *large number* of network devices, *services*, topology, traffic paths, and packet handling (quality of

DevOps model and tools to enable scale, programmable agility, and policy-driven automation, and provides network virtualization to mask network configuration complexity with set of networking APIs



Netcentric / "network-centric" participating in a continuously evolving, complex community of people, devices, information and services interconnected by a network to optimize resource management and provide information on events and conditions.

Net-centric Enterprise Architecture : "massively distributed architecture with components, services available across and throughout an enterprise's entire lines-of-business."



# USPTO APPLICATION 13,573,002 The Heart Beacon Cycle Time – Space Meter, Applique' Overlay

GIZMAG: New NASA network poised to bring internet to entire solar system

SCt 573 ALICE CORP VS CLS BANK PHYSICAL MEMES

INTERNET TCP/IP "PING", "HOPS",  
"PACKETS", FRAMES = METAPHOR



TIME / DISTANCE SERVICE LEVEL  
AGREEMENT SLA / O Operations

IEEE 802.15.4 OASIS MQTT

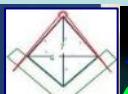
TELEMETRY TRANSPORT

IEEE 802.1AG HOP BY HOP  
DETECTION

IEEE 802.11  
HOP BY HOP CONTROL



TIME / DISTANCE SERVICE LEVEL  
AGREEMENT SLA / O Operations



TIME-SPACE BEACON

INFOCON

Unused Resources / Unmet Needs

vector



UNUSED RESOURCES  
UNMET NEEDS

/localhost/nfd/fib/add-nexthop  
Geo-Spatial Temporal  
Metrics, Meters

DISTANCE  
INFO SERVICE

Time Series

Value  
Time



IDMaps

SonarHops



602

RISK

INTENSITY

WATER DROP IN POND MEME IS  
SONAR NAVY METAPHOR / MEME

NDN </INTEREST>  
NDN {"DISTANCE"}

NAMED DATA  
NETWORKING

IEEE C37.118  
Harmonization  
& Sync heartbeat  
update Interval

CLOSER SOURCE  
CHEAPER RATE



PAUL REVERE  
LINEAR, SEQUENTIAL

603

NULL

+1

+2

TCP/IP HOP BY HOP COUNT

Energy Attenuates over Distances

RADIUS  
WATER DROP IN POND MEME

Attribute Series

$t_1$

$t_2$

$t_3$

INTEREST  
DISTANCE

$t_1$

$t_2$

$t_3$

Temporal Series

$t_1$

$t_2$

$t_3$

Geo Spatial

$t_1$

$t_2$

$t_3$

Micro Grids Closer - Cheaper

BLOCKCHAIN  
MICROGRIDS

Spatial  
Econometrics

TIME-SPACE BEACON

INFOCON

Spaceship  
Earth  
Signals &  
Telemetry  
Annex



buckminster fuller  
operating manual  
for spaceship earth

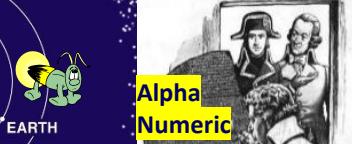
METRICS / METERS  
TRADE WITH EARTH

INFORMATION  
CONDITION



SIRIUS DISCLOSURE

MOON = "Numbers are the  
Universal Language  
offered by deity to humans as  
confirmation of the truth"



Alpha  
Numeric  
Brevity  
Codes



SYNTAX  
LEXICON



K0.99

ANDERSON  
INSTITUTE

ASTEROID BELTS =  
RARE MINERALS



MAIN  
ASTEROID  
BELT



MERCURY



VENUS



EARTH



STOCHASTIC



HARMONIZATION



ERLANG



TIME- SPACE METRICS



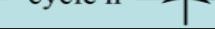
43



22



13



0



1.5



2.7



5.2



Astronomical units

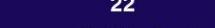
FIREFLY-HEARTBEAT  
ALGORITHM



TROJAN  
ASTEROIDS



UNIVERSAL  
EVENT MESSAGE BUS



ERLANG



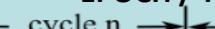
TIME- SPACE METRICS



43



22



13



0



1.5



2.7

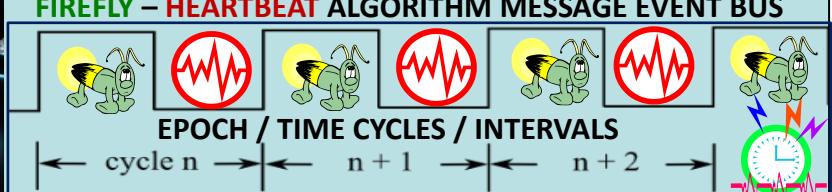


5.2



Astronomical units

FIREFLY – HEARTBEAT ALGORITHM MESSAGE EVENT BUS



EPOCH / TIME CYCLES / INTERVALS

← cycle n →

n + 1

n + 2

→

cycle n + 3

→

cycle n + 4

→

cycle n + 5

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cycle n + 6

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cycle n + 7

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cycle n + 8

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cycle n + 9

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cycle n + 10

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cycle n + 11

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cycle n + 12

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cycle n + 13

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cycle n + 73

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cycle n + 74

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cycle n + 75

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cycle n + 76

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cycle n + 77

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cycle n + 78

→

cycle n + 79

→

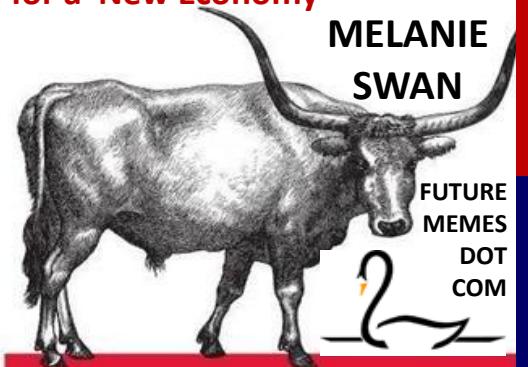
cycle n + 80

→

cycle n + 81

→

&lt;p



# Blockchain

BLUEPRINT FOR A NEW ECONOMY



Blocktime Arbitrage MTL (machine trust language) time primitives might be assigned to a micropayment channel DAPP as a time arbiter. In blocktime, the time interval at which things are done is by block. This is the time that it takes blocks to confirm, so blockchain system processes like those involving smart contracts are ordered around the conception of blocktime quanta or units. Since blocktime is an inherent blockchain feature, one of the easiest ways to programmatically specify future time intervals for event conditions and state changes in blockchain-based events is via BLOCKTIME. Universal blocktime source example: a procedure call to NIST or other time oracle.



**BLOCKTIME: A General Temporality of Blockchains** Blocktime as blockchains' temporality allows the possibility of rejigging time and making it a malleable property of blockchains. The in-built time clock in blockchains is blocktime, the chain of time by which a certain number of blocks will have been confirmed. Time is specified in units of transaction block confirmation times, not minutes or hours like in a human time system. Block confirmation times are convertible to minutes. Conversion metrics might change over time. Network Economies: Economic System as Configurable Parameters

The current standard time common throughout the world is based on a 24-hour clock, with zones that are either 12 hours ahead or behind **Coordinated Universal Time (UTC)**. However, these time zones are decided upon by individual governments, without overall coordination and can even extend fourteen hours ahead UTC.



The proposed **Universal Timezone System** would do away with all these different time zones. Instead, it would be the same time all over the world, all the time.



Erlang programming language / mini OS  
massively scalable high availability, real-time Erlang's runtime system built-in concurrency distribution, fault tolerance



- coordinate 1000's of virtual machines
- ...distributed Dbases RIAK, CouchDB
- ...real time data dashboards
- ...service oriented software architectures
- .. server, API endpoints .. RabbitMQ
- ..distributed, multi-node architecture.
- protocol-aware load-balancer, stateful binary comi



### Functional Sequential Erlang

- Data types:
  - Integers (incl. BigNums), floats, atoms
  - tuples/records, lists/plists, binaries, funs
  - Maps (added in R17)
- single assignment
- pattern matching & guards
- closures (anonymous function data type)
- list comprehensions
- bit-syntax & binary comprehensions
- tail recursion & tail call optimization (TCO)

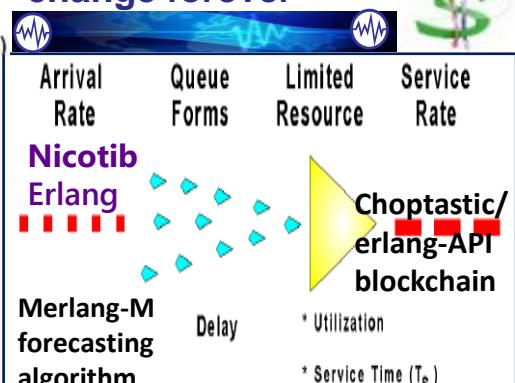
### SORTING ALGO'S

[Ericsson Open Money For Society Patent App](#)



[20130166398 "System And Method For Implementing A Context Based Payment System."](#)

"It is our vision that one day everyone with access to a mobile phone will be able to spend, send and receive money as easily as sending a text via SMS"  
"When money is open, the way we send, spend and receive money will change forever"



Rho ratio  $\Delta\delta$  queueing systems wait times  
Service Rate per unit time stochastic processes, function scheduling Start, Stop TTL

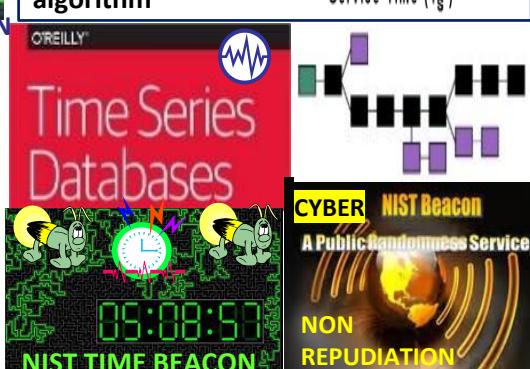


distributed "noSQL" database, embedded right into Erlang, supports indexing, replication, transactions, and fail-over

Fast ETS in-memory, and DETS persistent on-disk database

Mnesia database ("Organization\_ID") Global name resolution

FROM	TO/CC-A	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRIDAY	SATURDAY	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
XBRL	/ CDL / DAML																		
ALPHA	NUMERIC																		
BREVITY	CODES																		
AZURE	BLETCHLEY																		
STRUCTURED																			
MILITARY	MESSAGE																		
TEMPLATE	FORMS																		
LOGIC	/ FILTERS																		

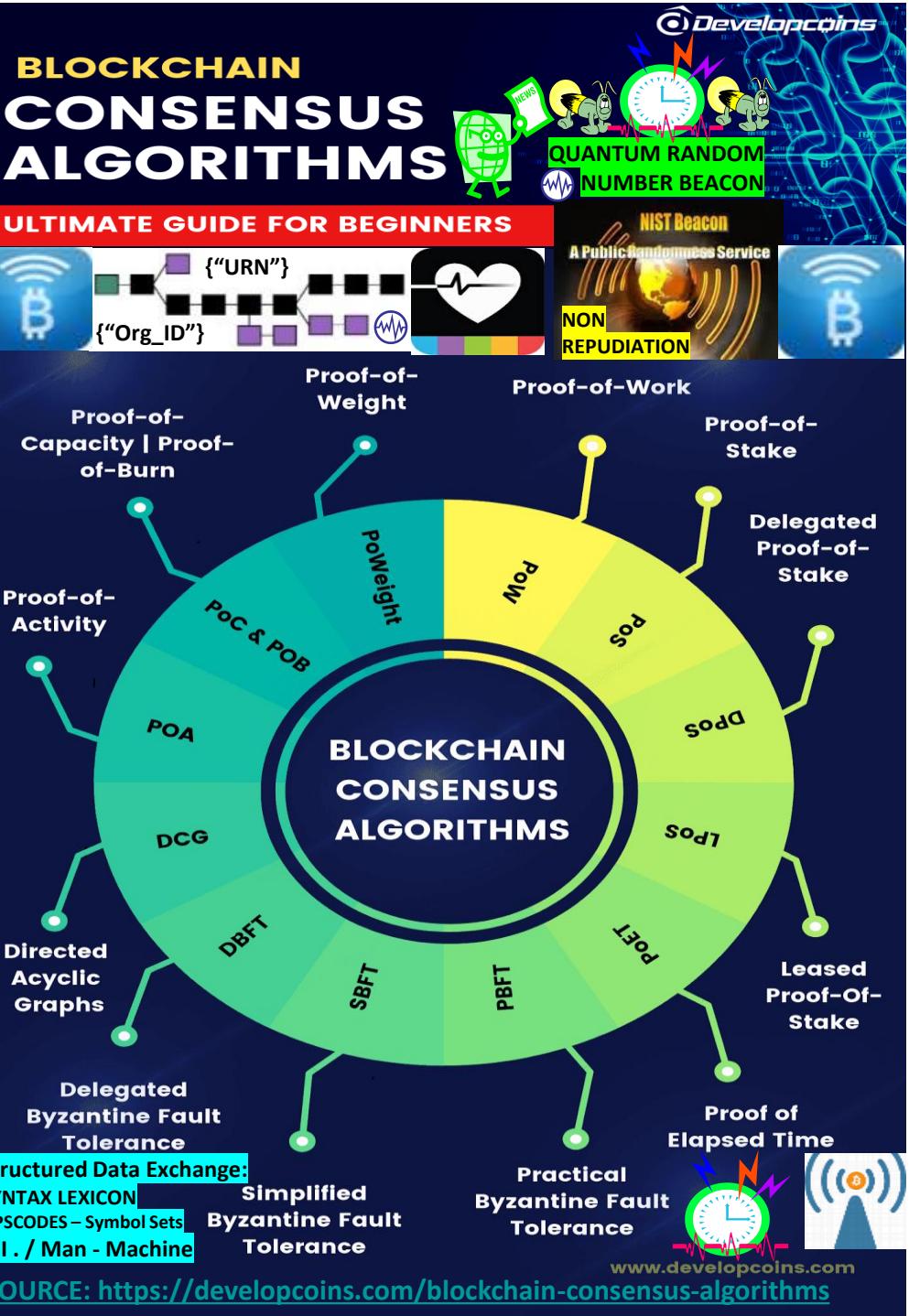
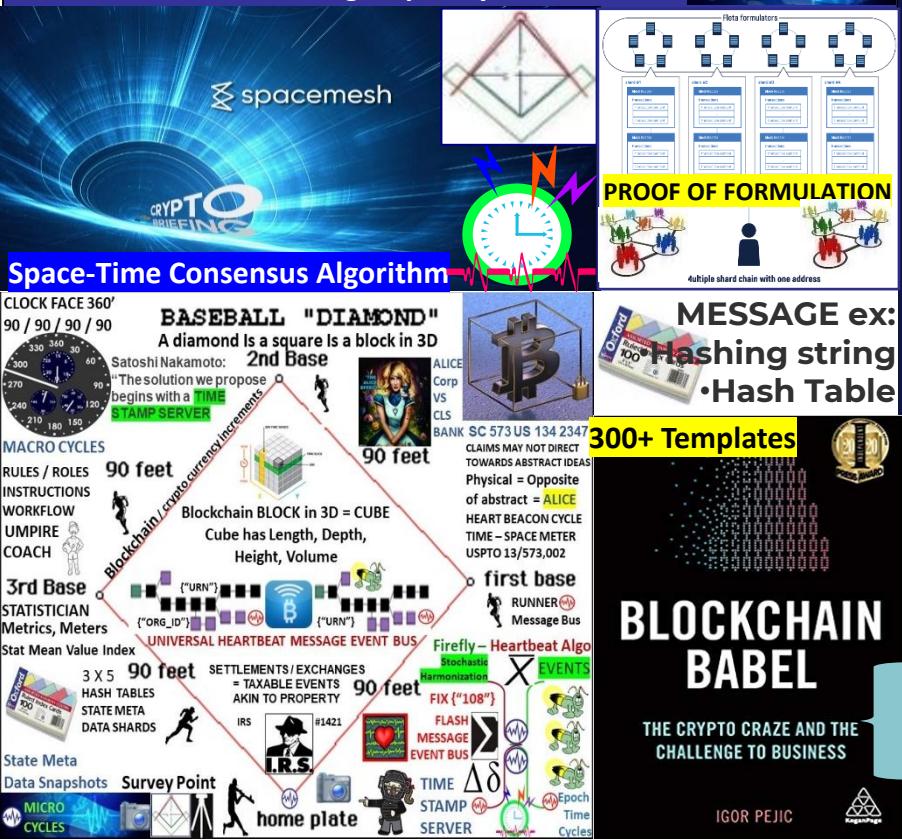


Q: Which meme describes the myriad blockchain consensus algorithms the most comprehensively that uses an algorithm (based on nature = “shortest path to the knowledge of truth Luxor Temple) enabling distributed system of systems geo-spatial, UTZ Universal Time Zone temporal, semantic - syntactic sync, OPSCODE brevity code, data element & symbol (for A.I. man – machine interface) consensus?

### Blockchain Consensus Algorithms & Mechanisms

In the world of blockchain consensus algorithms, consensus is the **HEART OF THE BLOCKCHAIN NETWORK**. Its main purpose is to achieve agreement on transactions among a distributed system (s)

**Proof of Formulation:** PoF: generation / propagation of blocks using a previously agreed sequence between participants of the generation of blocks, formed by two groups: a generator group and/or Formulator and a group of synchronization.





# STABLE PROTOCOL THREE MAIN TYPES:

DeFi-Native: Cap Labs, Elixir, Level

Collateralized Debt Positions: Ducat, Felix

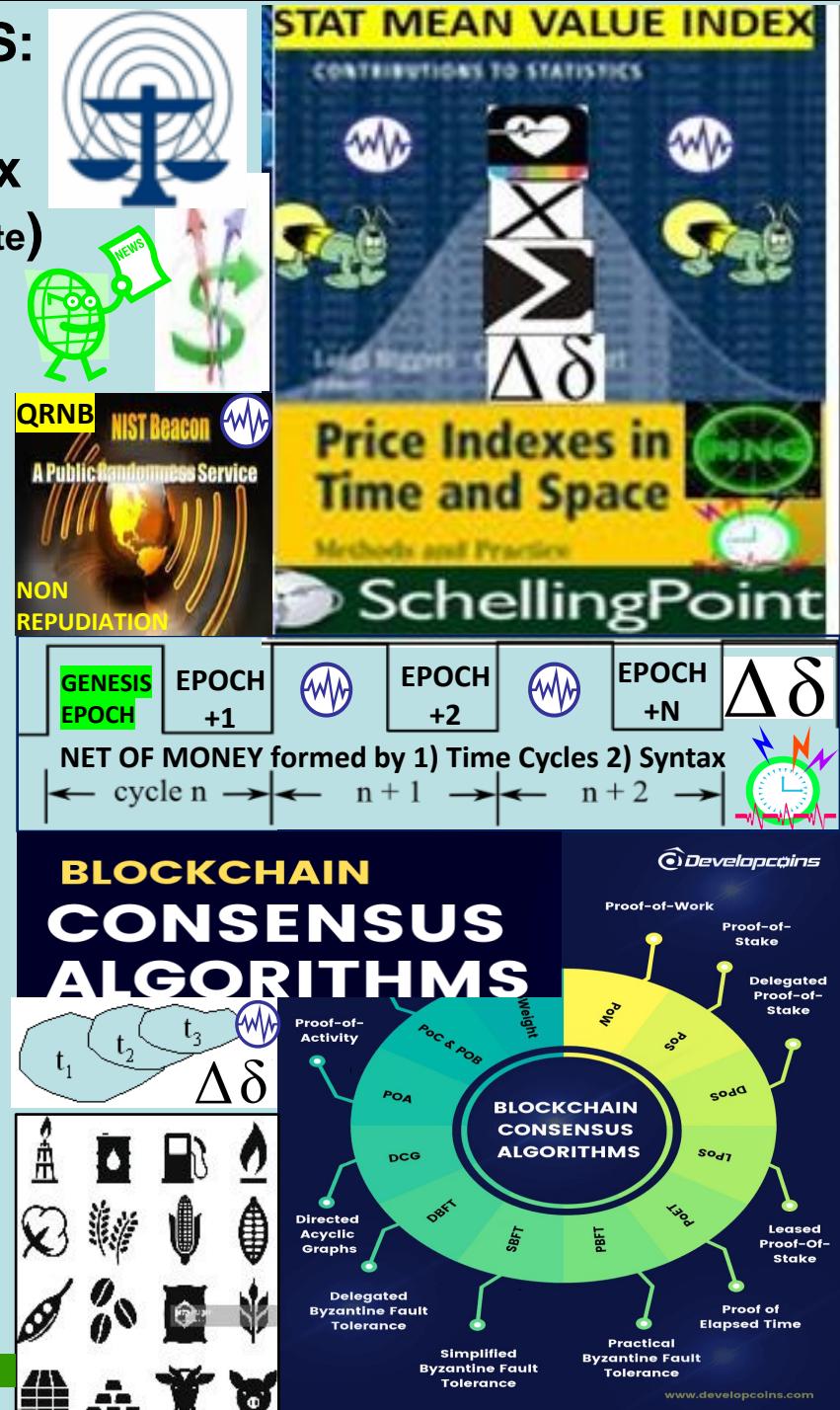
RWA-Backed:, EAnzen, Superstatethena (UStb update)

**1) DeFi-Native collateral backing:** stablecoin engine produces redeemable tokens of various denominations (USD, BTC, ETH, etc) system of external agents, such as market makers, MEV actors and RWA protocols, to access collateral and generate independent yield on behalf of holders. These actors keep profits over a predetermined threshold, incentivized to earn as much as possible. behavior is kept in check by security delegations from restaking protocols, support good actors, penalize bad ones

## 2) Collateralized Debt Positions (CDPs)

CDP protocols allow users to borrow assets by locking up collateral. When a user creates a CDP, they deposit a certain amount of ETH, BTC, USDC, or other assets into the protocol to borrow a proportionate amount of another asset, in this case a stablecoin. If the value of the deposited collateral falls below a specified threshold (loan-to-value level or collateral ratio), the CDP becomes under-collateralized and is recalled, or liquidated, with the protocol automatically selling off the underlying assets to repay the debt and maintain the stability of the system. After the underlying collateral is liquidated, the user usually gets to keep the asset they've borrowed, minus some kind of liquidation penalty.

## 3) RWA-Backed by off-chain real-world assets

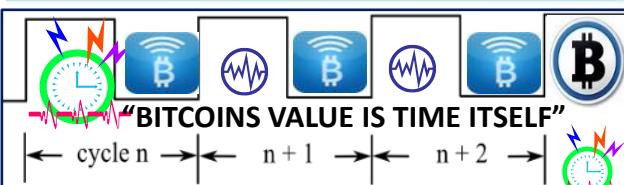




## PROOF-OF-WORK



**THE PROBABILITY OF MINING A BLOCK IS DEPENDENT ON HOW MUCH WORK IS DONE BY THE MINER**



**TIMESTAMP** marks the point that work started. Additionally, it contributes to the uniqueness of the work by an individual miner.

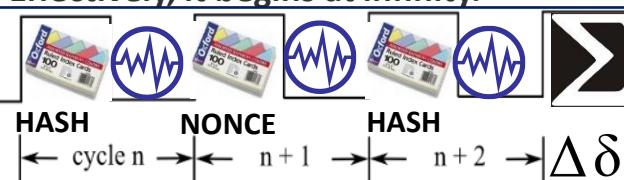


- **target** = maximum value of 8 bytes Snap ( $2^{64}$ ) divided by the difficulty. Shots

**NONCE increments from 0..N until the target is met.**



**GUESS stores the guess**  
**Effectively, it begins at infinity.**



**Proof-of-Work:** users perform some form of work to participate. Work must be difficult for the client but easy for the server/network to verify. POW determines the approximate time between blocks = rate that new bitcoins are created. Work is submitted as a message/timestamp payload with a nonce value. Payloads are made unique through use of public key encryption or address.Nonce allows checking the work



## 300+Message Templates

**LOGIC FILTERS  
LOGIC GATES**

**SYNTAX LIBRARY  
LEXICON**

**CODER'S GUIDE**

## POW PAYLOAD : COMBINATIONS OF ENCRYPTED SYNTAX **Attribute Series**



In a proof-of-stake network, it is the number of coins held in a wallet that determines the "weight" of the user the likelihood for the user to receive the block reward. In a Proof-of-Weight consensus mechanism, any value, not just the amount of coins held, is used to determine the "weight" of a user.

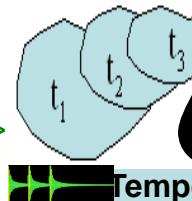
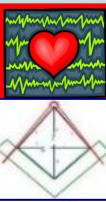


## TIME – SPACE MEASUREMENTS OF TOKENIZED COMMODITIES, SECURITIES... STOCHASTICALLY HARMONIZED ACROSS UTZ Universal Time Zone



The Volumetric Weight is often referred to as dimensional weight

$$\text{Volumetric Weight} = [\text{Width} \times \text{Length} \times \text{Height}]$$



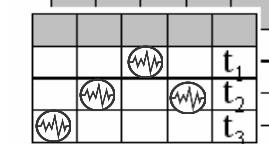
TIME BLOCK



IPFS

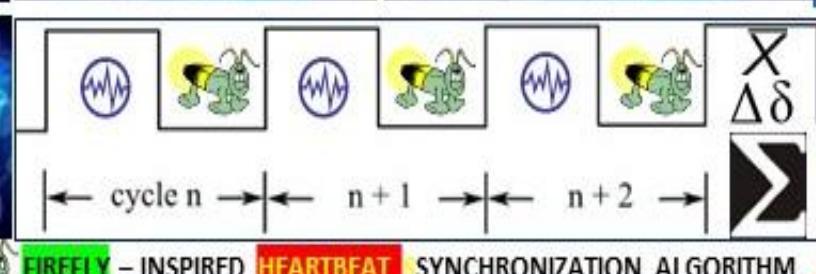
On the Filecoin blockchain, for example, the amount of IPFS data that a user is storing is used as the weighted value.

Attribute Series



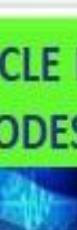
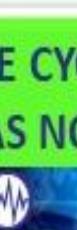
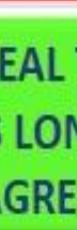
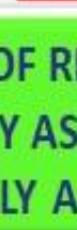
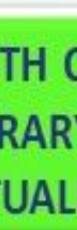
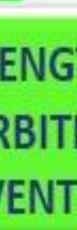
Geo Spatial

Temporal Series



FIREFLY – INSPIRED HEARTBEAT SYNCHRONIZATION ALGORITHM

"LENGTH OF REAL TIME CYCLE IS ARBITRARY AS LONG AS NODES EVENTUALLY AGREE"





# OpenBazaar open source decentralized peer to peer network online commerce —using Bitcoin —no fees and no restrictions



- Creates an online store for users to sell goods for Bitcoin
- Connects these stores directly to each other on a global network
- Users browse individual stores, search for products across whole network
- A buyer directly connects, purchases good from the merchant using Bitcoin
- Bitcoin payments via escrow protect merchants & buyers during trade

OPENBAZAAR.ORG  
BLOCKCHAIN ARBITRAGE



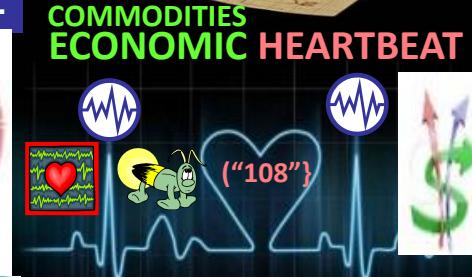
OpenBazaar is a different approach to online commerce. OpenBazaar connects buyers and sellers directly. Because there is no one in the middle of your transactions there are no fees, no restrictions, no accounts to create, and you only reveal personal information you choose.

## PROJECT PHILOSOPHY: *MAKE TRADE FREE*

Mission: *shift trade to a decentralized platform*



Demurrage TERRATRC TRADE  
Fees REFERENCE CURRENCY  
“Money of Peace”



Free, open markets: Commodity / Currency Index

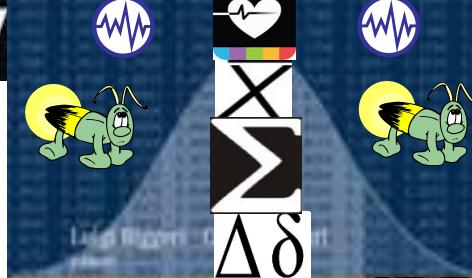
Creating open, competitive markets for services  
that cannot be perfectly solved with technology



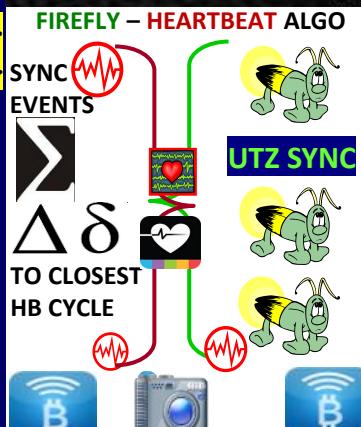
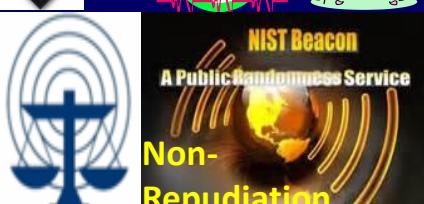
• Privacy </Org\_ID>



HASH Values  
Nonce Values </Org\_ID>



Bitcoin: OpenBazaar transactional currency



Cryptographic Security

- tamper-proof agreements
- 1) minimize potential disputes
- 2) fast-track dispute resolution

## DON: DECENTRALIZED ORACLE NETWORKS



### Explicit Staking

Chainlink nodes lock up LINK tokens as collateral that can be slashed for malicious and undesirable behavior.

Chainlink's explicit staking model's goal is to achieve a super-linear staking impact—a mechanism where malicious actors are required to have a budget significantly larger than the combined deposits of all nodes within a DON, creating increasingly greater security guarantees for high-value smart contract applications in a cost-efficient manner.

Explicit staking in Chainlink 2.0 oracle reports reflect the state of specific real-world events outside a blockchain (off-chain).

Chainlink's explicit staking mechanism protects against a broad range of attacks, including advanced strategies like prospective bribery, in which nodes are targeted according to their role in the network, such as those selected for report adjudication.



INFOCON  
4 3 2 1  
INFORMATION CONDITION

Behind each DON is a service agreement that will define the number of LINK tokens each oracle node is required to stake and key performance requirements, such as how far an individual node's response can deviate from the aggregated value and how far the aggregated value in an oracle report can deviate from the correct value it should represent. The service agreement can also define other parameters such as the data sources used, how often updates should occur, how much each node is paid, and more.

ALERT LEVEL >  
NEWSCAST ZONE

Outputs produced by a DON are structured into reporting rounds, where each round involves the creation of a new oracle report containing each node's individual response for a particular piece of data (e.g. the price of ETH/USD), with all the individual responses aggregated into a single value (e.g. taking the median). A DON network's service agreement defines how each report should be generated & conditions in which a node's stake can be slashed.



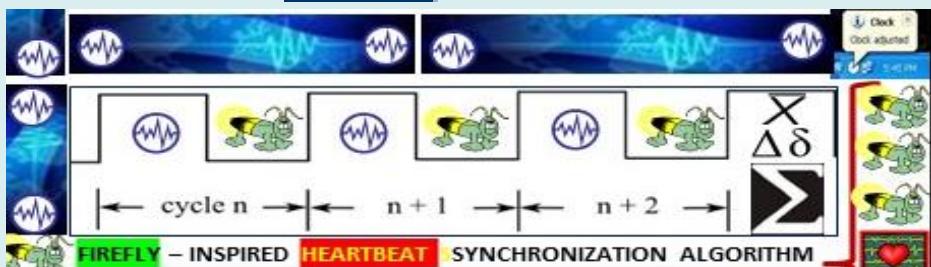
## DISTRIBUTED AUTONOMOUS ORGANIZATIONS DAO

# Heart Beacon Cycle

### FEDERATE / TRADE FEDERATIONS

#### Linear Sequential Meme

$$\dots -1 / 0 / +1 \dots \Delta \delta > \Sigma$$





## VERITAS TOKENS P2P Capital Market smart contracts Eco Economic HEARTBEAT

Decentralized Trading Platform DAO ORACLE  
access conventional, legacy financial data to  
price, value, trade & settle OTC, P2P financials



INFOCON  
5 4 3 2 1  
INFORMATION CONDITION



{"108"}

STATISTICAL MEAN VALUE INDEX PULSE

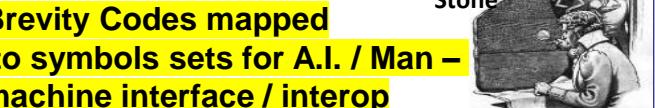
GDP INDEX ECONOMY K% RULE



{"108"}



UTZ SYNC  
STOCHASTIC HARMONIZATION



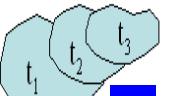
Zero Trust Transaction: money performs I.A.W. to terms agreed to by parties. Ex: purchase of widget from retail store where widget must be delivered to person B on TIME X, in Y condition at PLACE Z or person A does not get paid. Stock, currency, commodities, letters of credit, insurance underwriting, trading, intellectual property...

Cost = stated rates that fluctuate with VeUSD exchange rate.  
Veritas holders get priority. The ability to redeem Ve against USD gives clients instant value.

DAO Distributed Autonomous Organization Investor Pools



"LENGTH OF REAL TIME CYCLE IS ARBITRARY AS LONG AS NODES EVENTUALLY AGREE



SYNTAX LEXICON OPSCODE  
Brevity Codes mapped to symbols sets for A.I. / Man – machine interface / interop

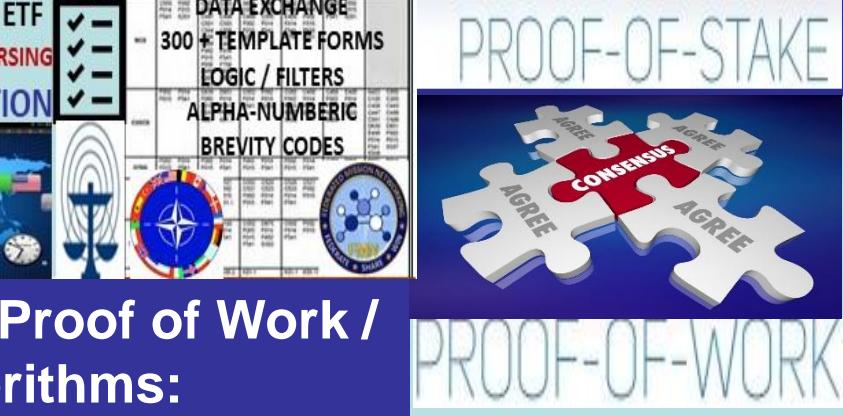
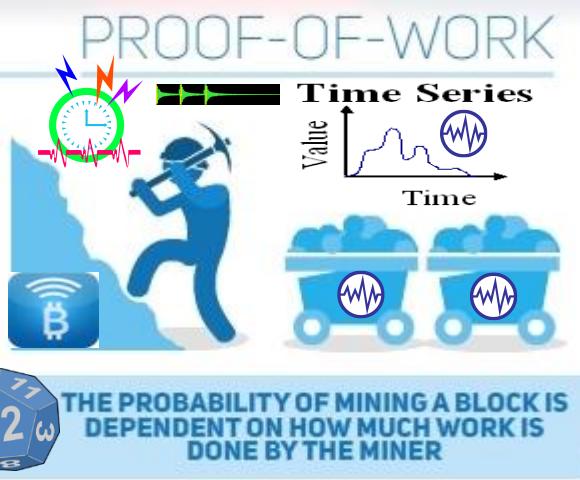
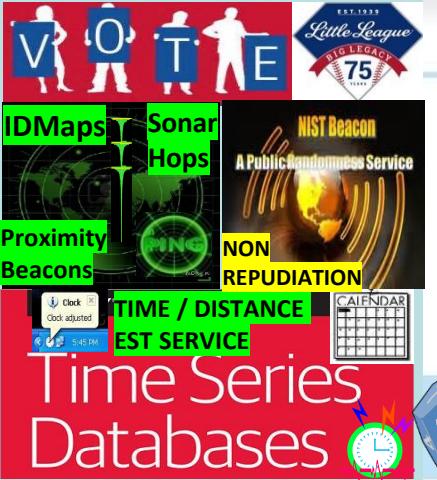




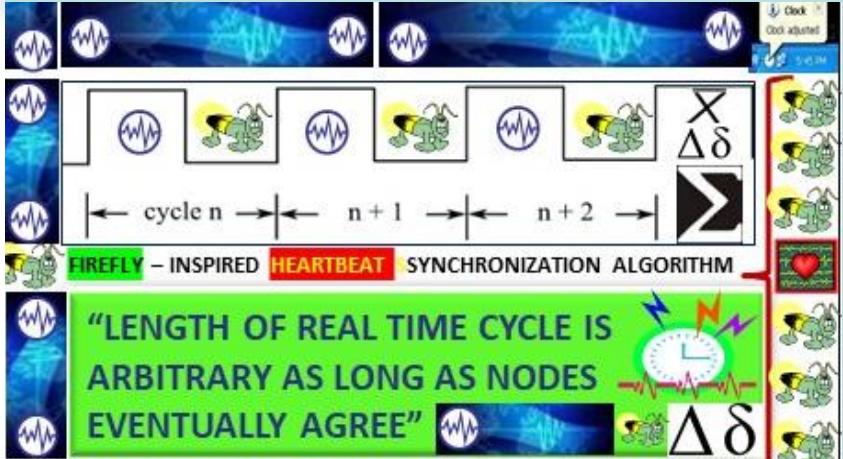
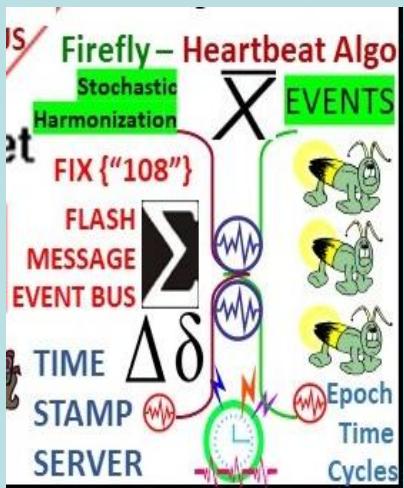
## Proof-of-activity PoA is a combination of Proof of Work / Stake blockchain consensus algorithms:

### Example of Proof-of-Activity (PoA)

Decred (DCR) is the most well-known cryptocurrency that uses the PoA consensus mechanism. With Decred, blocks are created about every five minutes.<sup>2</sup> The mining process for Decred begins with nodes (computers that participate in the network) looking for a solution to a cryptographic puzzle with a known difficulty level in order to create a new block. Once the solution has been found, it is broadcast to the network. The network then verifies the solution. At this point, the system becomes a PoS. The more DCR that a node has mined, the more likely they are to be chosen to vote on the block. (In DCR's blockchain, stakeholders earn tickets that grant them voting power in exchange for mining DCR.) Five tickets are chosen pseudo-randomly from the ticket pool; if at least 3 of the 5 vote "yes" to validate the block, it is permanently added to the blockchain. Both miners, voters are rewarded with DCR.

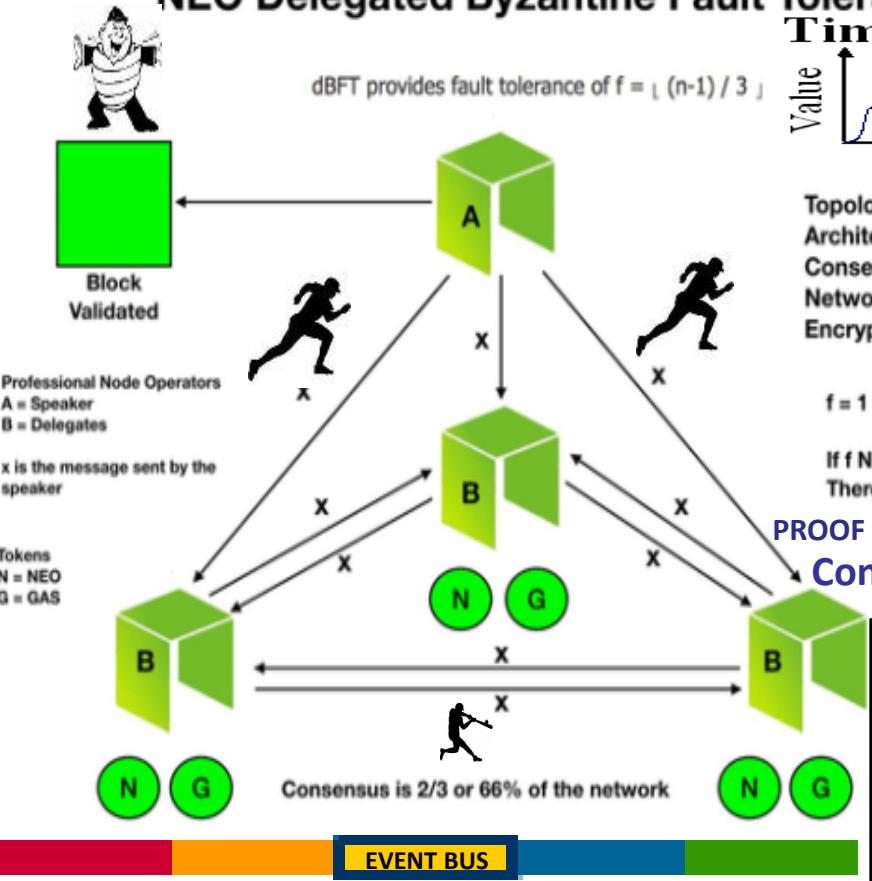


HEART BEACON CYCLE 13/573,002



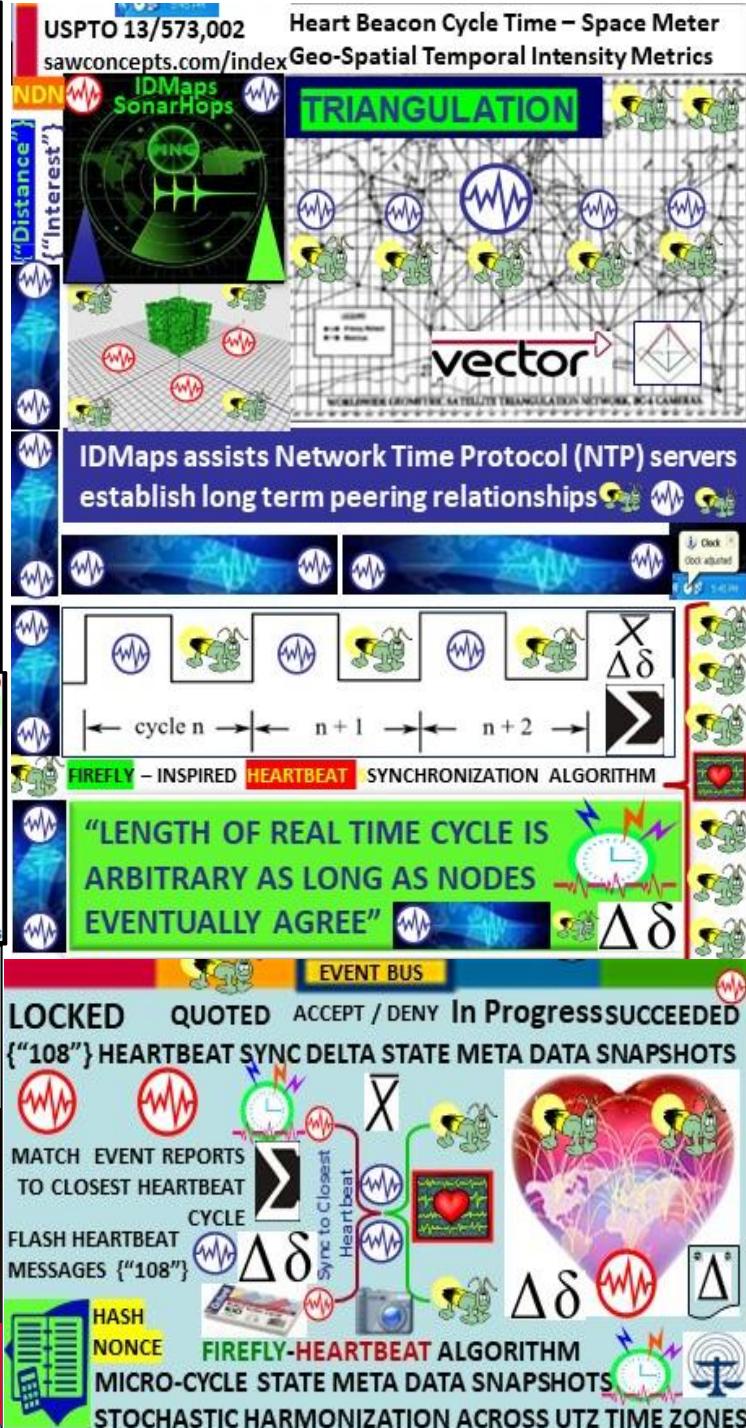


# NEO Delegated Byzantine Fault Tolerance (dBFT)



No collusion between individuals or entities is possible. Participants in the network validate transactions adding to the ledger have no affiliation or relationship (political, adversarial, etc.) with the transaction or its participants. Only a permissionless platform can meet this set of criteria.

Specifically, a random selection algorithm called RS is developed to cooperate with the voting mechanism, which can effectively reduce the number of nodes participating in the consensus process. Our proposed scheme is characterized by the unpredictability, randomness, and Impartiality, which accelerate the system to reach consensus on the premise of ensuring system activity. ✓





**Hashgraph consensus algorithm for replicated state machines**

- Consensus Event Time Stamps
- State Meta data consensus order
- **Virtual voting:** each member has a Hashgraph copy
- Famous witnesses

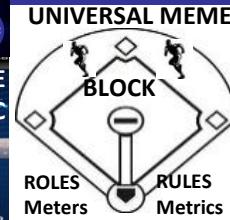
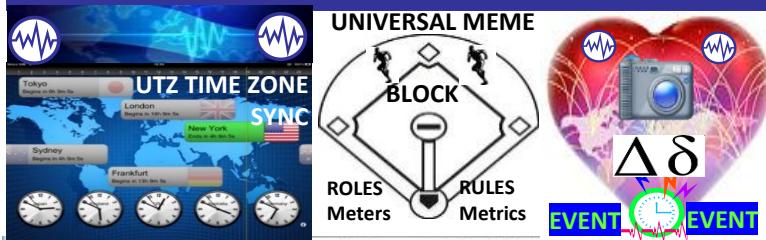
data structure that records who gossiped to whom in what order  $\Delta\delta$

Gossip In Bitcoin: transactions and mined blocks are gossiped.  
Consensus is enhanced via "gossip about gossip"



DAG "Directed Acyclic Graph" large number of blocks arrive at the same time. DAG system reaches consensus leveraging "Gossip"... information spread by a computer calling up other computers at random, sharing everything it knows

The Heart Beacon Cycle Time – Space Meter  
Adaptive Procedural Template Checklist  
Heartbeat Sync Delta state meta data  
structured data exchange snapshots  
300 + Use Case message template sets  
Rosetta Stone Syntax lexicon Coder's guide



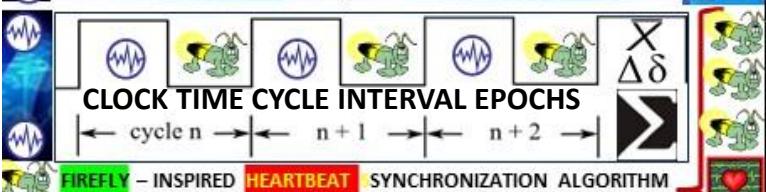
USPTO 13/573,002  
[sawconcepts.com/index](http://sawconcepts.com/index)  
Heart Beacon Cycle Time – Space Meter  
Geo-Spatial Temporal Intensity Metrics



vector  
WORLDWIDE LOW-EARTH SATELLITE TRIANGULATION NETWORK, 364 CAMERAS

IDMaps assists Network Time Protocol (NTP) servers establish long term peering relationships

FIREFLY HEARTBEAT Synchronization Algorithm



FIREFLY – INSPIRED HEARTBEAT SYNCHRONIZATION ALGORITHM  
“LENGTH OF REAL TIME CYCLE IS ARBITRARY AS LONG AS NODES EVENTUALLY AGREE”  $\Delta\delta$

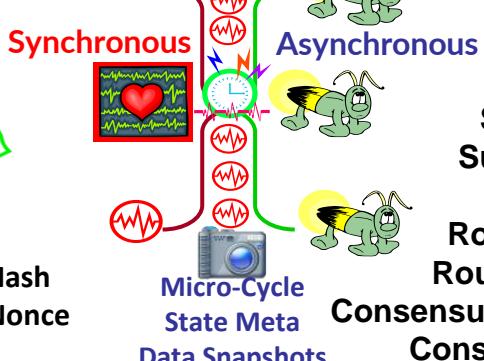
DAG finite directed graph  
= no directed cycles

$$\sum \Delta\delta \times$$



Round created  
Witness  
0 / 1

Hashgraph Member Event Transaction Consensus Order Timestamp Gossip protocol Self-parent Other-parent Graph Hash Hashgraph



Famous witness  
Election  
0 / 1



Vote  
See  
0 / 1



Strongly see  
Supermajority  
Decide  
0 / 1



Round created  
Round received  
Consensus timestamp  
Consensus order  $\Delta\delta$

Hash  
Nonce

Micro-Cycle  
State Meta  
Data Snapshots

# Proof of Burn



Proof of burn (POB) operates on the principle of allowing miners to “burn” virtual currency tokens. They are then granted the right to write blocks in proportion to the coins burnt.

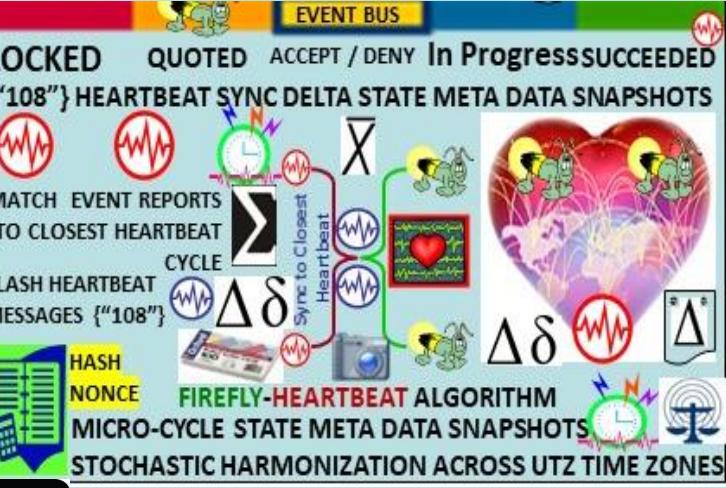
Iain Stewart, the inventor of the POB algorithm, uses an analogy to describe the algorithm: burnt coins are like mining rigs. In this analogy, a miner burns their coins to buy a virtual mining rig that gives them the power to mine blocks. The more coins burned by the miner, the bigger their virtual mining "rig" will be.<sup>2</sup>

To burn the coins, miners send them to a verifiably un-spendable address. This process does not consume many resources (other than the burned coins) and ensures that the network remains active and agile. Depending upon the implementation, miners are allowed to burn the native currency or the currency of an alternate chain, such as Bitcoin. In exchange, they receive a reward in the native currency token of the blockchain.



You can send out transactions to the network that will burn your own cryptocurrency coins. Other participants can mine/burn on top of your block, and you can also take the transactions of other participants to add them to your block. Essentially, all of this burning activity keeps the network agile, and participants are rewarded for their activities (both burning their own coins and burning other people's coins).

To prevent the possibility of unfair advantages for early adopters, the POB system has implemented a mechanism that promotes the periodic burning of cryptocurrency coins to maintain mining power. The power of burnt coins “decays” or reduces partially each time a new block is mined. This promotes regular activity by the miners, instead of a one-time, early investment. To maintain a competitive edge, miners may also need to periodically invest in better equipment as technology advances.



IEEE C37.118 Time Synchronization  
Harmonization Heartbeat update Interval  
PMU data time-stamp measure C37.118

Phase 2: Shared file stores data for 5 tags:

(1) Active ID

(2) Heartbeat 1.

(3) Heartbeat 2.

(4) Device Status 1.

(5) Device Status 2.



TAG	Volume / Size + / - Of rig	Token Award
{"Org_ID"} ActiveID	[UFO2_ACTIVEID]	</EVENT>
IF1_Heartbeat (IF-Node1)	[UFO2_HEARTBEAT:#]	</EVENT>
IF2_Heartbeat (IF-Node2)	[UFO2_HEARTBEAT:#]	</EVENT>
{"UUID"} IF1_DeviceStatus (IF-Node1)	[UFO2_DEVICESTAT:#]	</EVENT>
{"UUID"} IF2_DeviceStatus (IF-Node2)	[UFO2_DEVICESTAT:#]	</EVENT>
IF1_State (IF-Node1)	$\Delta\delta$	[UFO2_STATE:#] $\Delta\delta$ IF_State
IF2_State (IF-Node2)	$\Delta\delta$	[UFO2_STATE:#] $\Delta\delta$ IF_State

# Proof of Capacity PoC



**consensus mechanism algorithm for mining devices to use hard drive space to decide mining rights, validate transactions**

Proof of capacity for mining devices, also known as blockchain nodes, to use empty space on their hard drive to mine the available [cryptocurrencies](#).



Instead of repeatedly altering the numbers in the block header & repeated hashing for the solution value as in a PoW system, PoC works by storing a list of possible solutions on the mining device's hard drive before mining activity starts



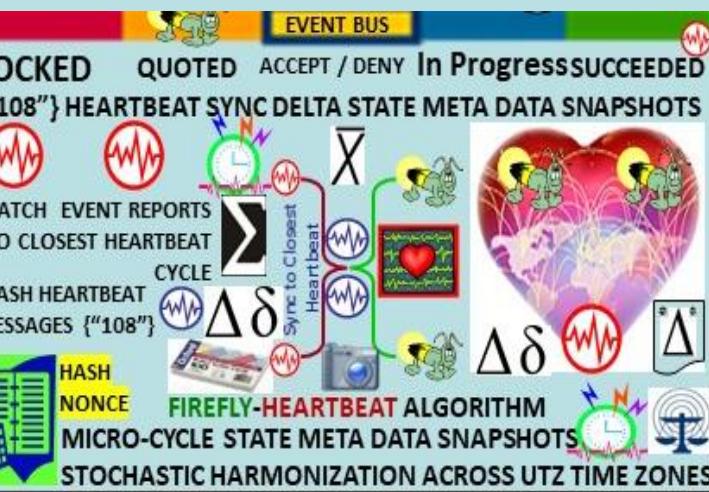
The larger the hard drive, the > possible solution values one can store on the hard drive, the more chances a miner has to match required hash value from his list, resulting in more chances to win the mining reward.



Analogy: if lottery rewards are based on matching the most numbers on the winning ticket, then a player with a longer list of possible solutions will have better chances of winning. Additionally, the player is allowed to keep using the lottery ticket block numbers again and again repeatedly.



Bitcoin purchase akin to property

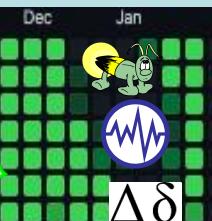


# PoST Proof-of-Spacetime (PoST)

PoST shows that physically storing data (spent "spacetime" resource/allocated storage capacity to the network) over a certain period of time.

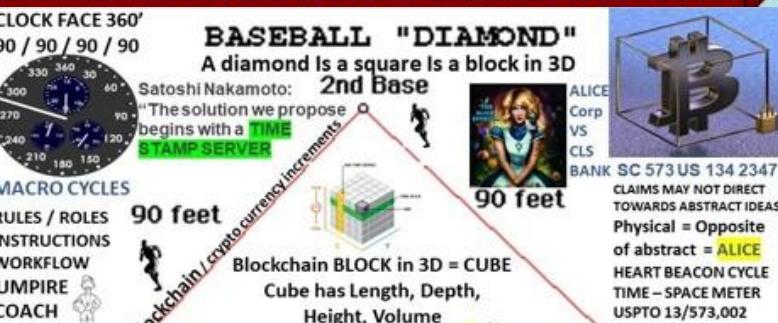


PoST users / nodes must prove that they are spending a certain amount of space for storage.

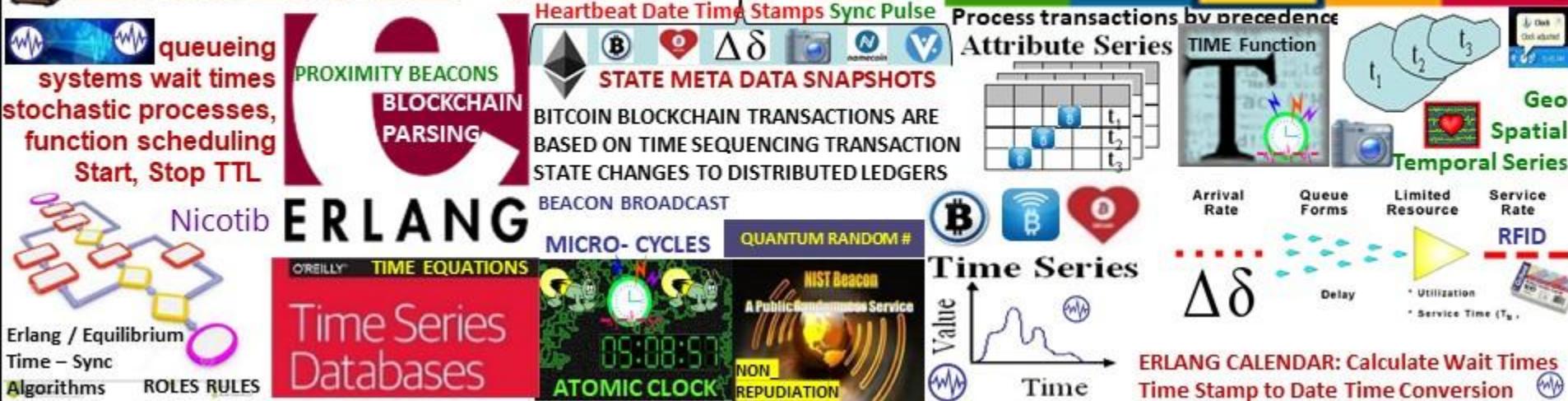
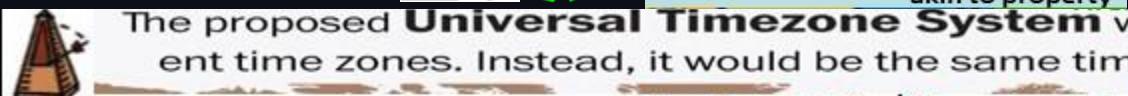


DISTRIBUTED AUTONOMOUS ORGANIZATIONS DAO

## Heart Beacon Cycle FEDERATE / TRADE FEDERATIONS



The proposed Universal Timezone System would do away with all these different time zones. Instead, it would be the same time all over the world, all the time.



# Proof of Authority



{"GROUP ID"}  
{"Org\_ID"}

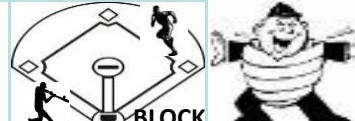
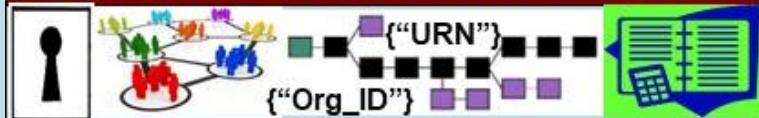
Not pay to play, Node identiy is kept as stake

A PoA network are secured by validators, that are selected democratically by existing validators. The nodes on the PoA network are rewarded for validating the transactions on the network. The identity of the validator is kept anonymous by encryption and secured cryptographically. It is revealed only as a negative reinforcement when the validator processes a fraudulent or a malicious transaction.



A notary license verifies the identity of the person formally, a notary license is released by the Federation / Government after extensive verification. The identity of the validator is kept for cross-referencing with the notary data and blockchain data

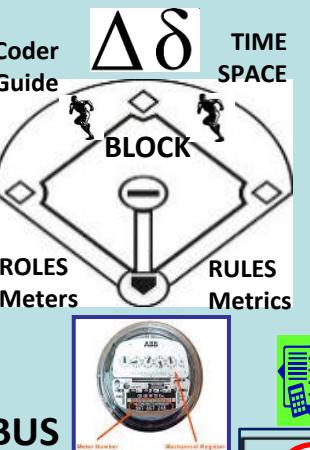
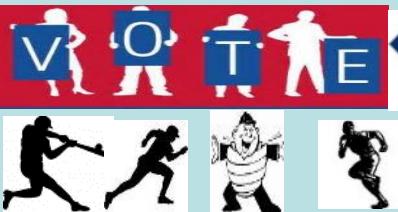
Parity supports a Proof-of-Authority consensus engine. Proof-of-Authority is a replacement for Proof-of-Work, and can be used for private or centralized chains. PoA as tested by a Kovan test network improves outdated economic models.



# BTC NG NEX GEN / Heart Beacon Cycle 13/573,002

## KEY BLOCKS:

- NO CONTENT = NULL
- LEADER ELECTION



MVP

EVENT BUS

## MICRO BLOCKS:

- ONLY CONTENT
- NO CONTENTION



NDN

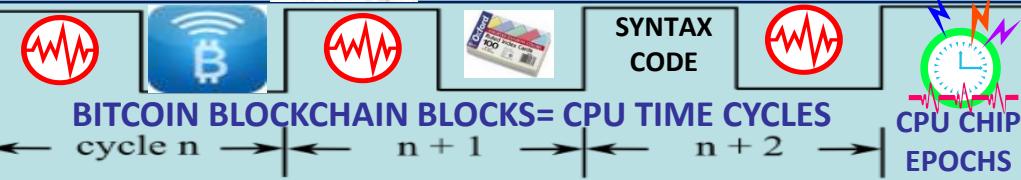
XBRIL / CDL / DAML  
STOCK MIC CODES

STRUCTURED  
MILITARY MESSAGE  
TEMPLATE FORMS  
LOGIC / FILTERS



SYNTAX  
LEXICON LIBRARY

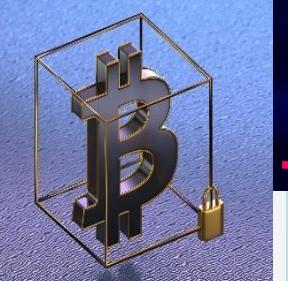
CPU CHIP  
EPOCHS



long exponential  
intervals (10 min)

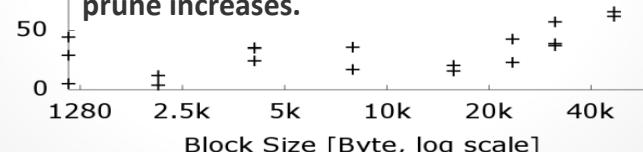


COMMAND SYNTAX  
RESTFUL State Transfer



Subjective Time to Prune

Additional metrics used by researchers included "time to prune", or the time it takes for miners whether they are on the correct "branch" or version of the blockchain they are processing transactions. As block sizes increase, suggested time to prune increases.



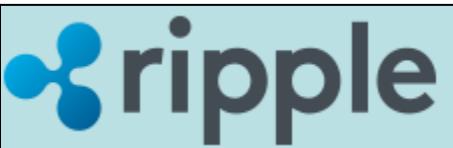
short deterministic  
intervals (10 sec)

MACRO – CYCLES



ATOMIC CLOCK

MICRO-CYCLES



real-time gross settlement system,  
currency exchange, remittance network

A.K.A Ripple Transaction Protocol or Ripple protocol, built on a distributed open source Internet protocol, consensus ledger and native currency called XRP. Ripple enables "secure, instant and nearly free global financial transactions of any size with no chargebacks." Ripple supports tokens representing fiat currency, cryptocurrency, commodity or any other unit of value such as frequent flier miles or mobile minutes. Ripple is based around a shared, public database or ledger, which uses a consensus process that allows for payments, exchanges and remittance in a distributed process.

Connects to receiving bank's  
Ripple Connect to exchange KYC,  
risk info, fees, payment details,  
**expected time** of funds delivery

Provides information about total  
costs of the transaction



Workflows are serially executed  
Except first two work flow are  
workflows are based on **event**  
**pull model**



Bitcoin Address Shortener

Bitcoin Address Shortener is an Android app that you can use to shorten those lengthy bitcoin addresses!

Simply enter a long Bitcoin address to have it transformed into a short one, and VICE-VERSA!

You can get it for free [here!](#)

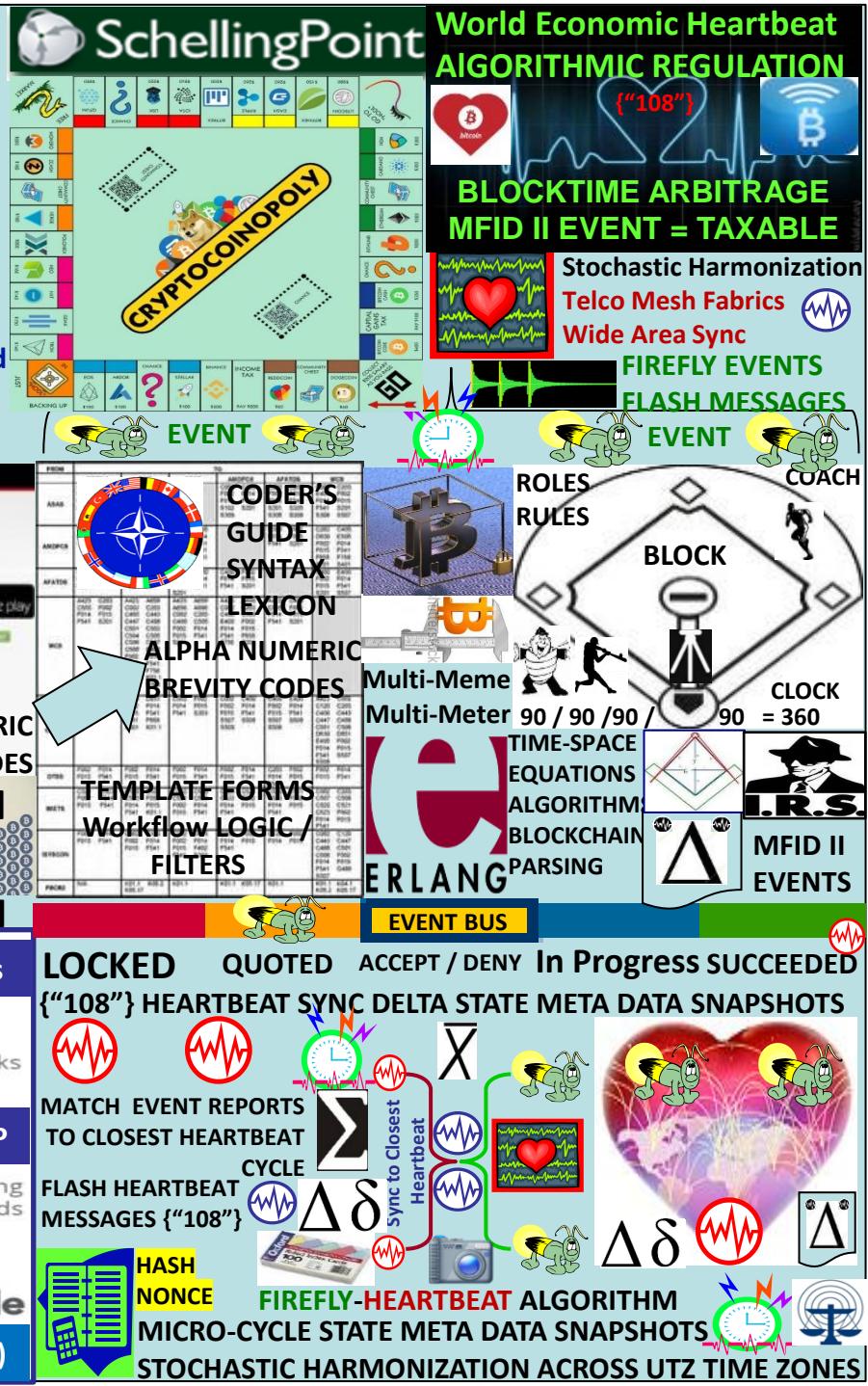
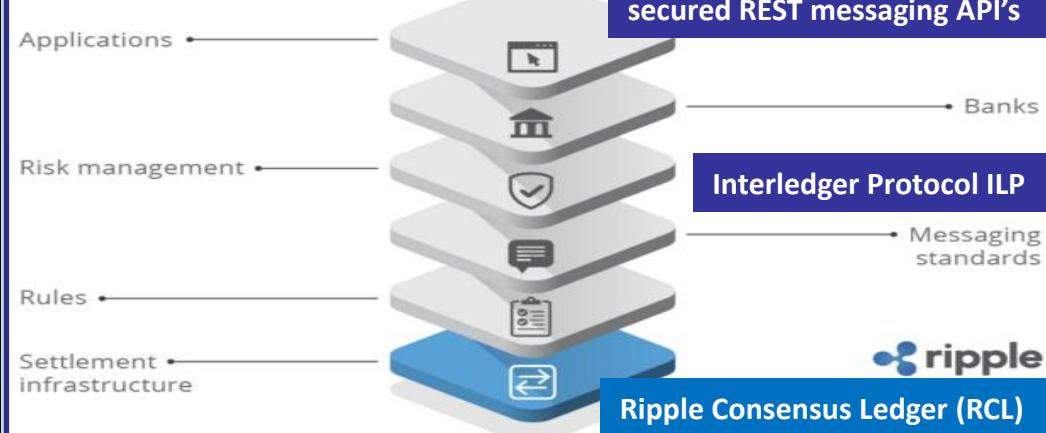
ALPHA NUMERIC BREVITY CODES A.I.

To retrieve addresses us computer, use [bit.co](#)

Clock Clock adjusted 5:45 PM

Blockchain.info

Neutral transaction protocol



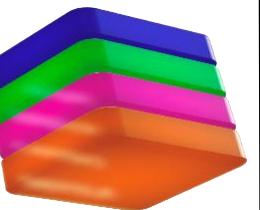


## PROTON A CHAIN Virtual Machine

## CONTRACT C CHAIN Smart contract

## PLATFORM P CHAIN Meta Data

## EXCHANGE X CHAIN Cross blockchain



Universal @names Identity / Governance / Resources / Staking

Snowball Consensus

Algorithm

preference := pizza

consecutiveSuccesses := 0

while not decided:

ask k random people preference

if >= α give the same response:

    preference := response with >=

α

    if preference == old preference:

        consecutiveSuccesses++

    else:

        consecutiveSuccesses = 1

    else:

        consecutiveSuccesses = 0

    if consecutiveSuccesses > β:  
        decide(preference)

EOSIO computer function emulation  
NET, CPU bandwidth, RAM data  
Publishing, Voting based not mining

Delegated Proof  
of Stake {"Org\_ID"}



coordinates validators, keeps track  
of active subnets, SNOWMAN  
consensus Token representation of  
real-world resources (e.g., equity,  
bonds) smart contract rules </URN>



DAG Acyclic Graph Parameters:

n: number of participants

k (sample size): between 1 and n

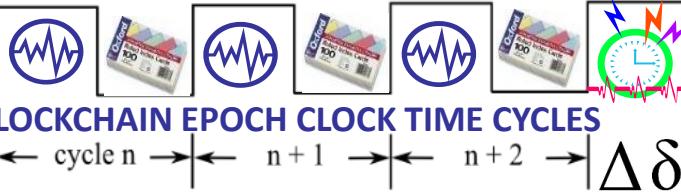
α (quorum size): between 1 and k

β (decision threshold): >= 1

ALL THINGS NET, NET OF \$\$\$

1) EPOCH TIME INTERVALS

2) SYNTAX (not) used in epochs

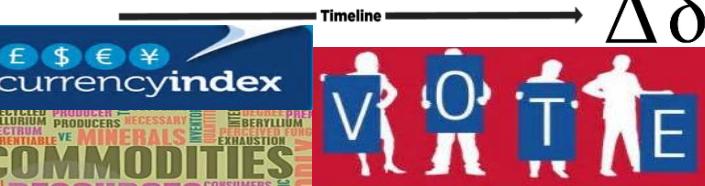
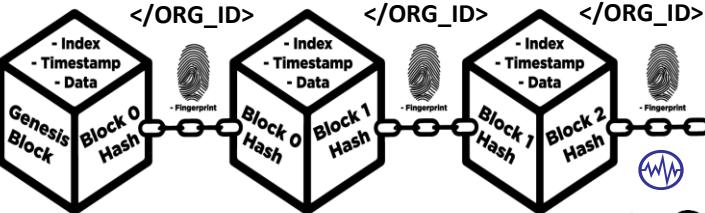


GENESIS BLOCK: "Layers" = follow on epoch time intervals

Block 0

Block 1

Block 2



SECURITY TOKEN: A DIGITAL  
ASSET THAT'S BACKED UP  
BY TANGIBLE ASSETS IN THE  
REAL WORLD </URN>  
</URN>  
</URN>



"all digital currency networks, the base layer of people  
generating the blockchain — "miners," "stakers,"  
"witnesses," "validators," or "forgers" get paid"



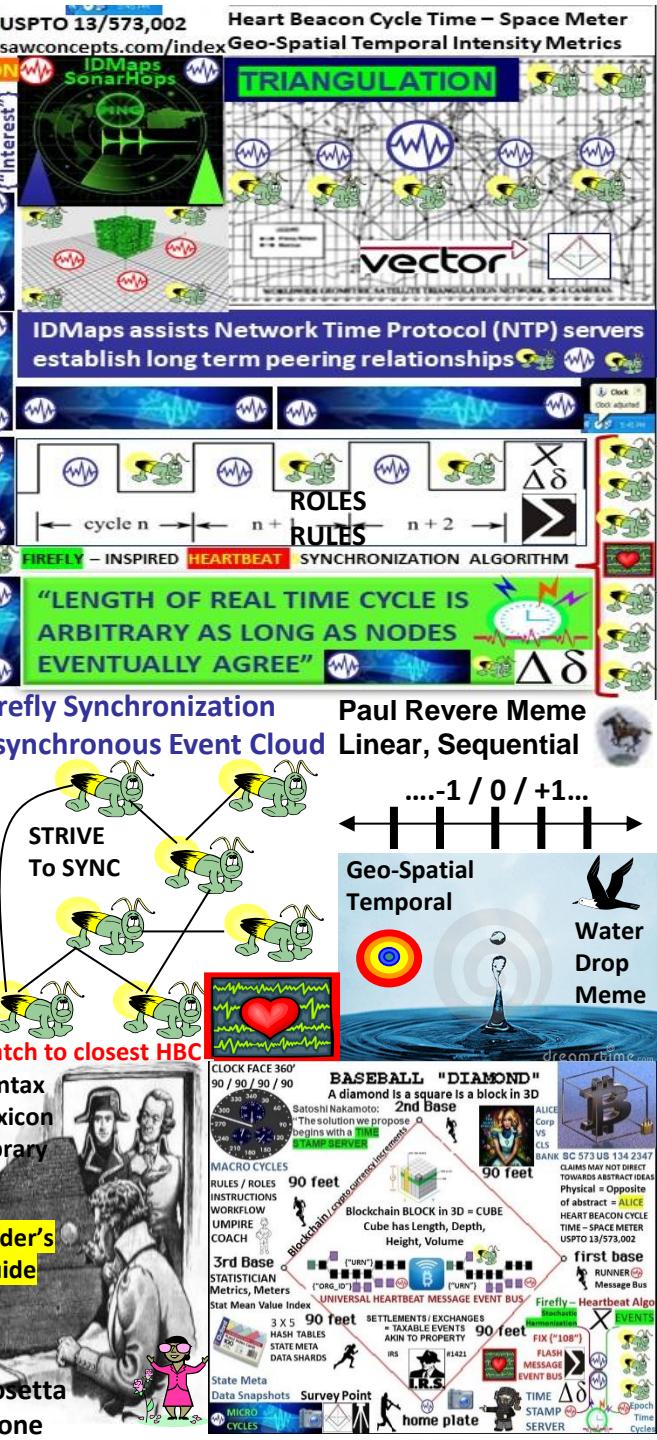
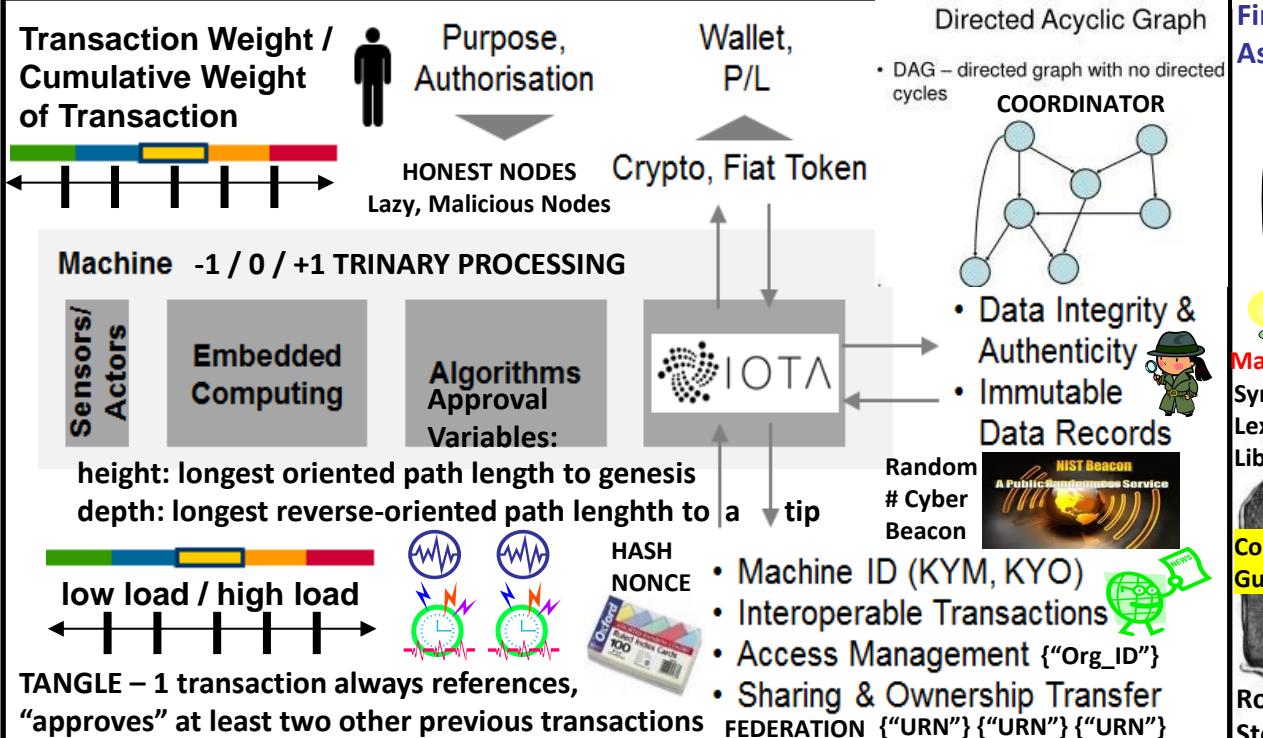


OTA: Internet Of Things IOT distributed ledger  
with microtransactions without fees

# Tangle, a directed, ASYNCHRONOUS acyclic graph (DAG) for storing transactions

**Contrary to Blockchains, consensus is no longer decoupled, It is an intrinsic part of the system for decentralized, self-regulating peer-to-peer network. Transfer value without fees**

The iota network is ASYNCHRONOUS. In general, nodes do not necessarily see the same set of transactions. The tangle may contain conflicting transactions. The nodes do not have to achieve consensus on which valid transactions have the right to be in the ledger, meaning all of them can be in the tangle. However, in the case where there are conflicting transactions, the nodes need to decide which transactions will become orphaned. Nodes use the tip (unapproved transaction) selection algorithm to decide between two conflicting transactions. GHOST protocol main ledger = tree





# ZEPPELIN

ZEPPELIN OPEN, GLOBAL ECONOMY

# OpenZeppelin open framework of reusable, secure smart contracts in the Solidity language

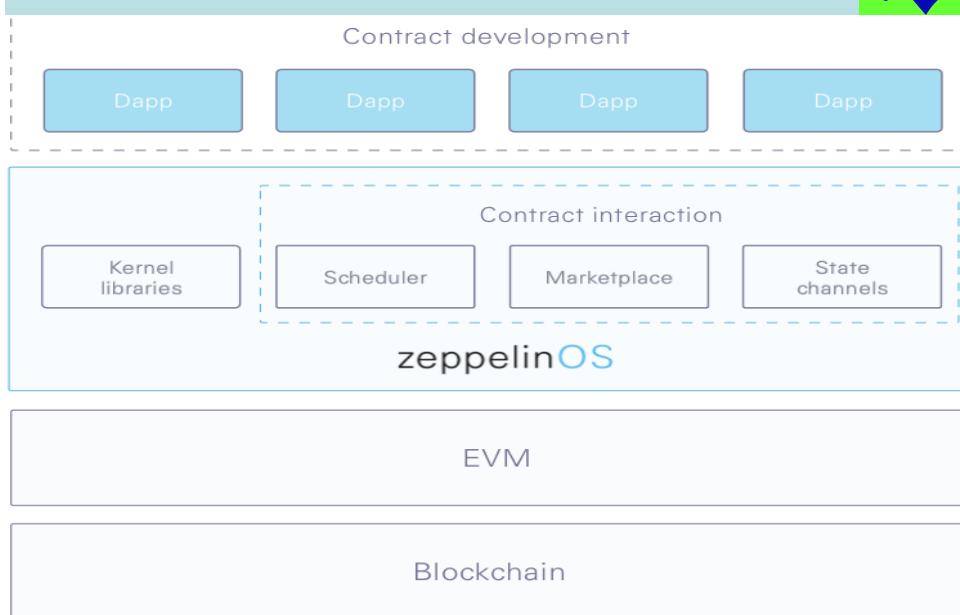
**zeppelinOS**, operating system for smart contracts  
*“the rate of innovation in building decentralized applications is limited by the manual and duplicative efforts developers must make to ensure basic usability and security.”*

## ZEPPELIN / zeppelinOS Common Functionality:

**zeppelinOS Kernel** common set of functions for smart contracts requesting services from the OS rather than re-implementing them from scratch. Functions will be available as an on-chain standard library of reusable contracts and functions, nspired by [OpenZeppelin](#) Libraries

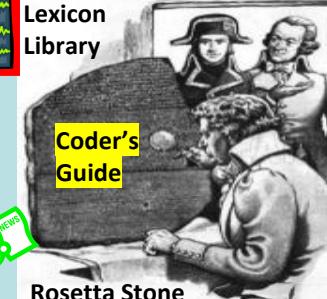
# Create and customize your own ERC20 Token.

- Create capped, refundable and/or whitelisted crowdsales.
  - Create a trustless bug bounty.
  - Create pausable, ownable, balance-limited contracts.
  - Set up a token vesting or token locking contract.



# HEART BEACON CYCLE TIME – SPACE METER ECO-ECONOMETRICS ON THE BITCOIN BLOCKCHAIN

Syntax 300 + Templates



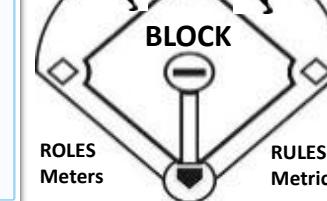
# STRUCTURED DATA EXCHANGE

## **LOGIC / FILTERS ALPHA-NUMERIC BREVITY CODES**

## STOCHASTIC HARMONIZATION for TELCO Mesh Fabrics



PARISIENNE



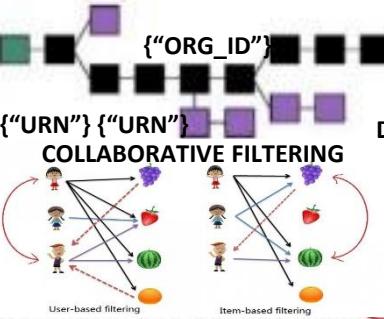


# EGAAS

ELECTRONIC GOVERNMENT AS A SERVICE

Distributed digital asset registries were the first projects that used blockchain systems such as databases designed for secure storage of records on real estate property, stocks, copyright and so on. It is assumed hosting any document on the blockchain is equivalent to notarization of its content at a fixed time point.

**The Heart Beacon Cycle HBC: an adaptive procedural checklist of form templates, procedures, SOP building blocks useful to form Eco-responsible trade federations Procedural template checklist items links to detailed technical, process... treatises**



# TEMPLATE ENGINE LANGUAGE ETF

O'REILLY

## NAMED DATA NETWORKING, corrections

## Time Series Databases

## BLOCKCHAIN PARSING, SYNCHRONIZATION



The current standard time common throughout the world is based on a 24-hour clock, with zones that are either 12 hours ahead or behind **Coordinated Universal Time (UTC)**. However, these time zones are decided upon by individual governments, without overall coordination and can even extend fourteen hours ahead UTC. **INCENTIVIZE ECO-FRIENDLY TRANSACTIONS**



The proposed **Universal Timezone System** would do away with all these different time zones. Instead, it would be the same time all over the world, all the time.





**“EARTHDAY EVERYDAY ON THE BITCOIN BLOCKCHAIN”**

**"GIVE A HOOT, DON'T POLLUTE"** Woodsy The Owl

# GNOSIS

Gnosis Wisdom (WIZ) pay platform fees in Services layer, Wiz subsidize other participants fees, provide initial subsidies for markets, or market trading.

**WIZ pegged to \$1 USD worth of fees. WIZ acts as coupon for \$1 of Gnosis**

**Gnosis tokens (GNO) generate Wisdom token s(WIZ) via smart contract**

GNO token holders agree to “lock” tokens in a smart contract (30-365 days). A multiplier is added for longer lock durations. Smart contract determines selected lock duration and applies that duration to a formula regulating supply of WIZ tokens currently in use. Once users execute the contract, 30% of their WIZ are distributed for use, the remaining 70% is distributed proportionally over the locked duration. When lock duration expires, the locked GNO ceases to generate WIZ & GNO is freely transferable

The current standard time common throughout the world is based on a 24-hour clock, with zones that are either 12 hours ahead or behind **Coordinated Universal Time (UTC)**. However, these time zones are decided upon by individual governments, without overall coordination and can even extend fourteen hours ahead UTC.



**“Our mission is to build an accessible prediction market platform enabling free flow of useful information / the “Google” of Customized Information Searching”**

# Futarchy GnosisAMA

# Gnosis trading interface alpha **TERR** WIZ token fee payment INFORMATION ARBITRAGE ECONOMICS



# TERRACYCLE Price OMICS Oracle

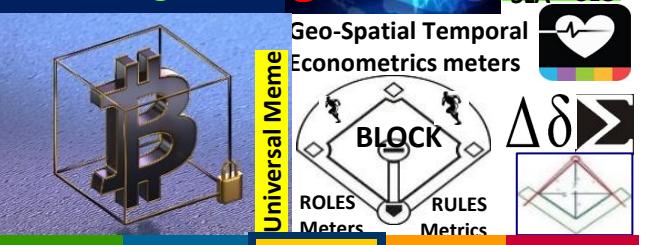


# THE TERRA (TRC)

## Trade Reference Currency



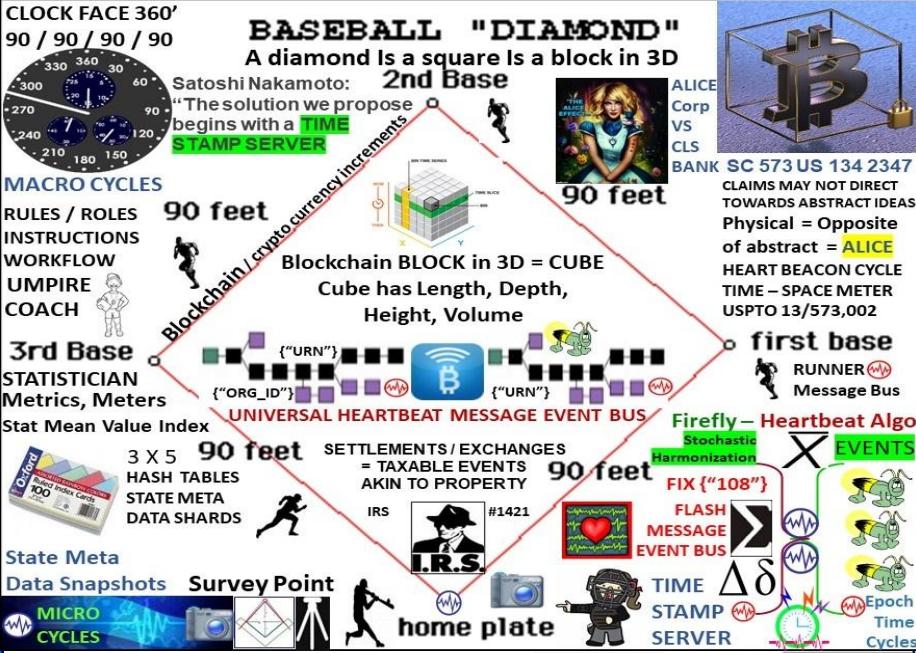
## Demurrage Fees



Firefly inspired Heartbeat Synchronization nodes strive to sync in a distributed system. Nodes generate periodic “heartbeat” events approximately at the same time. It differs from classical clock sync in that nodes are not interested in counting cycles to agree on the ID of the current clock cycle. There is no requirement to sync during a cycle length in real time as long as length is bounded & all nodes agree eventually”



Bitcoin Classic seeks to mitigate the problem of more transactions, which are causing transaction backlogs and increased transaction costs, by increasing the block size - the number of kilobytes in a block of transactions - from 1MB to 2MB.



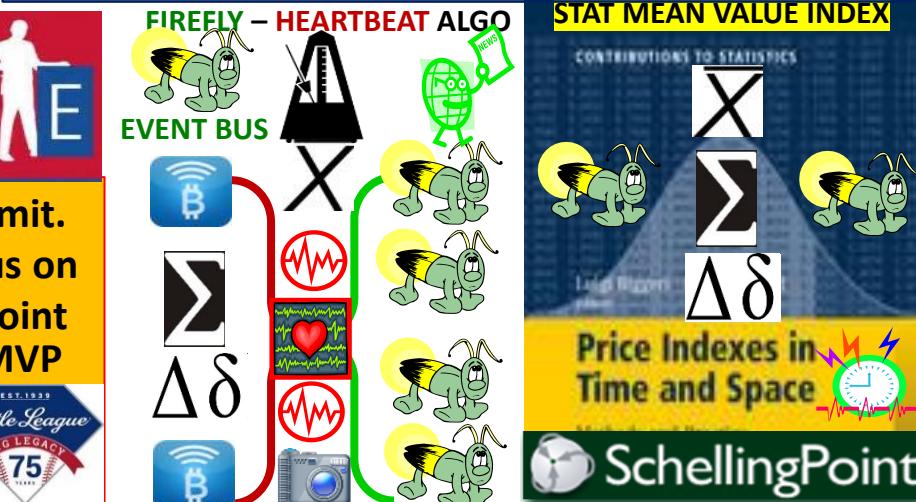
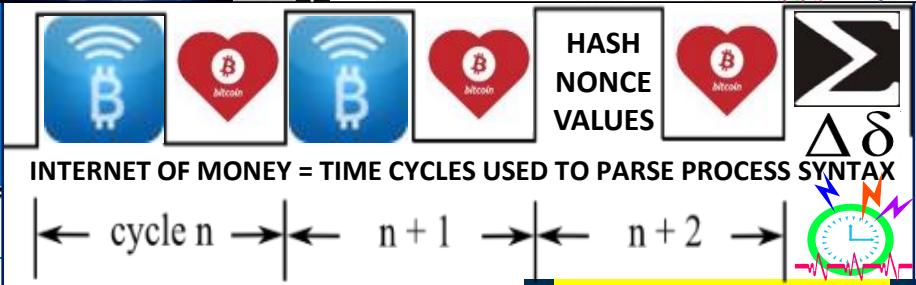
### ALL THINGS INTERNET FORMED W 1) TIME EPOCHS 2) SYNTAX



**BitPay Core:** limits: 1) block size 'hard limit' adjusted on a regular basis coinciding with difficulty adjustments, 2) miner set 'soft limit' like focal points in Unlimited.  $\Delta\delta$



**Bitcoin Unlimited:** absence of a hard-coded block-size limit. Users manually set limits on their own nodes; Consensus on a limit expected to emerge naturally at Schelling focal point. Unlimited introduces a level of democracy into development, management of the implementation, . the community votes on changes.



Microsoft Blockchain modular framework:  
choose combination of tech best fits Biz domain

AZURE: Core/Kernel/Universal Protocol

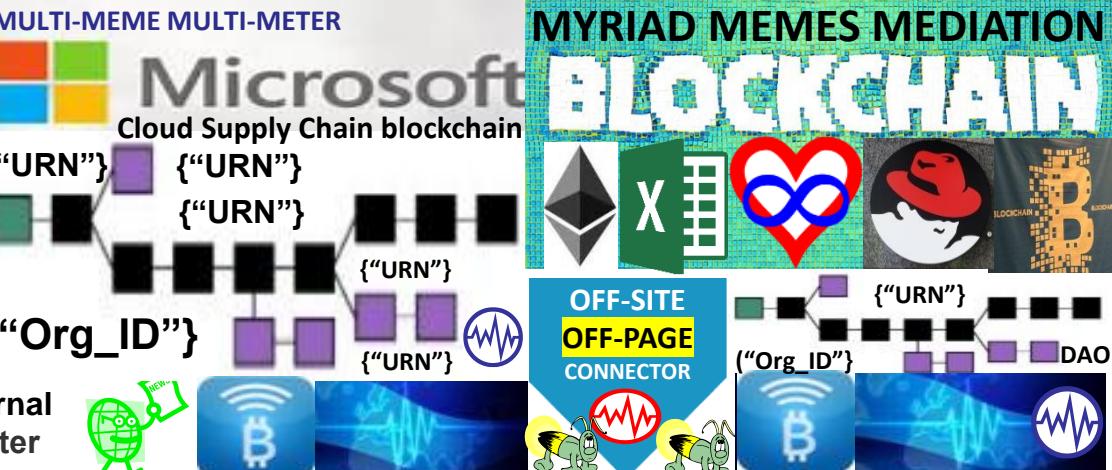


Fabric Tier consortium node CryptoDelegate in  
VM or UTXO Adapter, (Azure, AzureStack, AWS..)

Unspent Transaction Output protocols UTXO

Crypto Tokenized Assets Digital Bearer Bonds  
unique identity for owned artifacts

Utility Cryptlets encryption, time & date events, external  
data access, authentication “CryptoDelegate” / adapter



Blockchain middleware: identity and operations management, data,  
intelligence services like analytics and machine learning. New middleware  
works with existing Azure services, like Active Directory and Key Vault

Blockchain Fabric: Blockchain Gateway Services [Interledger](#)-  
like services to allow for SmartContracts and tokenized  
objects to be passed between different ledger systems.

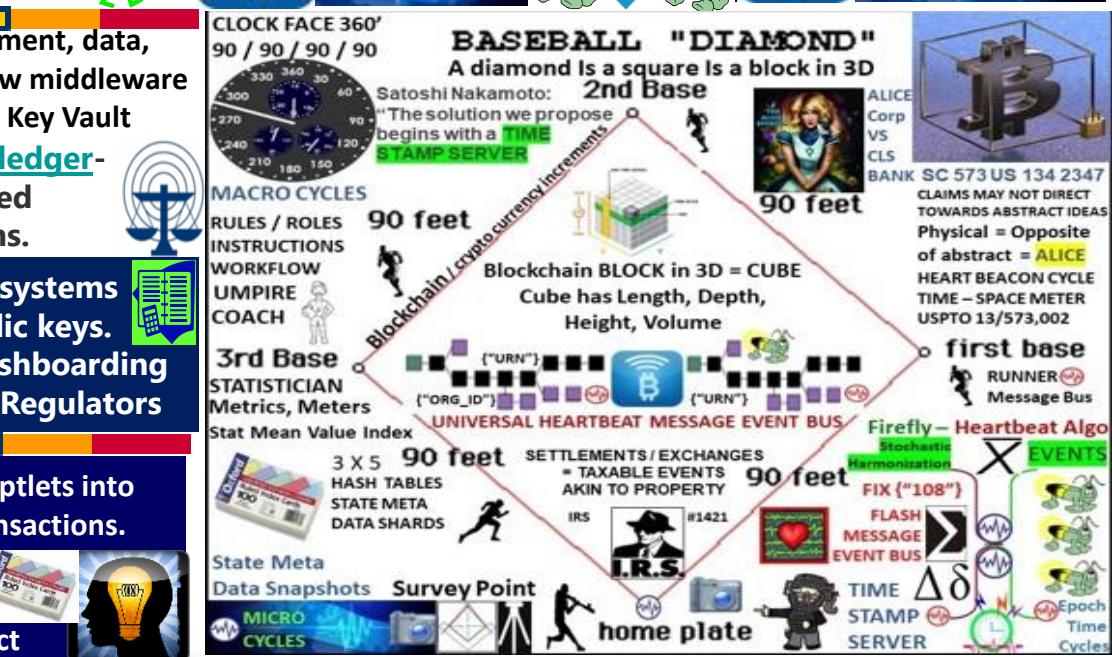


Data Services - key data services like distributed file systems  
(IPFS, Storj, etc) of off-chain data referenced by public keys.



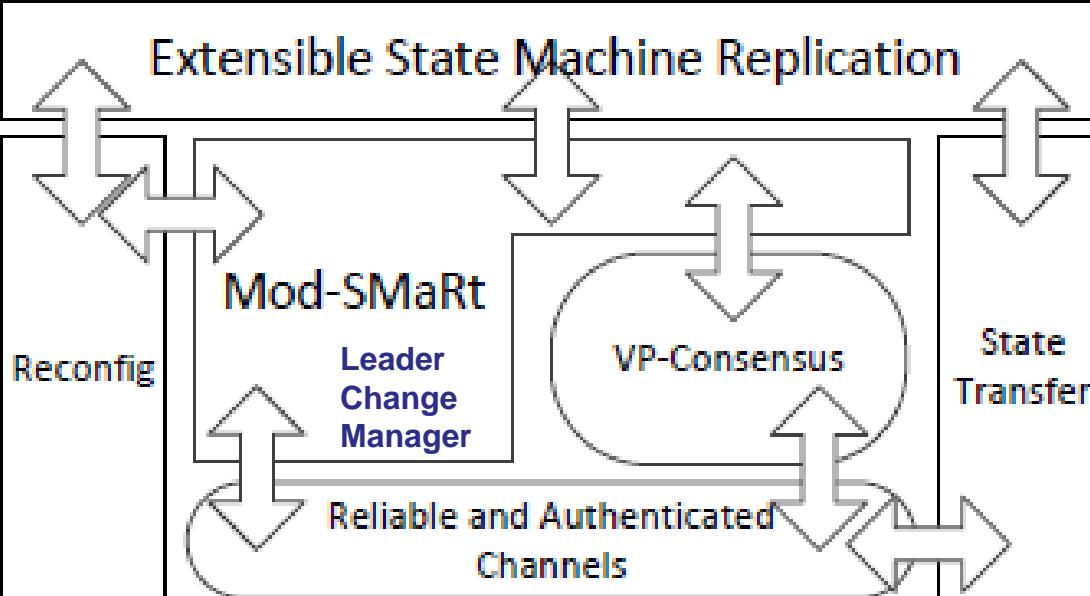
Auditing, Advanced Analytics, Machine Learning, Dashboarding  
services for SmartContracts, Blockchains, Consortia, Regulators

Utility and Contract. Developers can discover and enlist Cryptlets into  
their SmartContracts to create more robust and trusted transactions.  
Contract Cryptlets are full delegation engines that act as  
SmartContract surrogates off the chain. Cryptlets provide  
execution logic and securely store data in the Smart Contract



## Byzantine Fault-Tolerant State Machine Replication

BFT-SMART dynamic distributed system processes are divided in two nonintersecting subsets: replicas and clients. Each system process has a unique identifier. During dynamic system execution, a sequence of views is installed to denote the reconfigurations due to replicas joins and leaves. A view is composed by a set of replicas identifiers.



**Modularity** is achieved using a set of building blocks (or modules) containing the core functionality of BFTSMART. Blocks are divided in three groups: communication system, state machine replication and state management.

**BFT-SMART needs an eventually synchronous system**

**Total order multicast is achieved using the Mod-SMaRt protocol and with the Byzantine consensus algorithm** Clients send requests to all replicas in cv, and wait for replies. replicas store each batch of ordered requests to a (stable) log and, periodically, take snapshots of the application state and store it in stable memory.

USPTO 13/573,002 HEART BEACON CYCLE TIME-SPACE METER

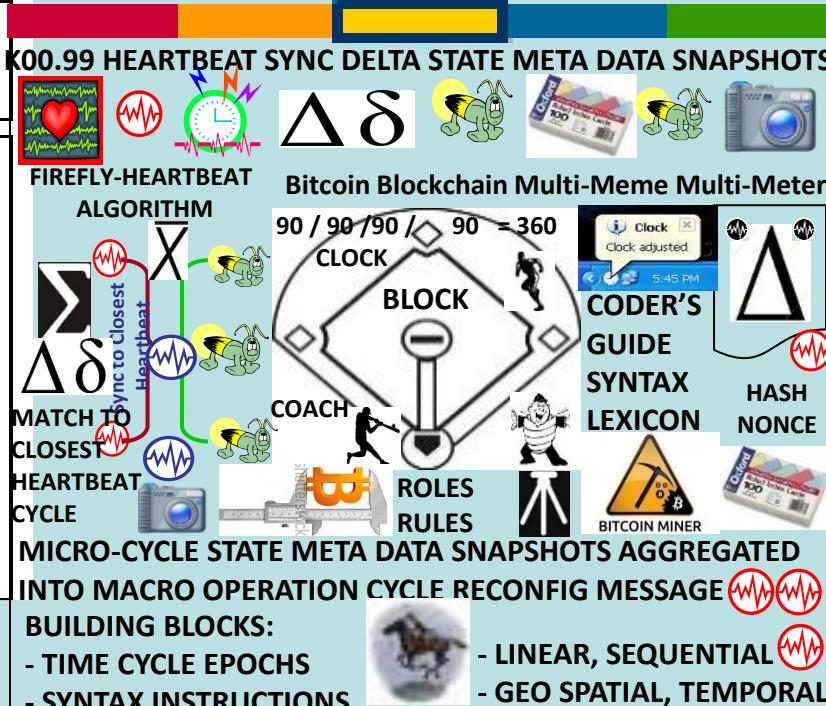
US Ct ALICE CORP V CLS BANK

## **PHYSICAL = OPPOSITE OF ABSTRACT**

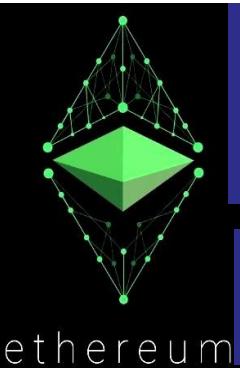


# DERIVED FROM BATTLEFIELD DIGITIZATION DISTRIBUTED AUTONOMOUS ORGANIZATION DAO SYSTEM OF SYSTEMS

**FEDERATED ID / ORGANIZATIONAL IDENTIFIER {"ORG\_ID"}  
ADDS, JOINS, DROPS, MOVES TO / FROM DAO  
CHANGES IN STATE VIEWED IN "APPLIQUE" OVERLAY VIEWS**



Firefly inspired Heartbeat Synchronization nodes strive to sync in a distributed system. Nodes generate periodic “heartbeat” events approximately at the same time. It differs from classical clock sync in that nodes are not interested in counting cycles to agree on the ID of the current clock cycle. There is no requirement to sync during a cycle length In real time as long as the length is bounded and all nodes AGREE ON IT EVENTUALLY”

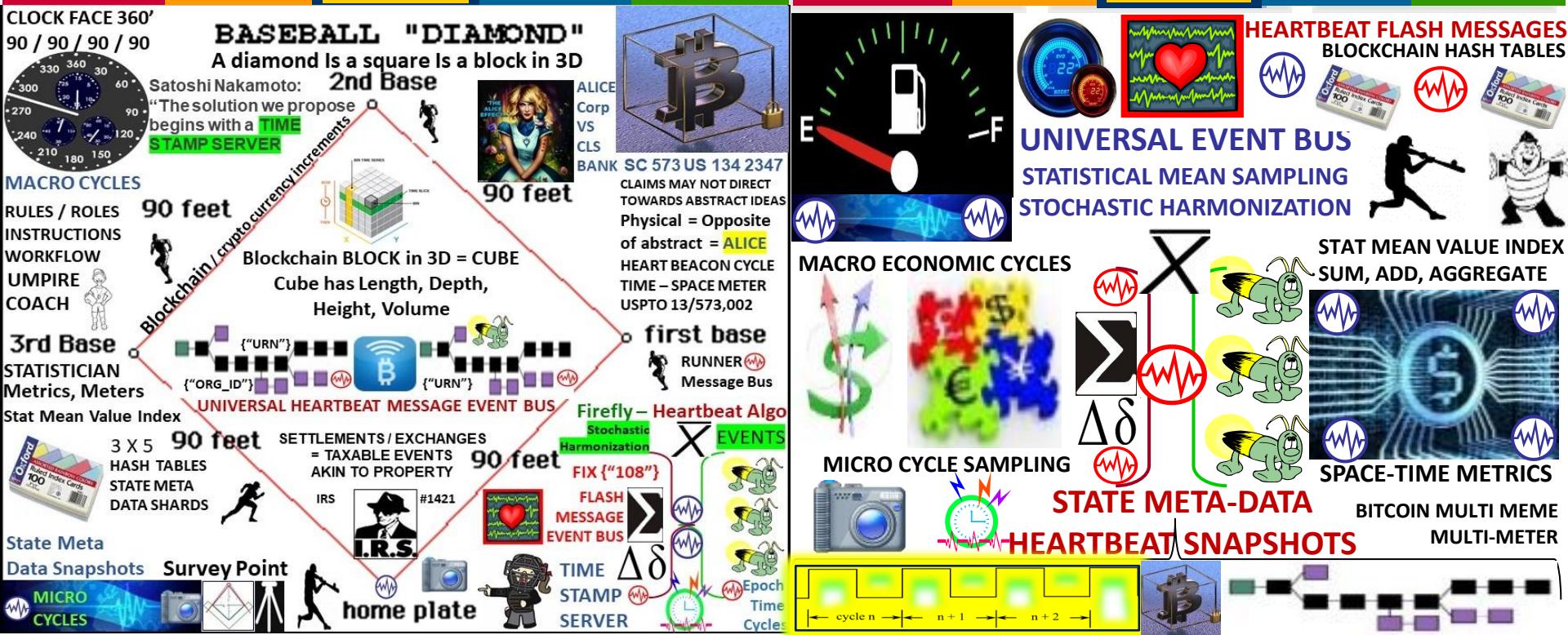


## ETHER: Compensate Resource Contribution

Gas: price to  
Run contract  
transactions

**Firefly - Heartbeat synchronization:** nodes in a distributed system generate periodic, local “heartbeat” events approximately at the same time with a goal of all nodes starting / ending cycles at the same time... **EVENTUALLY**

Casper is a security-deposit based economic consensus protocol. Nodes = “bonded validators” place security deposit (an action called “bonding”) If a validator generates an invalid action, account deposits are forfeited along with consensus privilege. Use of security deposits address “nothing at stake” problem; that behaving badly is not expensive. Casper is an **EVENTUALLY CONSISTANT** blockchain-based consensus protocol. CASPER favors availability over consistency



**DFINITY**

**RANDOM # BEACON**

**NIST Beacon**  
A Public Randomness Service

**QUANTUM RANDOM #**

**BLOCKCHAIN NERVOUS SYSTEM**  
HEARTBEAT {"108"} State Meta Data Snapshot Msgs

**STATEFUL DECENTRALIZED NET PROTOCOL:**  
Decentralized process workflows instead of  
Centralized Server farms

**GROUP Signature is random number**

- Number selects next group {"Org\_ID"} {"Org\_ID"}
- Next group use previous no. as message
- Verifiable Random Function
- Numbers verifiable using group public key
- New values produced in threshold agreement
- Random members {"Org\_ID"} {"Org\_ID"}**
- Each process is a member of multiple groups
- Groups intersect, have +/- 400 members
- BLS signature scheme**
- Math magic... If 51% of group members broadcast "signature shares" on a message, these are combined to create the group's threshold signature.

**HYPER GEOMETRIC PROBABILITY CALCULATOR**

**CONSENSUS / RANDOM BEACON**

Threshold relay chain generates randomness, records network metadata & validation tree "state root". State and updates to state stored on shards... State transitions passed to Validation Tree

**Each process has mining identity**

- Public key with meta data attached
- IDs mediate participation**
- Private network: trusted dealer defines list
- Public network: CC security deposit, USCIDs

**UTZ TIME ZONE SYNC**

**USPTO 13/573,002 HEART BEACON CYCLE TIME – SPACE METER**

**CLOCK FACE 360'**  
90 / 90 / 90 / 90  
330 360 30 60 90  
300 270 240 210 180 150

**BASEBALL "DIAMOND"**  
A diamond Is a square Is a block in 3D  
2nd Base

Satoshi Nakamoto:  
"The solution we propose begins with a TIME STAMP SERVER"

**MACRO CYCLES**

**90 feet**

Blockchain BLOCK in 3D = CUBE  
Cube has Length, Depth, Height, Volume

**3rd Base**

**STATISTICIAN Metrics, Meters**

**Universal Heartbeat Message Event Bus**

**3 X 5 HASH TABLES STATE META DATA SHARDS**

**SETTLEMENTS / EXCHANGES = TAXABLE EVENTS AKIN TO PROPERTY**

**IRS #1421**

**State Meta Data Snapshots Survey Point**

**MICRO CYCLES**

**home plate**

**Fix {"108"}**

**FLASH MESSAGE EVENT BUS**

**TIME STAMP SERVER**

**EVENTS**

**Firefly – Heartbeat Algo**

**STOCHASTIC HARMONIZATION**

**EVENTS**

**Epoch Time Cycles**

**HBC "ORG\_ID" {"URN"} CLASS ASSET TYPE {"UUID"} DEVICE TYPE INDEX CARD="SHARD"**



core blockchain code written in Erlang, for distributed, fault-tolerant, soft real-time and highly available non-stop applications.

**ERLANG API FOR BLOCKCHAIN**



**ORACLES:** crucial feature for most contracts, whether encoded as text or as code, is the ability to refer to values from the environment. æternity Oracle Machine provides real-world data to the blockchain. Each user can ask questions about the environment. Anyone can answer. Consensus mechanism invoked in case of disagreement.

MIT-licensed modules for easy implementation in blockchain consortiums. Free and open access for developers build on the æternity platform.

**CROSS – CHAIN ATOMIC SWAPS**

AE Tokens AE are access tokens to the æternity network and act as a unit of account for the resources spent on æternity.



Aeons: energy for applications implemented on the platform.

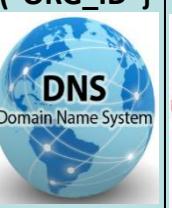
**ACCOUNTS & IDENTITY:** æternity's accounts are permission-less, but allow customization via schema.org's semantic web scheme. Create & own (**federated group**) / individual identities on the æternity network



("ORG\_ID")

("ORG\_ID")

NAMES (DNS) In the vein of Aaron Swartz' work and Namecoin, æternity features an easy to use name system, that is both decentralized and secure, while still supporting human-friendly, memorable names. The blockchain's state includes a mapping from unique human-friendly strings to fixed-size byte arrays, that are individually customizable.



Firefly Heartbeat Sync nodes strive to sync in a distributed system. Nodes emit periodic "heartbeat" events at approximately the same time. No need to sync during a cycle as long as the cycle length is bounded & nodes eventually agree

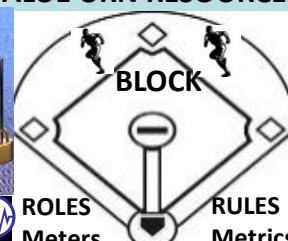
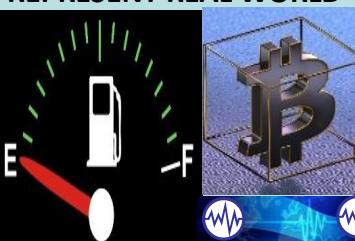
**AETERNITY CROSS-CHAIN ATOMIC SWAPS CORRESPOND TO HEART BEACON CYCLE'S USE OF BATTLEFIELD DIGITIZATION DERIVED HEARTBEAT SYNC DELTAS**



Terra Trade Reference Currency TRC "world currency" Bernard A. Lietaer Belgian economist proposed 1991 Basket of 9-12 most important commodities. Public issued demurrage fees for storage, shipping, handling

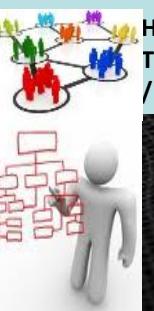
**TOKENS REPRESENT REAL WORLD VALUE URN RESOURCES**

ETHEREUM USES GAS GUAGE MEME INDICATING THRESHOLD MET / NOT MET



**BLOCK**  
ROLES Meters  
RULES Metrics

HBC's PRIMARY USE CASE IS TO ORGANIZE INDIVIDUALS IN TRADE FEDERATION GROUPS RE-USING BATTLEFIELD DIGITIZATION / ARIN Organizational Identifier Org\_ID for Ecosphere friendly trade



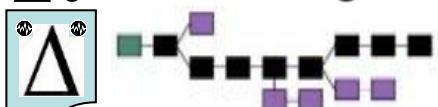
**Federation Gateway**  
("ORG\_ID")



# **HYPER LEDGER OPEN SOURCE BLOCKCHAIN**

## Core APIs, & SDKs

# $\Delta\delta$ Shared Ledger



# HEART BEACON CYCLE TIME – SPACE METER USPTO 13/573,002

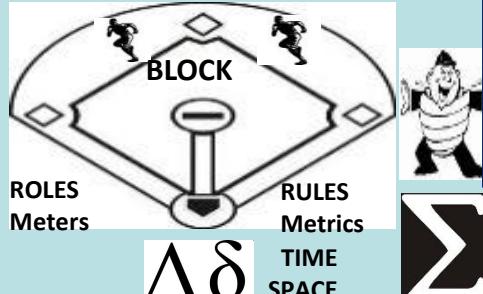


## METRICS (“Organization ID”) METERS

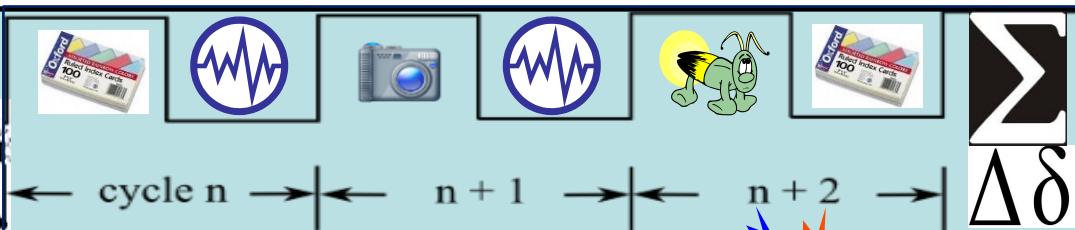
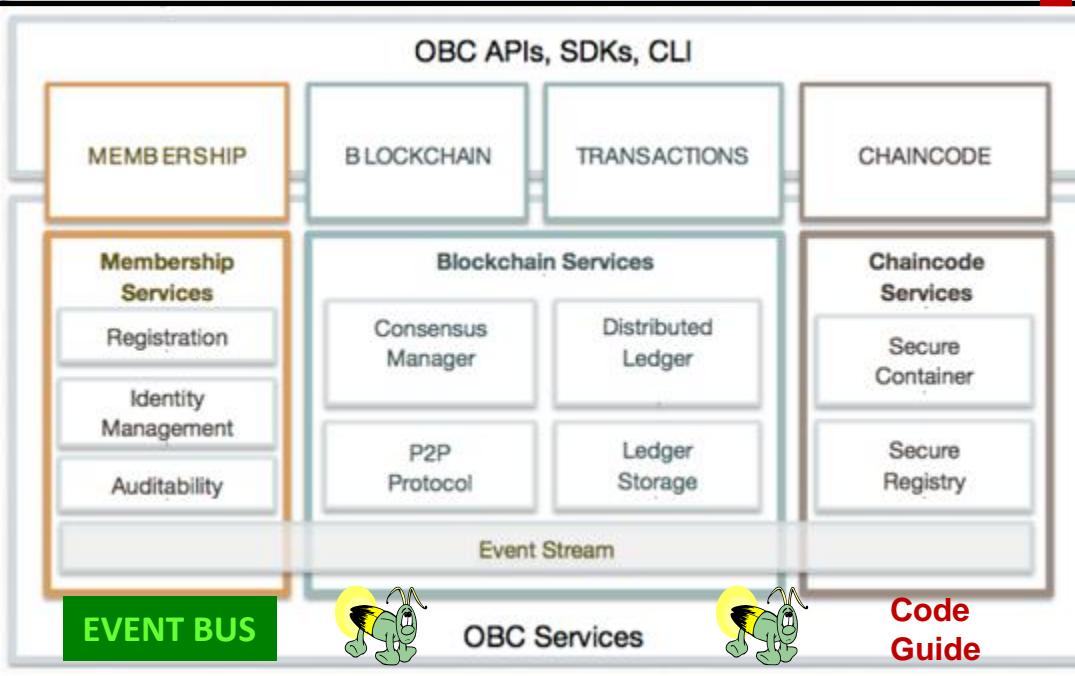
# RESTFUL SYNC DELTA CHANGE MANAGEMENT MICRO-MACRO CYCLE



## BLOCKTIME ARBITRAGE



**Code execution environment, ledger data structures, modular consensus fwk & algos, and modular membership services, modular storage and event fwks, network peers**

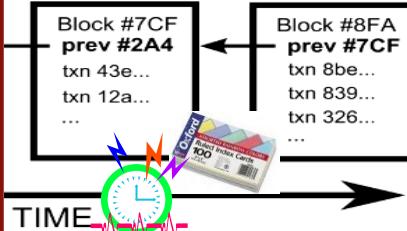


## **MICRO-MACRO CYCLE SCHEDULE**



FFIRNS  
FFUDNS

# Alpha-Numerics



# ROSETTA STONE

**300 + MESSAGE  
TEMPLATES**  
**USE CASES / GROUPED  
DATA TRANSACTIONS**  
**Alpha-Numeric Data**  
**Element ID -- #'s are the  
UNIVERSAL LANGUAGE**

**HYPER LEDGER USES  
JSON (“tag”” / YAML  
Text indentation –  
UNIVERSAL LANGUAGE  
= ALPHA-NUMERIC**



**"All decentralized, blockchain-based networks are DAOs, or decentralized autonomous organizations" Bitcoinist**

**“A DAO can be summed up as an organization of people who communicate with each other via a “network protocol,” which is to say that they communicate with one another via a ruleset”**

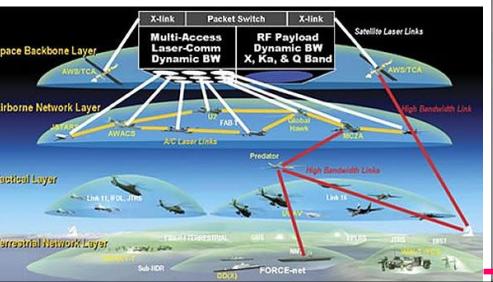
[LINK](http://bitcoinist.net/how-dash-dao-work/) <http://bitcoinist.net/how-dash-dao-work/>

**"all digital currency networks, the base layer of people generating the blockchain — "miners," "stakers," "witnesses," "validators," or "forgers" — all get paid to do so" "consensus," or an agreement upon what the rules should be; and second, the execution of said rules.**

**“Its makeup is thus: the block reward is divvied up in three parts. The first 45 percent goes to [Dash’s miners](#). Another 45 percent goes to its Masternodes. And 10 percent is set aside to fund whatever other jobs or expenditures the Dash network deems necessary”**

**InstantX: To solve the problem of lag time in transactions, Masternodes are able to instantly lock transactions** receive payments for their service to the network.

## DAO: RAND THINK TANK TERM COINED + / - 2001



STOCHASTIC HARMONIZATION **FIREFLY-HEARTBEAT** EVENT BUS

## **HEART BEACON CYCLE = IMPROVEMENT TO NETWORK CENTRIC WARFARE**



**Firefly - Heartbeat synchronization:** nodes in a distributed system generate periodic, local "heartbeat" events approximately at the same time with a goal of all nodes starting / ending cycles at the same time eventually = HB CYCLE

**STATE:** stored data at a given instant in time

**STATE CHANNELS:** blockchain interactions

which *could* occur on the blockchain, but instead get conducted off of the blockchain, without significantly increasing the risk of any participant.



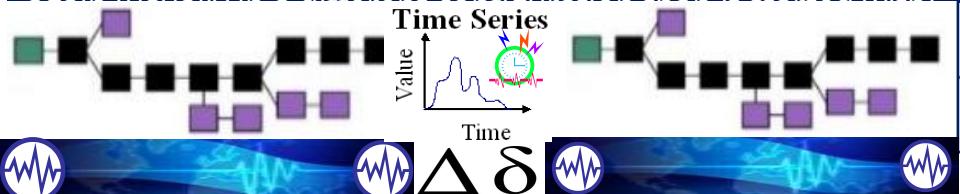
1. Part of the blockchain state is locked via multisignature or smart contract convention, so that a specific set of participants must completely agree with each other to update it.



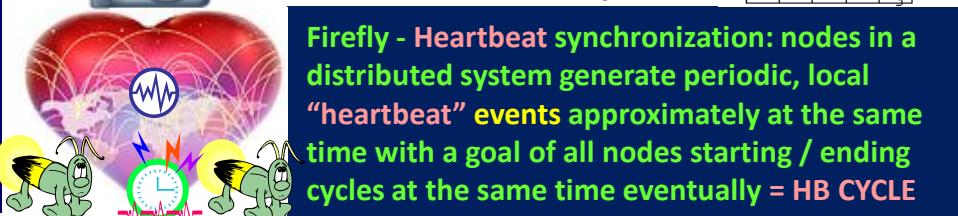
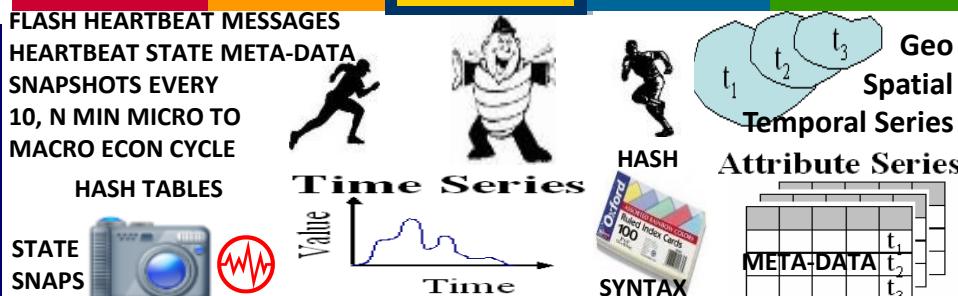
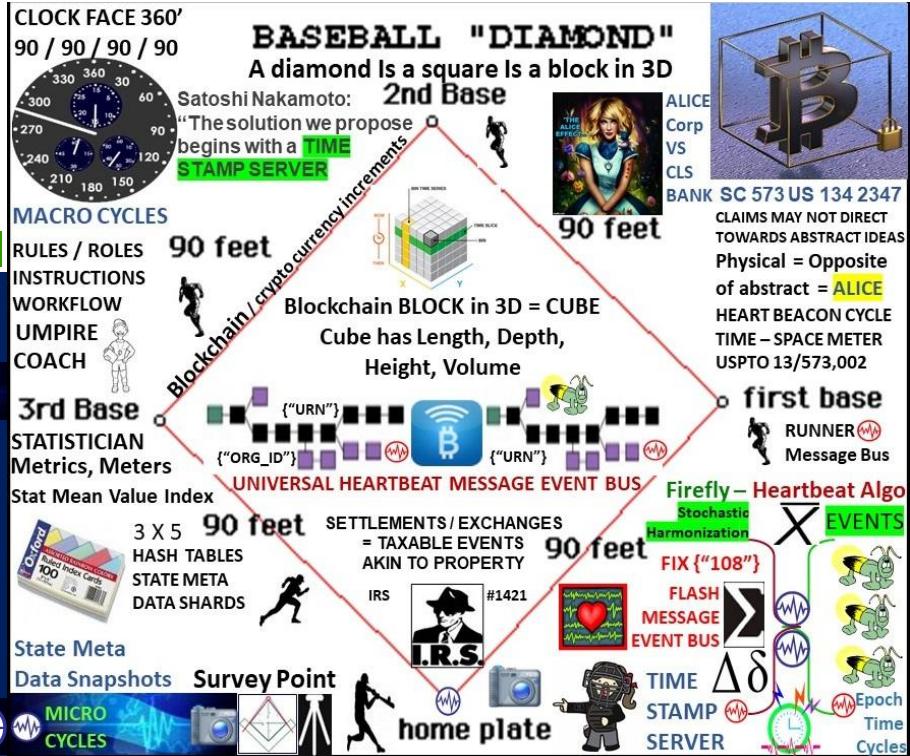
2. Participants update the state amongst themselves by constructing and signing transactions that could be submitted to the blockchain, but instead are made available for a new update "trumps" previous update.



3. Finally, participants submit the state back to the blockchain, which closes the state channel.



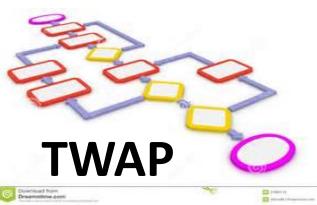
**NEW UPDATES OVERWRITE THE PREVIOUS:** simplest way is to have any unlocking attempt start a timer, during which any *newer* update can replace the old update (restarting the timer). When the timer completes, the channel is closed and the state adjusted to reflect the last update received. The length of the timer would be chosen for each state channel, balancing the inconvenience of a long channel closing time with the increased safety it would provide against internet connection or blockchain problems. Alternatively, one could structure channel with a financial penalty so anyone publishing an inaccurate update to the blockchain will lose more than gain by pretending later.



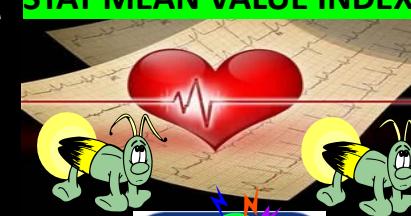
**Firefly - Heartbeat synchronization:** nodes in a distributed system generate periodic, local "heartbeat" events approximately at the same time with a goal of all nodes starting / ending cycles at the same time eventually = HB CYCLE

# TWAP Algorithm Manages Bitcoin Price Volatility Algorithm

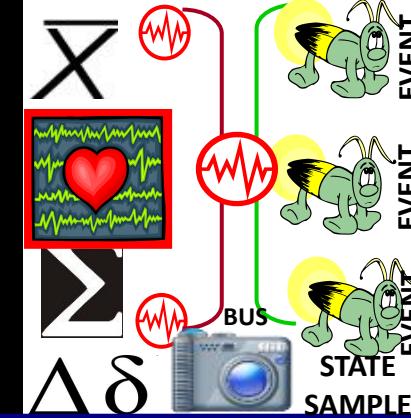
## TWAP GOAL: provide a Time Weighted Average Price Benchmark



FIREFLY HEARTBEAT ALGO  
STAT MEAN VALUE INDEX



STATE META  
DATA SNAPSHOTS



**TWAP Works To gauge trading performance, many traders in different asset classes (equity, fixed income, currency) often use average price as a benchmark. The two common ways to calculate an average are a time-weighted average price (TWAP) and a volume-weighted average price (VWAP). TWAP is the average price of a bitcoin over the course of a specified period of time i.e., Heart Beacon Cycle**



The algorithm trades over a desired time, either 1, 6, 12 or 24 hours and will give you a TWAP over that time period. For example, set the TWAP algorithm to sell 12 bitcoins over 12 hours, the algorithm will sell throughout the period, aiming to get a 12-hour TWAP



VWAP is price multiplied by number of bitcoins traded, then divided by the total number of bitcoins traded during a time period. The time-weighted average price algorithm is matched to closest HB

Firefly Heartbeat Sync nodes strive to sync in a distributed system. Nodes emit periodic “heartbeat” events at approximately the same time. There is no need to sync during a cycle as long as the cycle length is bounded & nodes eventually agree. HBC’s improvement is stipulating a clock cycle value e.g., 5, 10, 15..



**Block-Weighted-Average-Price (B-WAP) API** creates a USD price for any block in the Bitcoin blockchain, based on BNC's Bitcoin Liquid Index (BLX). Automatically appropriates blockchain transactions with a USD price or technical indicator for traders.

**Key Features:**

Look up any bitcoin blockchain transaction and receive back a USD value for any transaction.



Built using historic bitcoin price index - the [BNC BLX](#).

API updated every 10 min with a 2 hour delay on latest blocks (due to the nature of Block propagation to ensure avoidance of publishing rates on orphaned blocks).

All rates time-stamped in UTC.



Ability to look up by time-stamp.

Ability to look up by block-height.

Asset Classes: Digital Currencies

Get by: Block-height, Time-stamp or Transaction

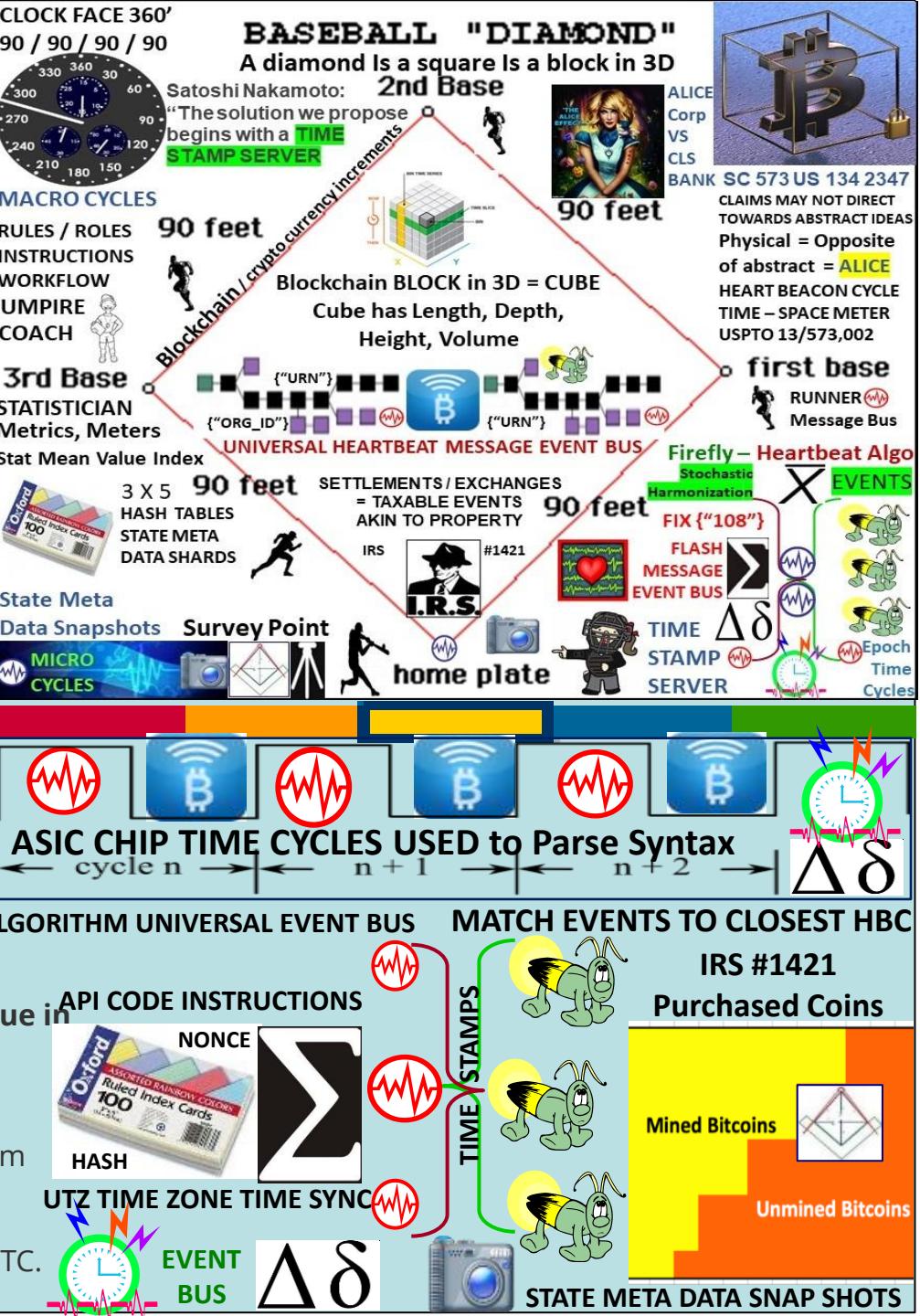
Transaction ID, Block ID, time-stamp, BWAP per block, Value in USD. BTC per transaction, bitcoin transaction fees per transaction.

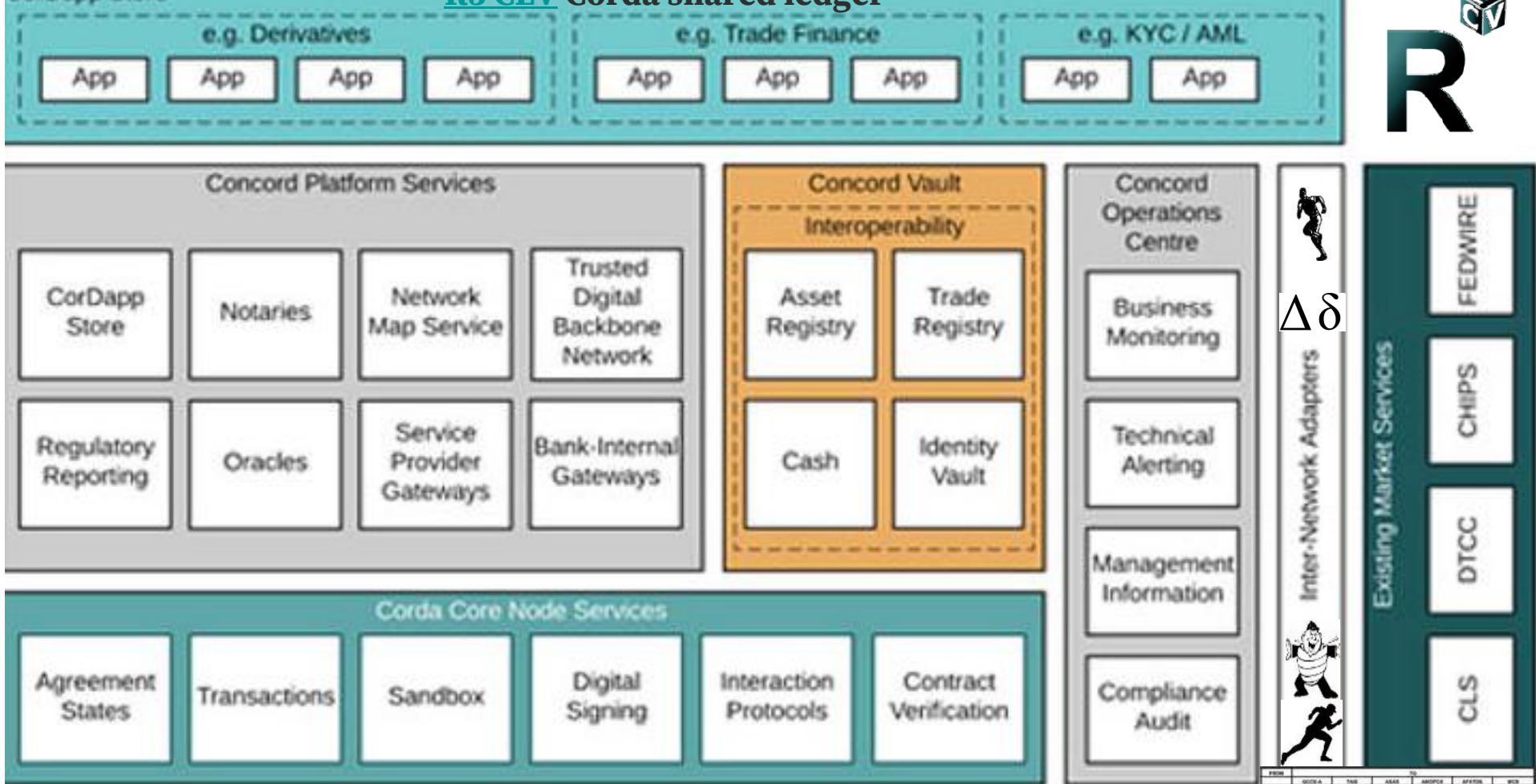
"Blocks are a measure of time":

The Bitcoin Blockchain 'B-WAP'

• Exchanges Covered: Price discovery for the B-WAP comes from utilizing the BNC [Bitcoin Liquid Index](#) (BLX) bitcoin price calculation.

• Historical Rates: This API goes back to 2010-07-17 23:14:35 UTC.

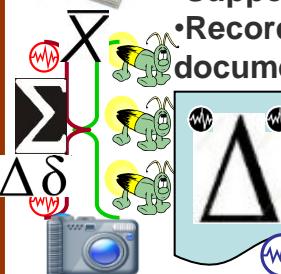




# UNIVERSAL EVENT BUS



- Choreographing workflow between firms without a central controller
  - Supports inclusion of regulatory & supervisory observer nodes
  - Validating transactions solely between parties to the transaction
  - Supporting a variety of consensus mechanisms
  - Recording explicit links between human-language legal prose documents and smart contract code



<b>11.1 - Kinematics</b>
<b>11.1.1 - Pos / Vel / Acc (PVA)</b>
<b>11.1.1.1 - Acceleration</b>
<b>11.1.1.1.1 - Angular</b>
11.1.1.1.1.1 - Linear
11.1.1.1.1.2 - Estimate Type
11.1.1.1.1.3 - Observed
11.1.1.1.1.4 - Smoothed
11.1.1.1.1.5 - Predicted
11.1.1.1.2 - Smoothed Data
11.1.1.1.3 - Position
11.1.1.1.4 - Bearing Angle
11.1.1.1.5 - Location, 2D
11.1.1.1.6 - Vertical
11.1.1.1.7 - Velocity
11.1.1.1.8 - Horizontal
11.1.1.1.9 - Acceleration
<b>11.1.1.2 - Confidence</b>
11.1.1.2.1 - Bearing Angle
11.1.1.2.2 - Bearing Angle Range
11.1.1.2.3 - Covariance Matrix

- PROOF OF WORK
  - PROOF OF STAKE
  - STATE CHANNELS
  - BITCOIN NEXGEN
  - LIGHTNING / DASH..



# **XBRL / CDL / DAML STOCK MIC CODES**

# **STRUCTURED MILITARY MESSAGE TEMPLATE FORMS**



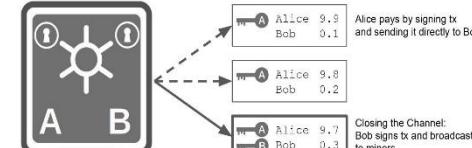
# 300+ Use Case Templates



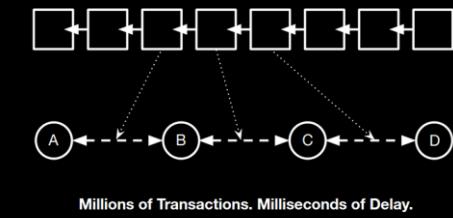
**transactions sent over / off chain  
micropayment channels**

Micropayment Channels

Setup: Alice creates transaction with 10 bitcoin to a 2-of-2 multisig with Bob



## LIGHTNING



Hashed TIME LOCK contracts component for global consensus

OP\_CHECKLOCKTIMEVERIFY During Macro Cycle w/Random # BEACON



Payment channels multi-hop hub spoke model like internet routing

## FIREFLY – HEARTBEAT ALGORITHM



**FIREFLY – HEARTBEAT**

CLOCK FACE 360'  
90 / 90 / 90 / 90



RULES / ROLES

INSTRUCTIONS

WORKFLOW

UMPIRE  
COACH

3rd Base

STATISTICIAN  
Metrics, Meters

Stat Mean Value Index



State Meta

Data Snapshots

Survey Point

MICRO CYCLES

home plate

FLASH MESSAGE  
EVENT BUS

TIME STAMP  
SERVER

Epoch  
Time Cycles

$\Delta\delta$

Sync Delta

State Meta

Data Snaps

ADJACENT FIELDS

SEPARATE CHANNELS

FIREFLY – HEARTBEAT

ALGORITHM

BASEBALL "DIAMOND"

A diamond Is a square Is a block in 3D

2nd Base

Satoshi Nakamoto:

"The solution we propose  
begins with a TIME  
STAMP SERVER

Blockchain BLOCK in 3D = CUBE

Cube has Length, Depth,  
Height, Volume

UNIVERSAL HEARTBEAT MESSAGE EVENT BUS

SETTLEMENTS / EXCHANGES  
= TAXABLE EVENTS  
AKIN TO PROPERTY

IRS #1421

Fix ("108")

FLASH MESSAGE  
EVENT BUS

TIME STAMP  
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Sync Delta

State Meta

Data Snaps

ADJACENT FIELDS

SEPARATE CHANNELS

FIREFLY – HEARTBEAT

ALGORITHM

BASEBALL "DIAMOND"

A diamond Is a square Is a block in 3D

2nd Base

Satoshi Nakamoto:

"The solution we propose  
begins with a TIME  
STAMP SERVER

Blockchain BLOCK in 3D = CUBE

Cube has Length, Depth,  
Height, Volume

UNIVERSAL HEARTBEAT MESSAGE EVENT BUS

SETTLEMENTS / EXCHANGES  
= TAXABLE EVENTS  
AKIN TO PROPERTY

IRS #1421

Fix ("108")

FLASH MESSAGE  
EVENT BUS

TIME STAMP  
SERVER

Epoch  
Time Cycles

$\Delta\delta$

Sync Delta

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Sync Delta

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Data Snaps

ADJACENT FIELDS

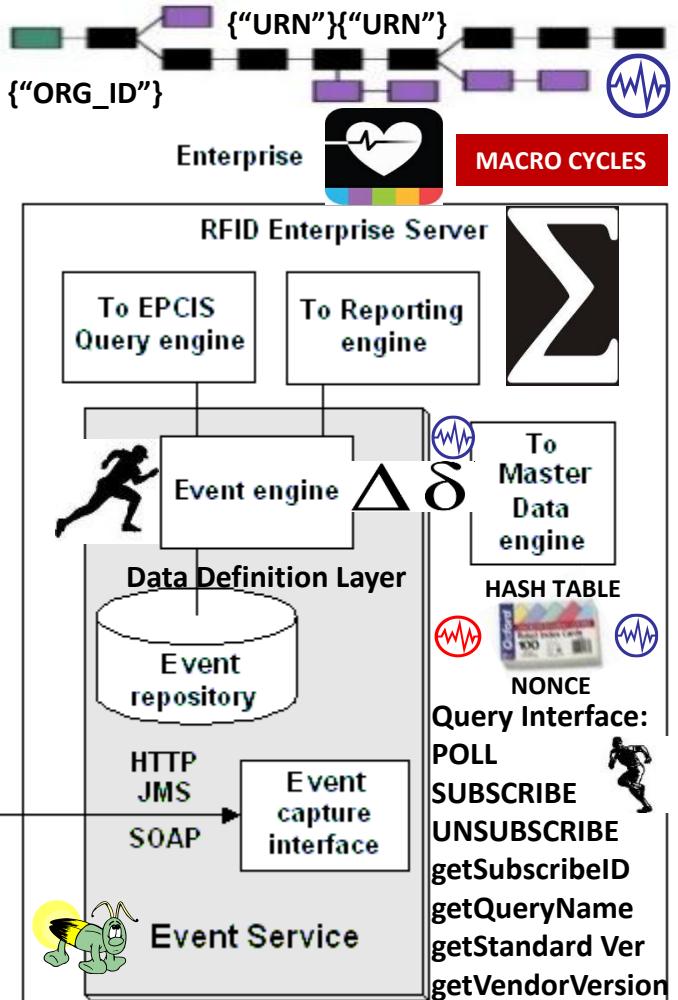
SEPARATE CHANNELS

FIREFLY – HEARTBEAT

ALGORITHM

**Electronic Product Code Information Services (EPCIS)**

## GS1 Standard for creating, sharing visibility event data



## Core Business Vocabulary (CBV)

**What identifiers of object(s) or entities / subject of the event**

**When date time when event took place, local time zone in effect**

**Where location identifier where event occurred, identifier of**

**location where object(s) are expected to be following the**

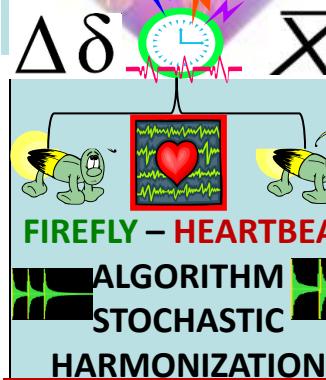
**Why** Information about the business context, including:  
**a Identifier that indicates the business step taking place**



**CLOSER IS CHEAPER  
CLOSER IS FASTER**



MICRO CYCLES



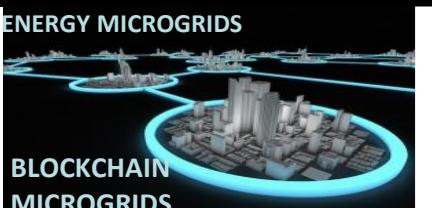
**Proximity Wireless Sensor Networks in Combination With RFID .. on reading tag in RF-field the router sends heartbeat message**

## RFID Configuration TCP/IP heartbeat message

## **STRUCTURED DATA EXCHANGE / STRUCTURED MILITARY MESSAGES**

# !st Compiler DESIGN Still the **BEST**





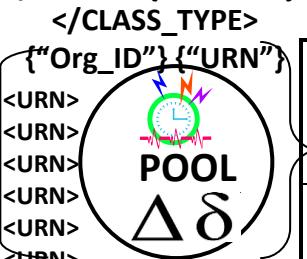
TERRA TRC



ECONOMIC HEARTBEAT

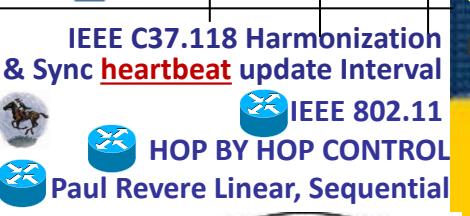
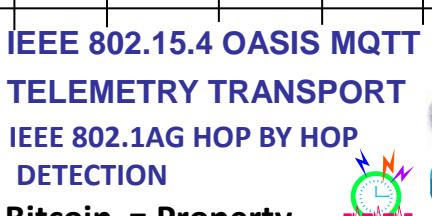
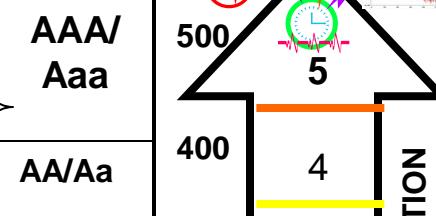
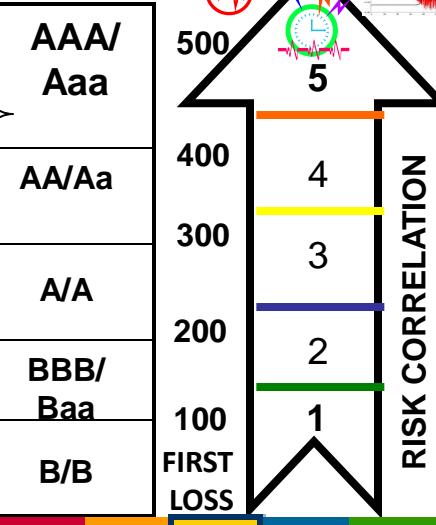


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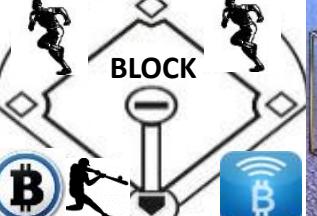
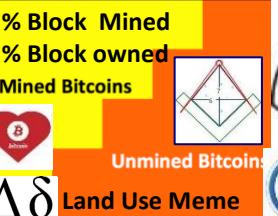


HB MSG </108>  
FIX PROTOCOL  
INDUSTRY-DRIVEN MESSAGING STANDARD

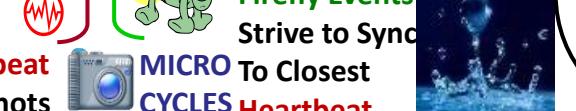
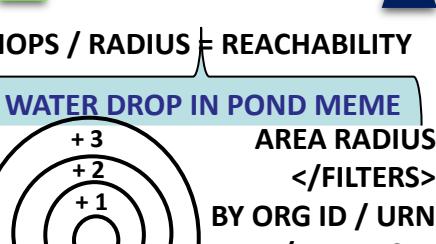
LAST LOSS



Bitcoin = Property



BLOCKTIME ARBITRAGE



## Autonomous Device Coordination Framework



- Registration
- Authentication
- Proximity based rules
- Consensus based rules
- Contracts
- Checklists

FEDERATION  
AGREEMENTS  
PROCEDURAL  
TEMPLATE

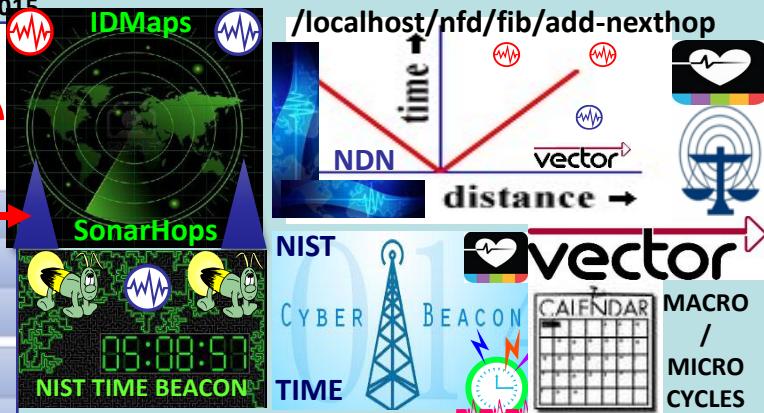
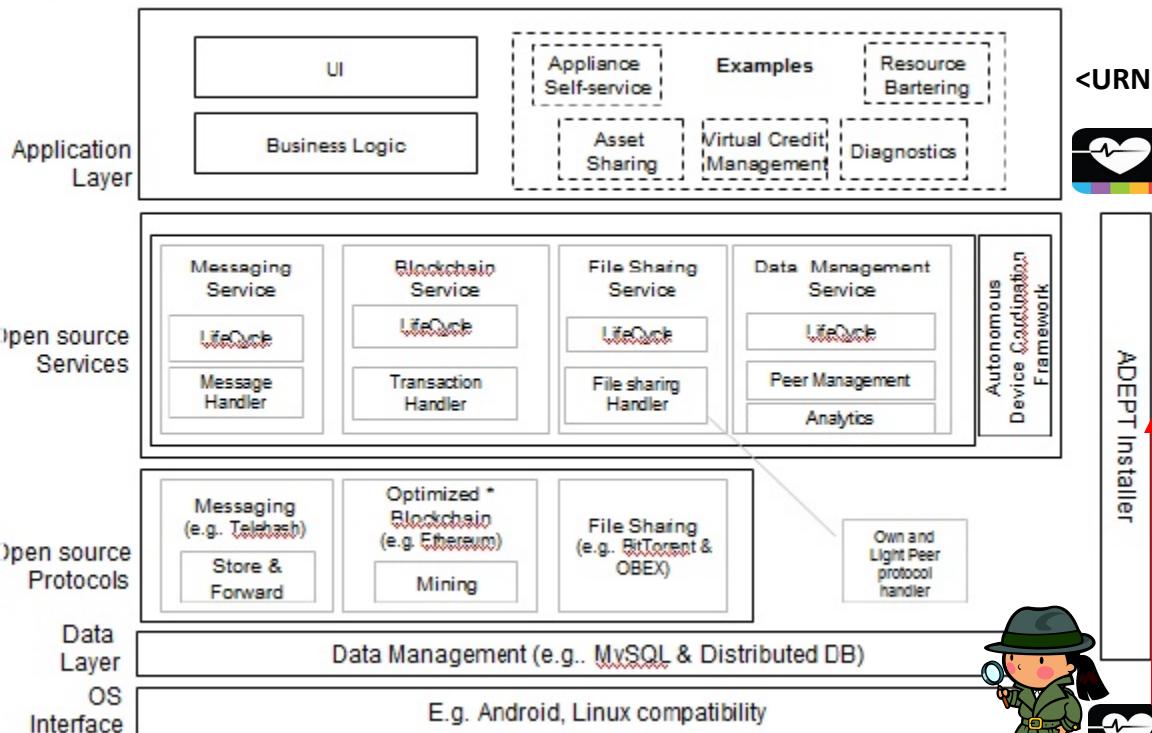
## FEDERATION

&lt;UUID&gt; &lt;ORG\_ID&gt; &lt;URN&gt;

## LDAP DIRECTORY

- Physical proximity
- Social proximity
- Temporal proximity
- Agreements
- Payments
- Barter

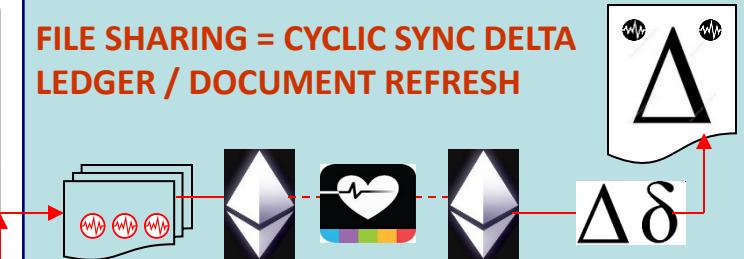
## ADEPT Standard Peer Architecture – Logical View



ASSET SHARING WITHIN FEDERATION

BUSINESS LOGIC = WORKFLOW &lt;XML\_Wf&gt;

FILE SHARING = CYCLIC SYNC DELTA LEDGER / DOCUMENT REFRESH



OPEN SOURCE = HBC = PROTOCOL AGNOSTIC

DATA LAYER: STATE META DATA TIME STAMPED BY &lt;UUID&gt;&lt;ORG\_ID&gt;&lt;URN&gt; &amp; DATA PREPPED &amp; "DATA WRANGLLED PRIOR TO FUSION CENTER ENHANCED ANALYTICS / PROTECTS BANDWIDTH

\* Could be optimized to hold the complete blockchain. Function of ADEPT Installer



## Three ideas combined

HOW TRUTHCOIN WORKS:

### 1) Tradable Reputation

- Abstract Corp exists to prove consistency within / across TIME
- Collects \$ to power the mechanism.

### 2) SVD Cross-Validation

- Statistical technique: seeks importance.
- Gleans truth, measures conformity.



### 3) Strategic Use of TIME

- Funds can be ‘locked’ across time.
- Yet info-search-costs constantly fall.
- Net effect: time penalizes attackers only.

## 2. A kind of ‘Future Wikipedia’

	Wikipedia	Truthcoin
Focus	Outcomes of <i>past</i> events. Consensus on known facts.	Outcomes of <i>future</i> events. <i>Future</i> consensus on <i>knowable</i> facts.

## 3. A software protocol

A protocol is a set of rules that determine how something is performed or accomplished

Finance Thing	Interpretation	EVENT DERIVATIVE CORP = <Org_ID_1,2,3>
Bond (Debt)	“I, Paul Sztorc, owe \$20 to whoever is holding this bond certificate on 03/02/2015.”	
Stock (Equity)	“I, the CEO of SztorcCorp, owe 1/100 <sup>th</sup> of SztorcCorp’s profits to whoever is holding this stock certificate on 03/02/2015.”	
Binary Call Option	“I, Paul Sztorc, owe \$20 to whoever is holding this Option on 03/02/2015, <u>only if</u> the stock price of SztorcCorp is above 40 \$/share on that date.”	
...(others)...	...(others)...	...(others)...
Event Derivative	“I, Paul Sztorc, owe \$20 to whoever is holding this derivative on 12/01/2016, <u>only if</u> Hillary Clinton is elected US President in 2016. Otherwise I owe \$0.”	...(others)...
...(others)...	...(others)...	...(others)...

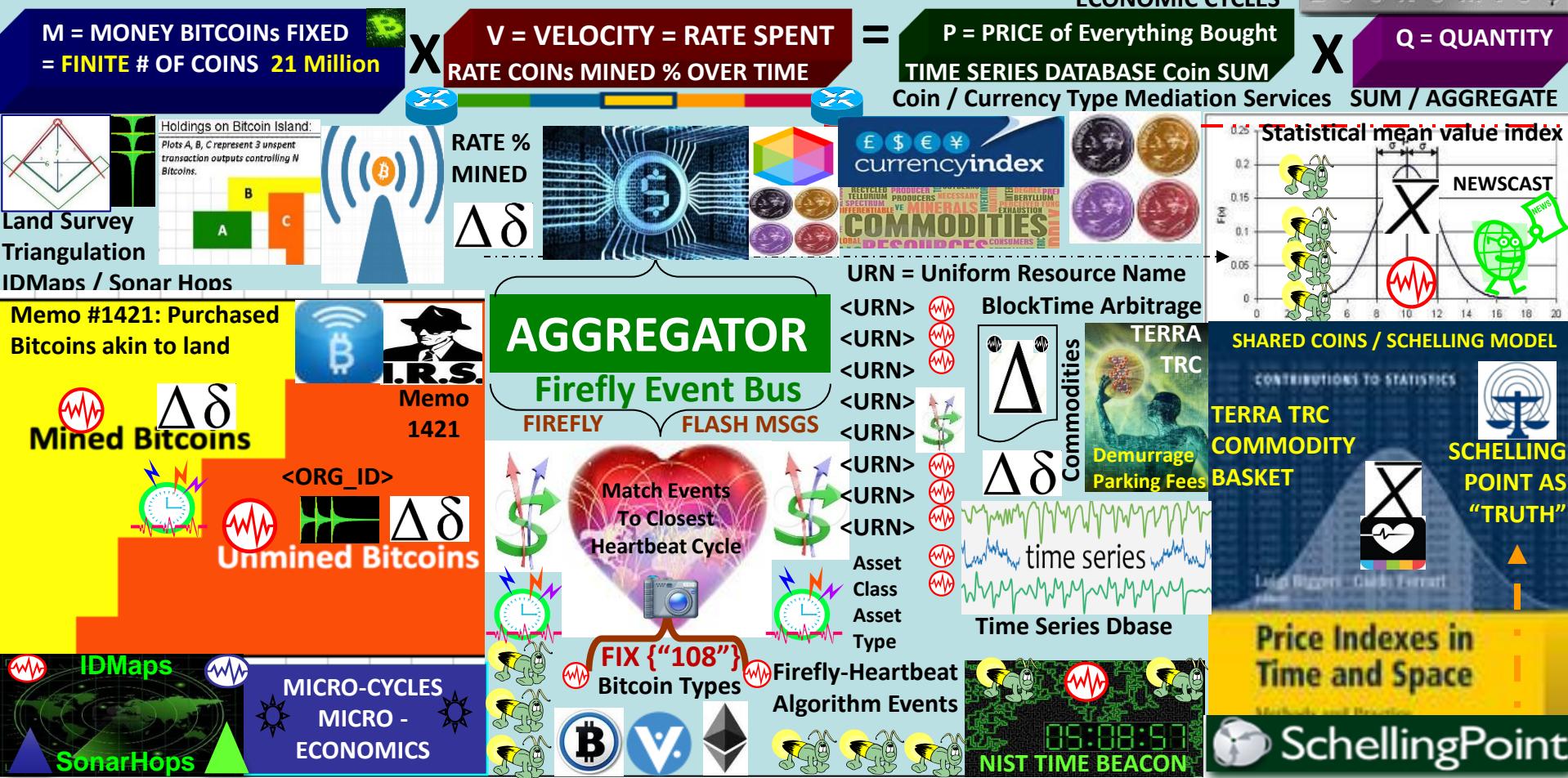
Protocol (Decentralized)	Centralized Non-Protocol
Spoken English	Shakespeare’s Globe Theatre, The Library of Alexandria, MLA Citation Format, Walt Whitman, J.K. Rowling.
Rules to American Football	The NFL, ESPN, The Buffalo Bills.
Bluetooth	A Set of Stereo Speakers, The iPhone 6, A Car Radio Equipped with Bluetooth
Bitcoin	VISA, PayPal, SWIFT, Western Union, Airline Miles, Amazon Coins, e-Gold, Liberty Reserve.



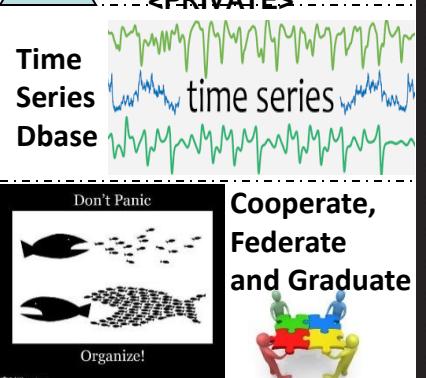
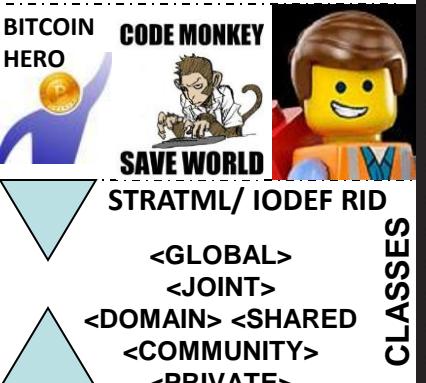
# How 'Bitbanks' Could Solve Bitcoin's Volatility Problem

$$MV=PQ \text{ Money} \times \text{Velocity} = \text{Price} \times \text{Quantity}$$

The most important equation in monetary economics, the equation of exchange:  $MV=PQ$ . The quantity of money (M) times the rate spent (V for velocity) equals the price of everything bought (P) times the amount bought (Q for quantity). In Bitcoin, M Money is on a predetermined path, converging to 21m bitcoins. In relation to the other variables, Bitcoin is fixed. V, P, & Q fluctuate



**Gamification** is the use of game thinking and game mechanics in non-game contexts to engage users in solving problems. Gamification techniques strive to leverage people's natural desires for competition, achievement, status, self-expression, altruism, closure.



## HOW GAMIFICATION WORKS:

### 5 COMMON MECHANICS

#### POINTS



Measure a user's achievements in relation to others  
Can double as currency to exchange for rewards

#### BADGES



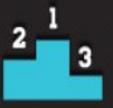
Reward achievements visually

#### LEVELS



Encourage users to progress and unlock new rewards

#### LEADERBOARDS



Organise players by rank

#### CHALLENGES



Encourage engagement by offering specific tasks to complete

### 4 MAIN WAYS TO DRIVE ENGAGEMENT

#### ACCELERATED FEEDBACK CYCLES

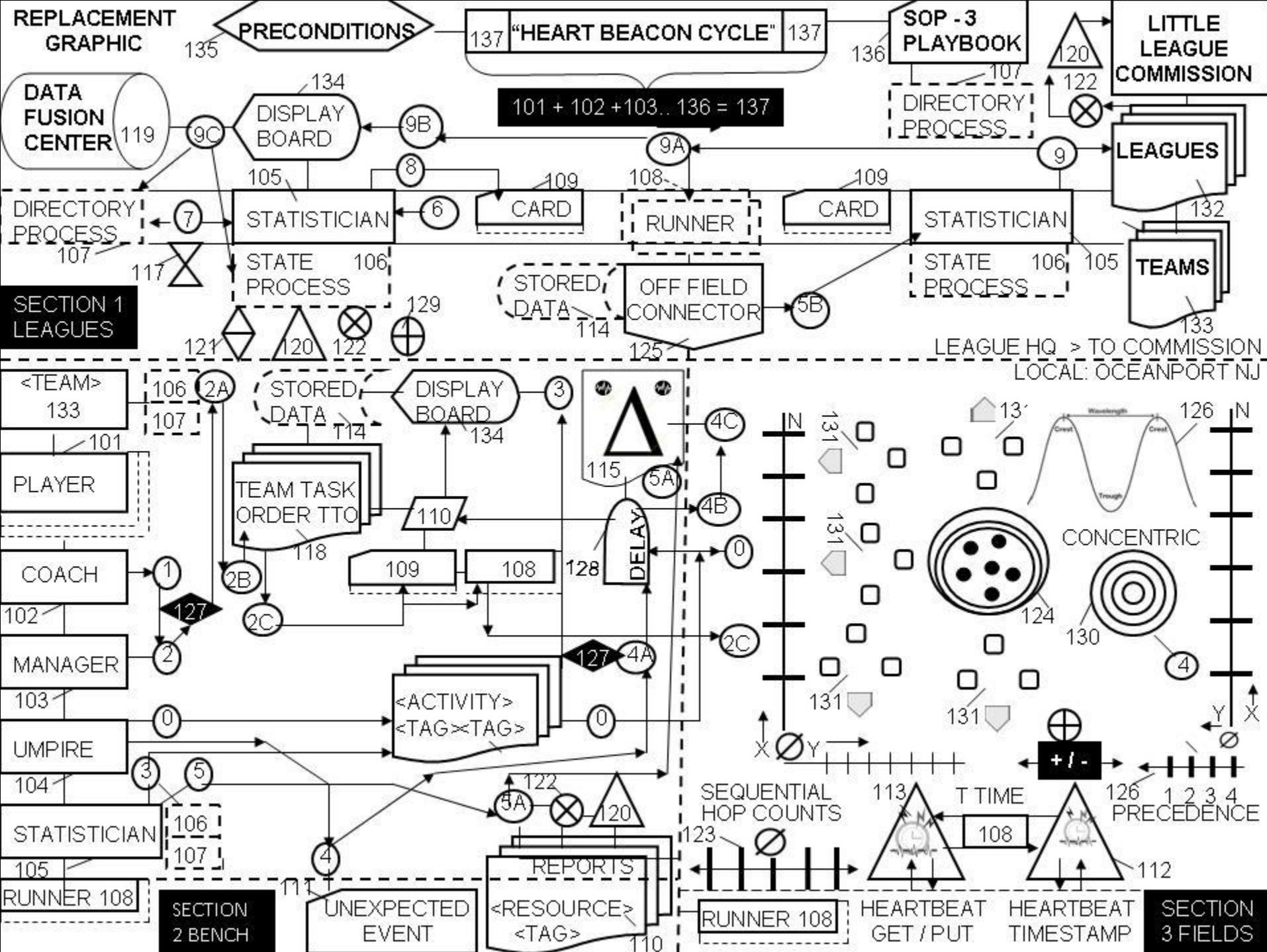
#### CLEAR GOALS AND RULES OF PLAY

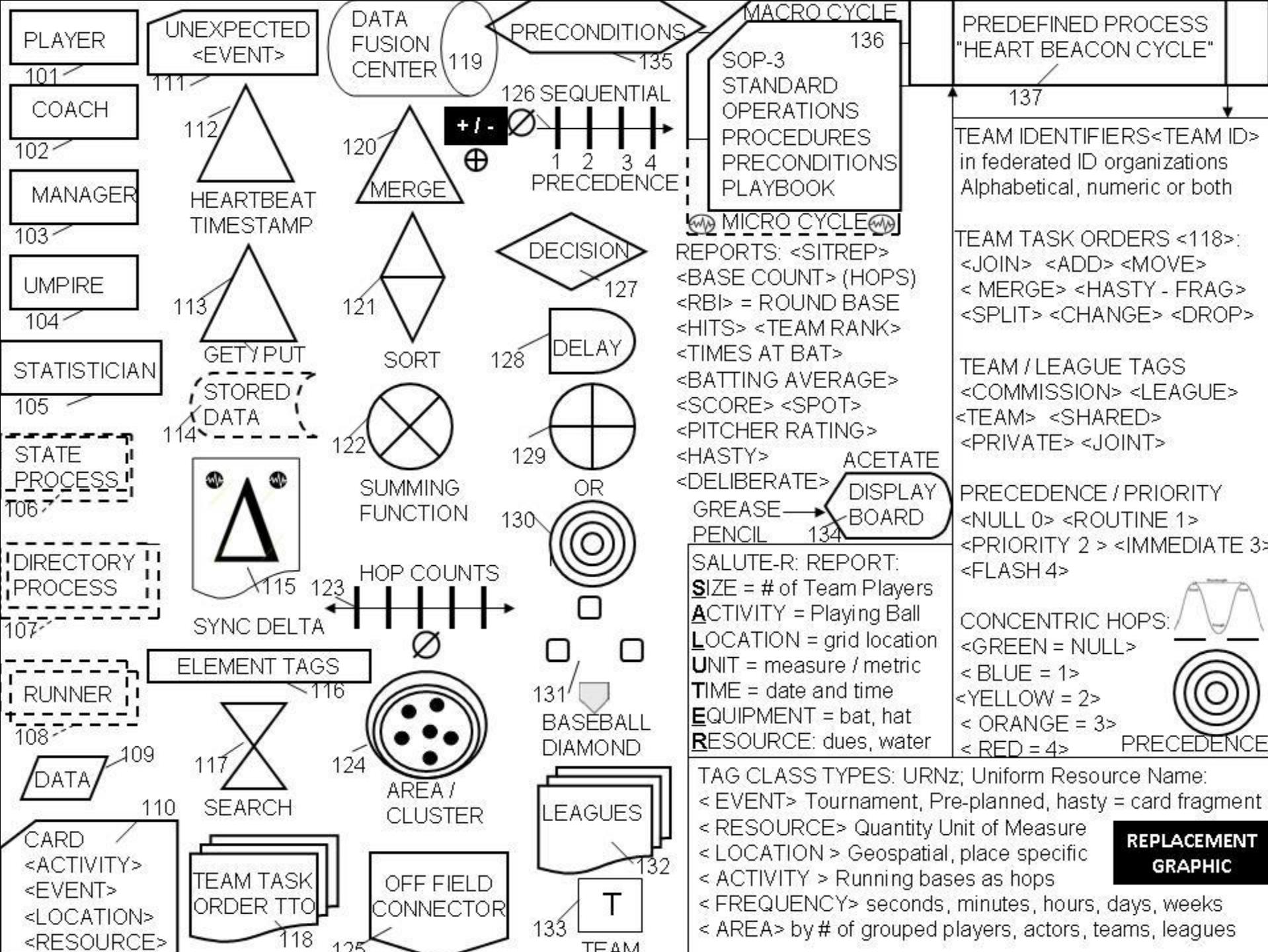
#### A COMPELLING NARRATIVE

#### CHALLENGING BUT ACHIEVABLE TASKS









# BUILDING BLOCKS



TASK ON / OFF

201

**B1: BUILDING BLOCK 1: TCP/IP HEARTBEAT TIME STAMP & DATA GET / PUT OF ORG ID / URN IN MICRO / MACRO CYCLES PRIOR TO DATA FUSION CENTER INSERTION**



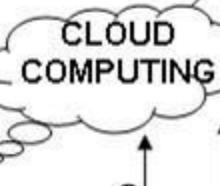
MACRO CYCLES



.0001

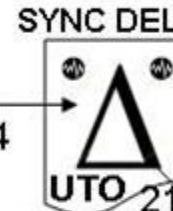
MICRO CYCLES

216



**202 FEDERATED GROUP JOINS, MERGE, ADDS, DROPS**

**B2: BUILDING BLOCK 2: ADAPTIVE, CYCLIC, ITERATIVE PROCEDURAL TEMPLATES: XML ARTIFACTS i.e. UNIT TASK ORDER & K00.99 HEARTBEAT SYNC DELTA MESSAGES / STATE META DATA SNAPSHOTS IN NETWORK EXECUTION MANAGEMENT MARKUP OF SERVICE INTERFACE ARTIFACTS**

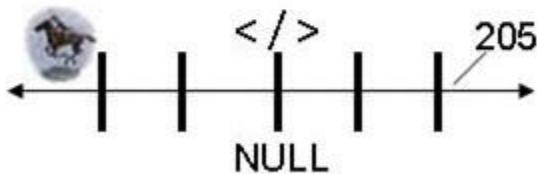


ADHOC / AGILE  
FEDERATED <ID>  
GROUPS SYNC'D  
IN TIME / SPACE

215 LEADER'S  
INTENT  
DECISIONS



SYNC DELTA METRICS IN SLA CLAUSES AS  
MOE, MOP METER IN TAX CODES, TRANCHE  
CLASSES / RATINGS ARBITRAGE TRIGGERS



LENGTH, THRESHOLD, INTENSITY, DURATION



SEARCH FOLLOWED BY ARBITRAGE INVITES VIA BEACON NEWSCASTS. INVITE ACROSS SPACE / TIME



208

APPLIQUE' OVERLAYS



MAP VIEWS GEO-LOCATION SPECIFIC  
SHOW SYNC DELTAS BY GROUP /  
RESOURCE TYPE, EVENT CLASS /  
NEWSCAST BY TRANCHE <CLASSES>

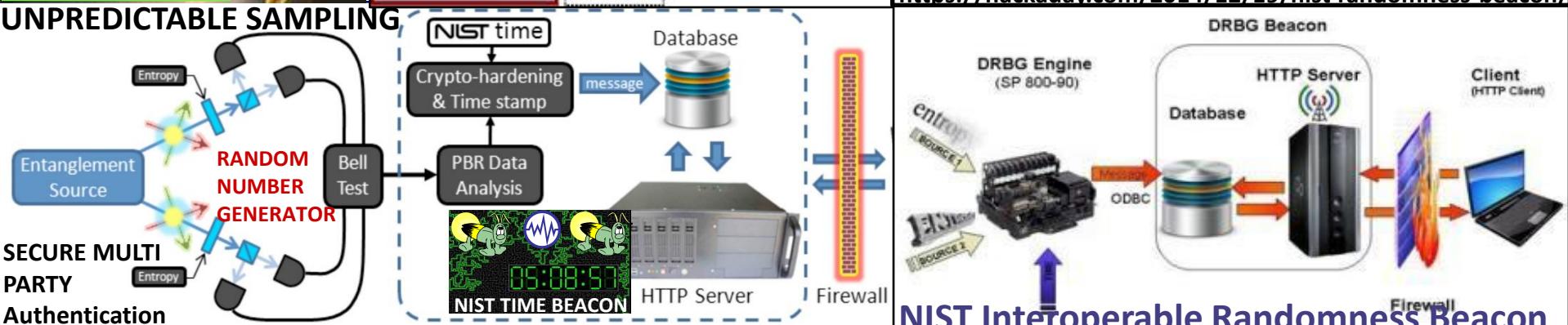
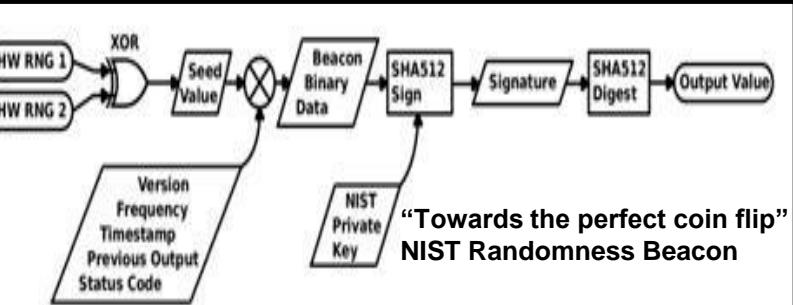
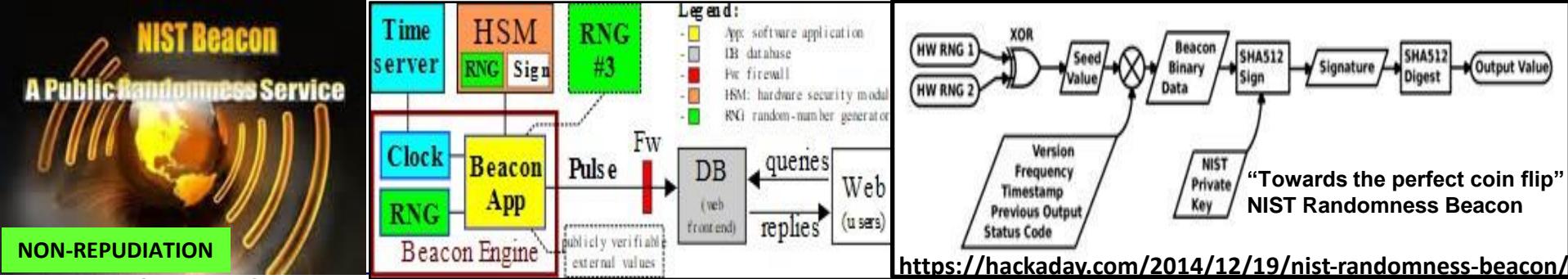


204

**B4 BEACON TECH TYPE II: WATER DROP IN POND RADIUS, CIRCUMFERENCE GEO SPATIO-TEMPORAL**







## NIST Interoperable Randomness Beacon

The NIST Randomness Beacon Broadcasts a randomness pulse every 60 seconds. Each pulse commits to a fresh 512-bit random string. Each pulse is time-stamped and signed. Beacon periodically outputs a pulse containing 512 fresh random bits, time-stamped, signed and hash-chained. For example, each pulse also pre-commits to the randomness to be released in the next pulse. The latter enables users to securely combine randomness from different beacons. The Beacon protocol also specifies the interface for users to interact with the Beacon, in order to obtain information about past pulses.

A randomness beacon produces timed outputs of fresh public randomness. Each output, called a pulse, includes metadata / cryptographic elements

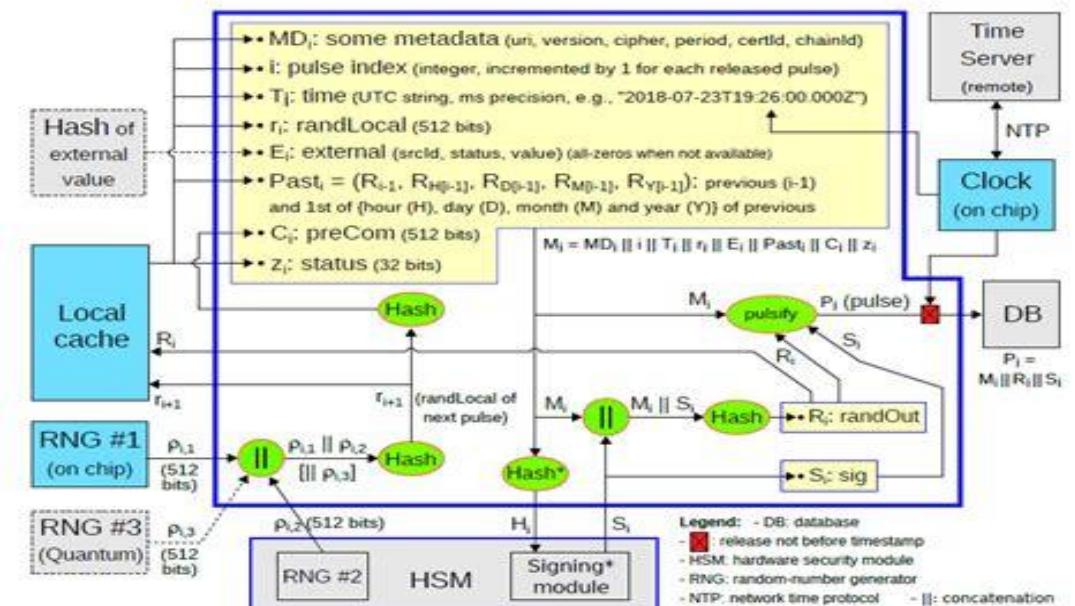
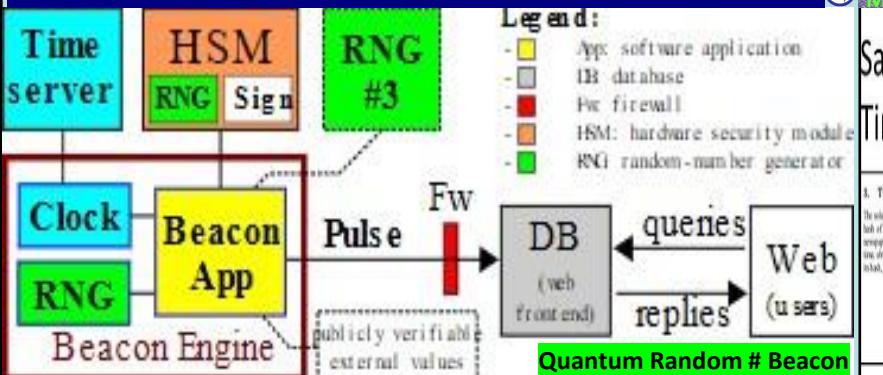


Figure 2. Illustration of the generation of the  $i^{\text{th}}$  pulse by a Beacon App (2.0)

The main goal of the NIST Random # Beacon is to serve as a baseline for deployment of many interoperable beacons

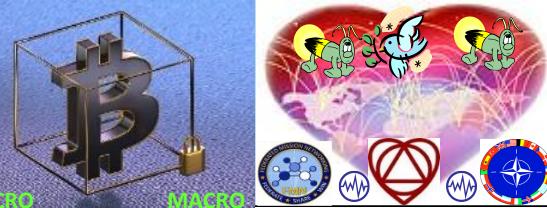
ALL THINGS NET FORMED WITH: Building Blocks:  
 1) EPOCH TIME CYCLES  
 2) SYNTAX / Opcode Brevity codes Programmable Economy / \$\$\$

## NIST Quantum Random Number Beacon



"The external environment could update resources at random... One solution is a **heartbeat**: defining a default lease duration delaying updates until the next cycle"

Building Blocks:  
 Programmable Economy / \$\$\$



Satoshi Bitcoin Blockchain  
Time Stamp Server

### 3. Timestamp Server

The solution we propose begins with a timestamp server. A timestamp server works by taking a batch of items to be timestamped and widely publishing the hash, such as in a newspaper or online post [3]. The timestamp proves for the data must have existed at the time, obviously, in order to get into the hash. Each timestamp includes the previous timestamp in its hash, forming a chain, with each additional timestamp confirming the previous one.

THE SOLUTION WE PROPOSE BEGINS WITH A TIME STAMP SERVER



TIME

SPACE

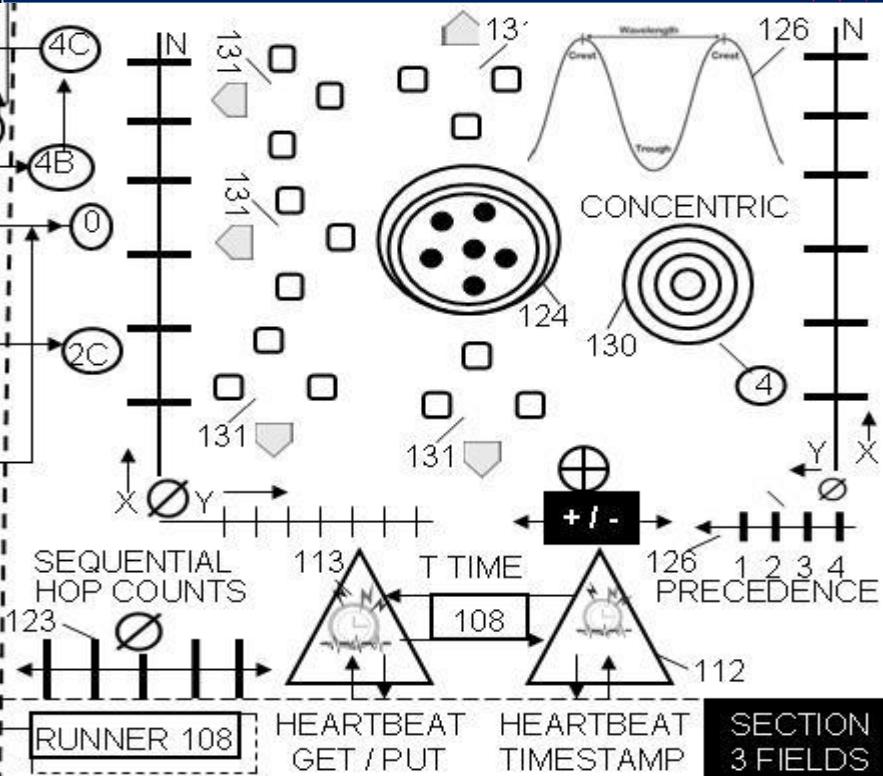
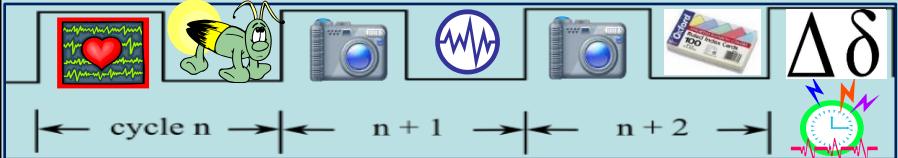
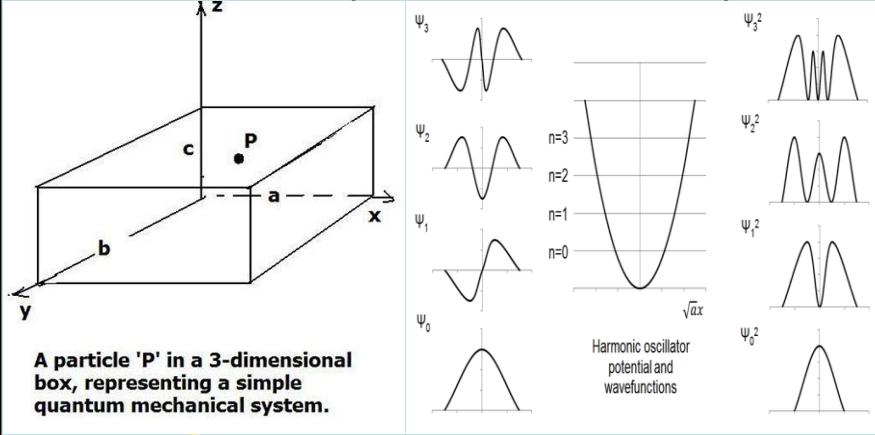
Metrics / Meters

05:08:57

NIST TIME BEACON

&lt;p

## QUANTUM COMPUTING / HBC TIME – SPACE METER / METRICS

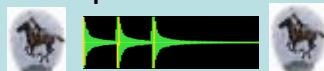


#QuantumComputing USct Alice Corp Vs CLS Bank compliant memes:  
In quantum computing, a qubit (or quantum bit (sometimes qbit)) is a unit of quantum information—the quantum analogue of the classical binary bit. A qubit is a two-state quantum-mechanical system, such as the polarization of a single photon: the two states are vertical polarization and horizontal polarization. In a classical system, a bit has to be in one state or the other. Quantum mechanics allows a qubit to be in a superposition of both states at the same time, a fundamental quantum computing property

US Sct Alice Corp Vs CLS Bank Physical memes

Linear sequential "Paul Revere" meme = horizontal polarization

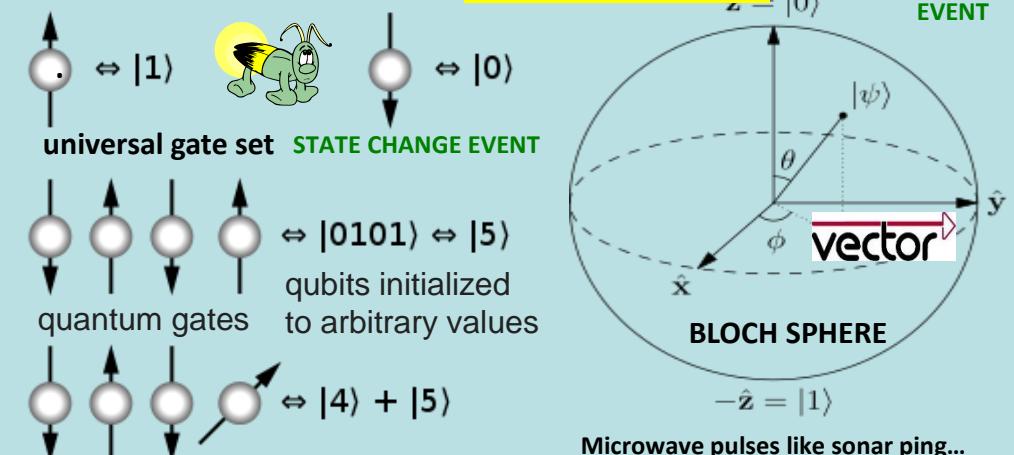
Vertical polarization vectors from a known point 0 null Sonar Hop meme



particle representation / samples



Instead of each bit having two potential states — on or off — a quantum bit or qubit has three. It can be on, off, or both, and you only know which one it is once you look at it. How can you tell if a bit of data is correct if looking at it might change its state?

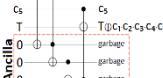
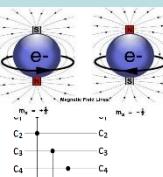


qubits can be in a superposition of all the classically allowed states

silicon device movement is controlled through use of microwave pulses. As an electron spins up, a binary value of 1 is generated, when the electron spins down, a binary value of 0 is generated.



Fock state number state quantum state that is an element of a Fock space with a well-defined number of particles (or quanta)

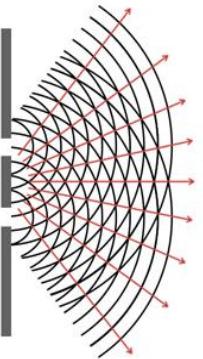


# Double-Slit Experiment

Screen with two slits

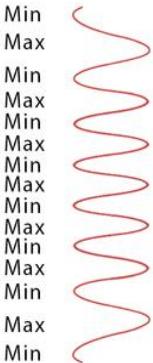
PARTICLE ?

Sodium lamp



Screen

WAVE ?



Light source      Rays of light coming from the source reach the slits

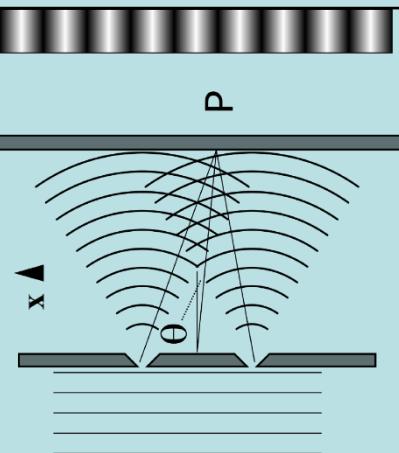
Interference of light waves due to two tiny slits and arrows indicate direction of wave propagation

Alternating bright and dark fringes due to interference of light waves

Intensity of the fringes shows the maxima and minima

Science Facts

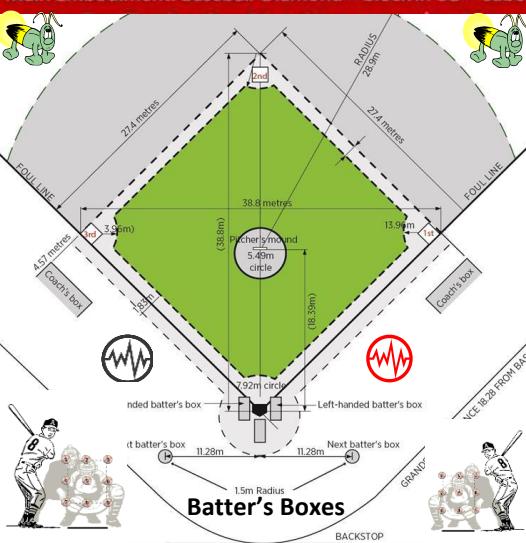
QUANTUM COMPUTING  
- RESISTANT ? - BASED ?  
THROUGH LENS OF SCOTUS  
ALICE LOOKING GLASS RULING



USPTO APPLICATION 13/573 002

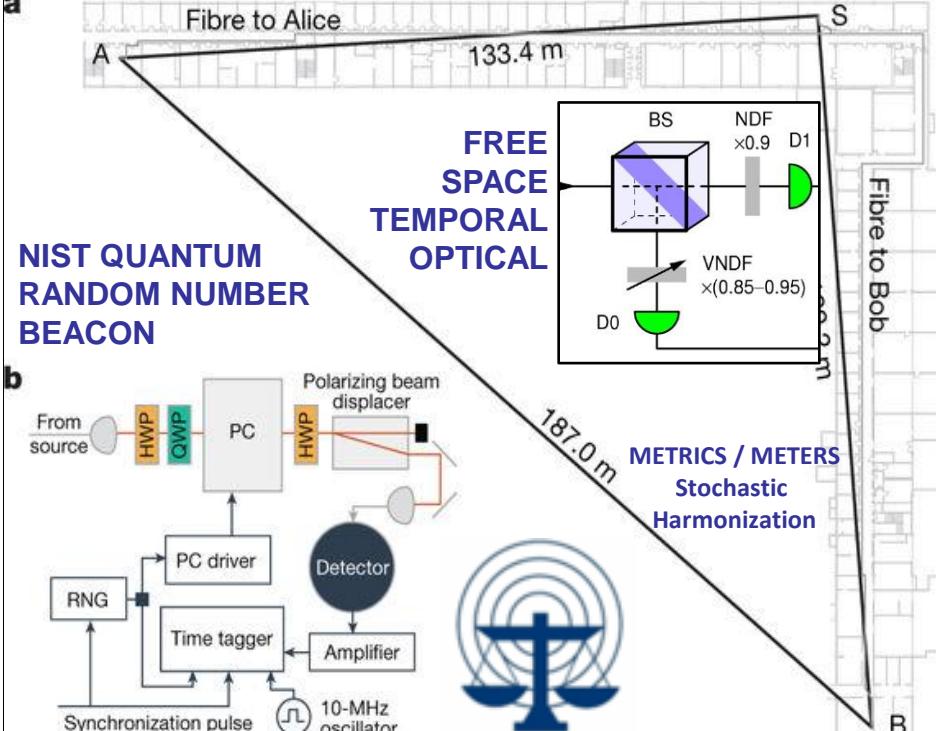
The Heart Beacon Cycle Time-Space Meter

Main Embodiment: Baseball Diamond = block in 3D = cube



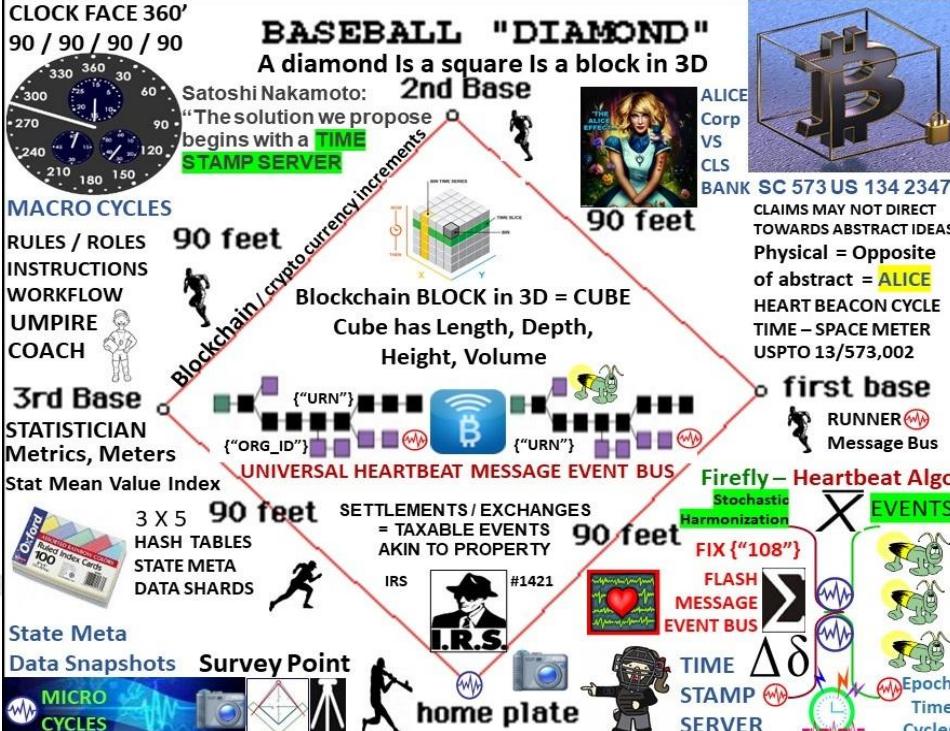
SCOTUS ALICE RULING: "Claims may not direct towards abstract ideas" / Physical = opposite of abstract

a



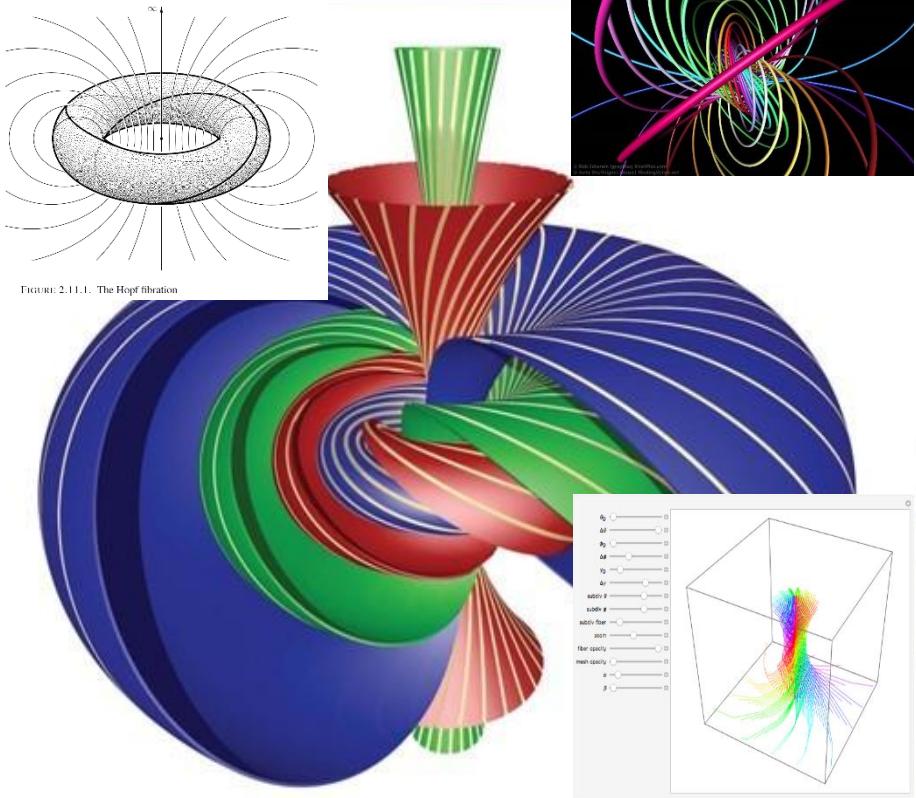
NIST QUANTUM RANDOM NUMBER BEACON

b

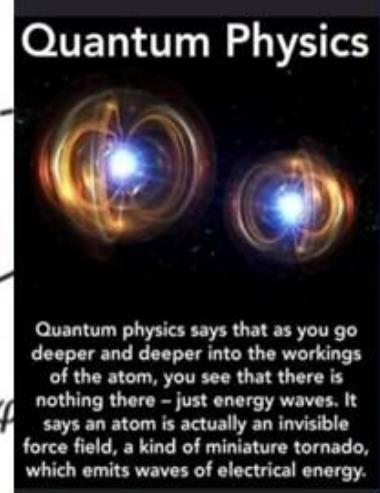
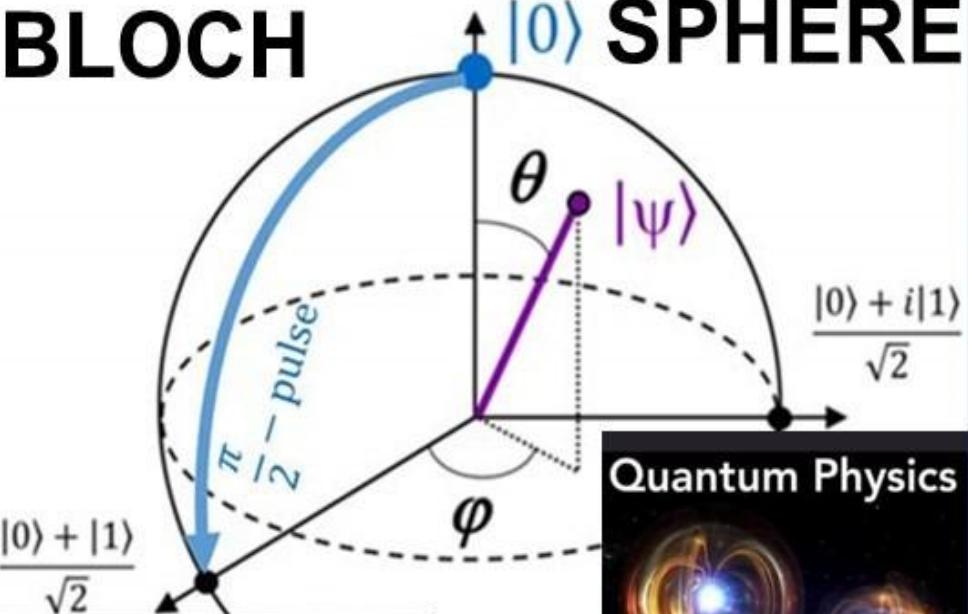


# The Hopf Fibration

Edmund Harriss



# BLOCH SPHERE



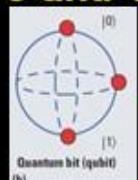
## Hopf Fibration / #Bloch sphere

"the most important object in the universe"

"Hopf fiber bundles pop up in 8 quantum physics situations"... USPTO 13/573,002 water drop in pond meme / scalar wave in 2D - 3D

Paul Revere linear - sequential hop count meme

The Bloch sphere provides a useful means of visualizing the state of a single qubit & operations on it. Any point on this sphere represents a linear combination of the 0 and 1 states with complex coefficients. A  $\pi/2$ -pulse 'rotates' a qubit from the 0-state to a superposition state.





**THE 1919 WORLD SERIES**

**'THE ALICE EFFECT...'**

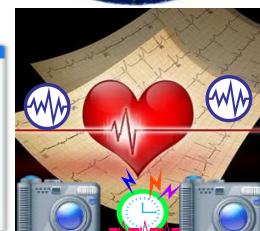
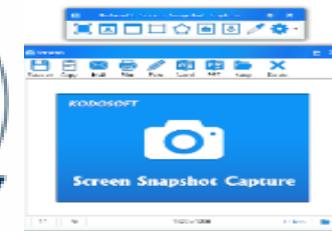
**What Really Happened?**

**William A. Cook**

imgflip.com



**Alice Corp. v. CLS Bank International, 573 U.S. 134 S. Ct. 2347 (2014)**  
RULING: "claims may not direct towards abstract ideas"



## USPTO SCREEN CAPTURES SUSPENDED PAIR RULES

- Moved Examination outside PAIR
- Admin forms, fees, amendments.. MUTED
- NO Time Stamps = TEMPORAL AMBIGUITY
- Screen captures before / after filing

CLOCK FACE 360'  
90 / 90 / 90 / 90  
330 340 30 60  
270 240 30 90  
210 180 150

**BASEBALL "DIAMOND"**

A diamond Is a square Is a block in 3D  
2nd Base



CLAIMS MAY NOT DIRECT TOWARDS ABSTRACT IDEAS  
Physical = Opposite of abstract = ALICE  
HEART BEACON CYCLE  
TIME – SPACE METER  
USPTO 13/573,002

first base  
RUNNER Message Bus

Firefly – Heartbeat Algo

X EVENTS

Blockchain BLOCK in 3D = CUBE  
Cube has Length, Depth, Height, Volume

SETTLEMENTS / EXCHANGES = TAXABLE EVENTS AKIN TO PROPERTY

IRS #1421

FLASH MESSAGE EVENT BUS

FIX {"108"}

TIME STAMP SERVER

ΔΔ Epoch Time Cycles

MICRO CYCLES

STATE META DATA SHARDS

SETTLEMENTS / EXCHANGES = TAXABLE EVENTS AKIN TO PROPERTY

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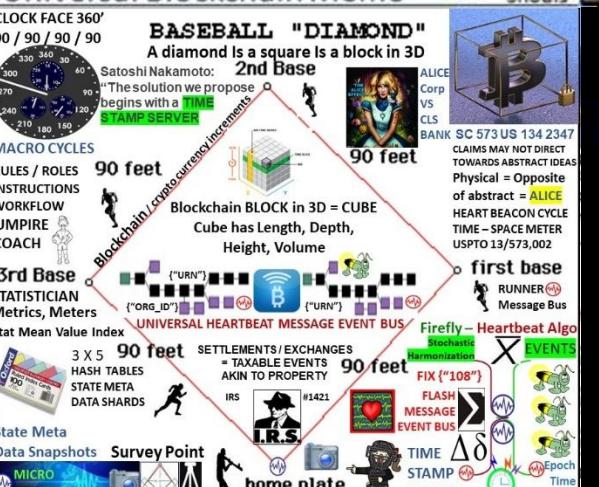
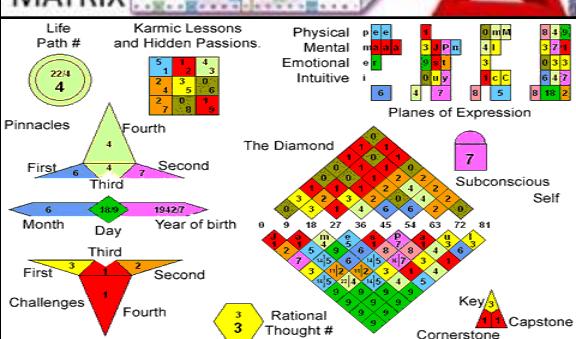
USPTO APPLICATION 13/573 002

## The Heart Beacon Cycle Time-Space Meter

Main Embodiment: Baseball Diamond = block in 3D = cube

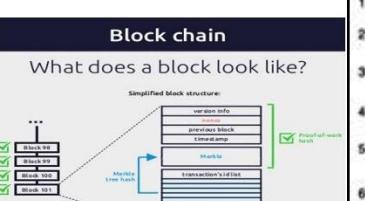
$$1 + 3 + 5 + 7 + 3 + 2 = 21 \quad 21 \text{ squared} = 441$$

"We can synchronize ourselves in time for a common purpose" Universal Blockchain Meme



Satoshi Bitcoin Blockchain  
Time Stamp Server

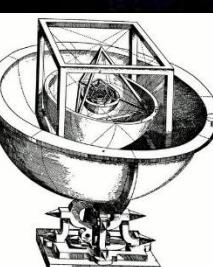
**Timestamp Server**  
 solution we propose begins with a timestamp server. A timestamp server works by taking a list of a block of items to be timestamped and publicly publishing the hash, such as in a public ledger or on a public bulletin board. The timestamp server also stores the timestamp, obviously, in order to get into the hash. Each timestamp includes the previous timestamp in its hash, forming a chain, with each additional timestamp reinforcing the ones before it.



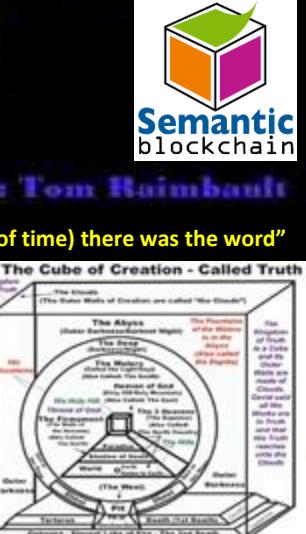
## Metatron's Cube and the Platonic Solids



**“In the beginning (of time) there was the word”**



GENESIS OF ALL FORM





"There is only one revolution tolerable to all men, all societies, all political systems: revolution by design and invention."

-Buckminster Fuller

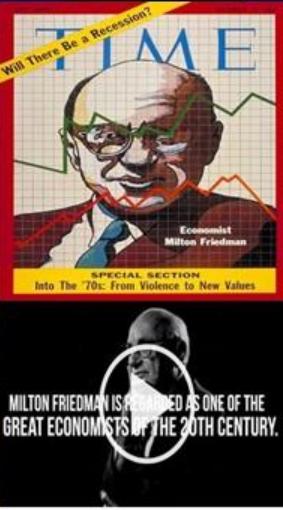


## THE GREAT CONJUNCTION IN AQUARIUS

**HERALDING THE NEW AGE**  
On December 2020, Jupiter and Saturn unite in the sign of Aquarius, forming a configuration called a Great Conjunction which only happens once every twenty years. Great Conjunctions are often longterm beginnings or foundations formed out of unstable circumstances. In the sign of AQUARIUS, this is likely to mark a major technological boom that will culminate on 2030 and last until 2040, the next Great Conjunction.

Over the next ten years, we are going to see our world innovate unlike never before, particularly in the fields of AI, technology, science, space travel, UFOs, networks, and the Internet. Major Universal truths will also be revealed as we welcome the New Age of Aquarius. The old world will soon come to an end, paving way to the new order of things.

photo by werner du plessis



**"ONLY A CRISIS—ACTUAL OR PERCEIVED—PRODUCES REAL CHANGE. WHEN THAT CRISIS OCCURS, THE ACTIONS THAT ARE TAKEN DEPEND ON THE IDEAS THAT ARE LYING AROUND."**

That, I believe, is our basic function: to develop alternatives to existing policies, to keep them alive and available until the politically impossible becomes politically inevitable.

Milton Friedman — Preface to Capitalism & Freedom 1962

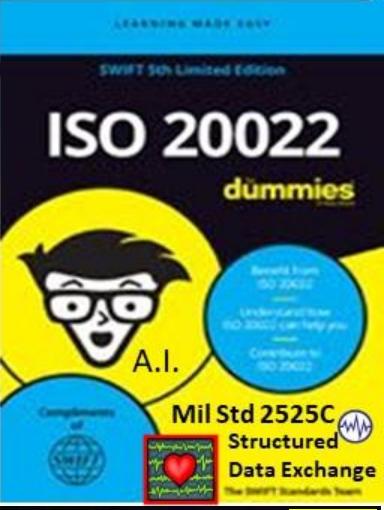
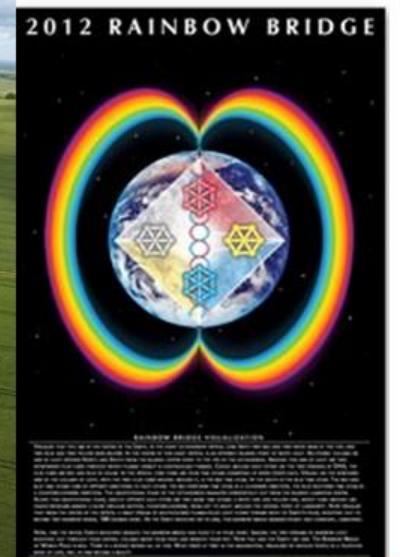
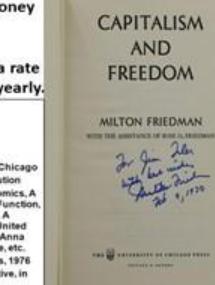
The K-Percent Rule was a proposal by economist Milton Friedman that the central bank should increase the money supply by a constant percentage every year.

The K-Percent Rule: sets the money supply growth at a rate equal to the growth of gross domestic product (GDP) yearly.



**Milton Friedman**

- 1912-2006
- Economist, monetarist
- 1946-1977: University of Chicago
- 1977-2006: Hoover Institution
- Essays on Positive Economics, A Theory of Consumption Function, Capitalism and Freedom, A Monetary History of the United States (1867-1960) - with Anna Schwartz, Price Theory, etc.
- Nobel Prize in Economics, 1976
- Considered as conservative, in reality liberal economist
- Advisor to President Nixon

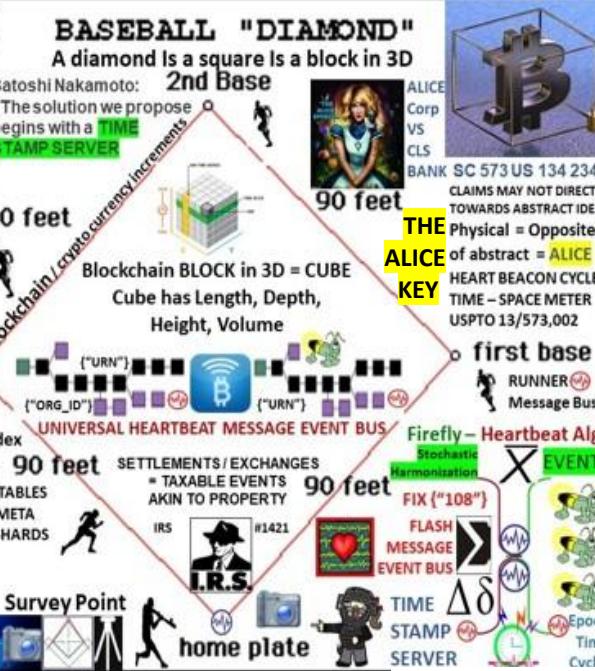


**The Age of Aquarius: Aquarius, Aquarius Rising @ 6:44 A.M. Feb 10<sup>th</sup> 1960**

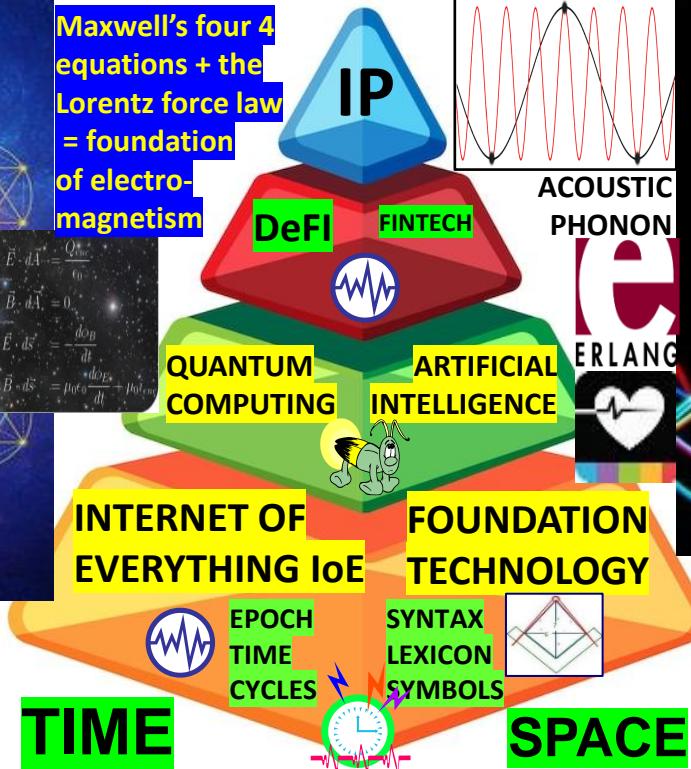
**Buckminster Fuller "build a new model that makes the old model obsolete"**

**Socrates: focus all your energy on building the new, not fighting the old"**

#algorithmic #stablecoin #buckminster #fuller #cryptocurrency #Milton #Friedman



**METATRON'S CUBE**  
GENESIS OF ALL FORM

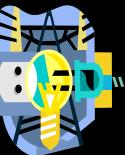


**THE OZ KEY**

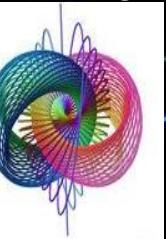


"Time is a created thing" Lao Tzu

"If you want to find the secrets of the universe, think in terms of energy, frequency and vibration." - Nikola Tesla



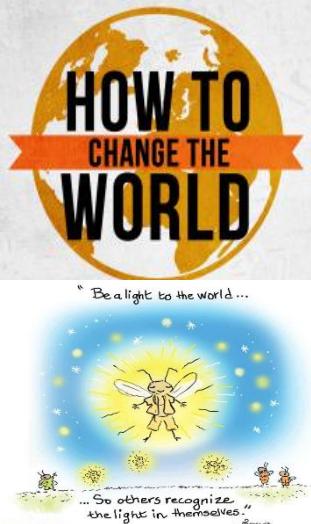
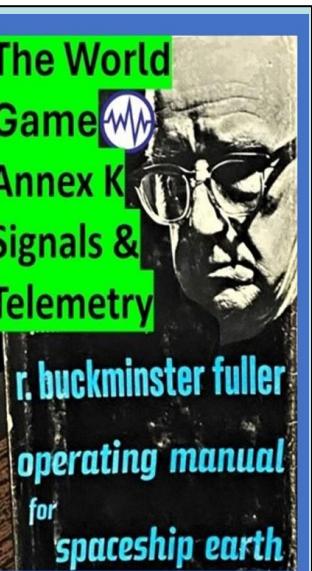
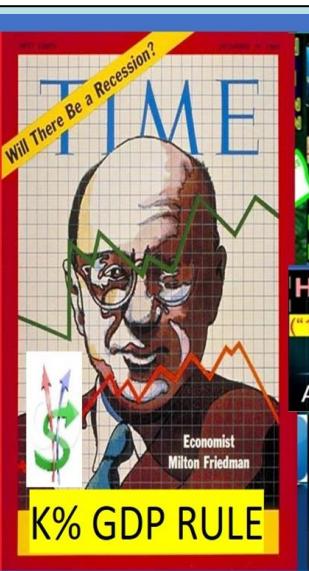
HOPF FIBRATION



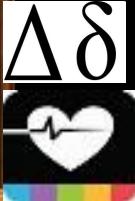
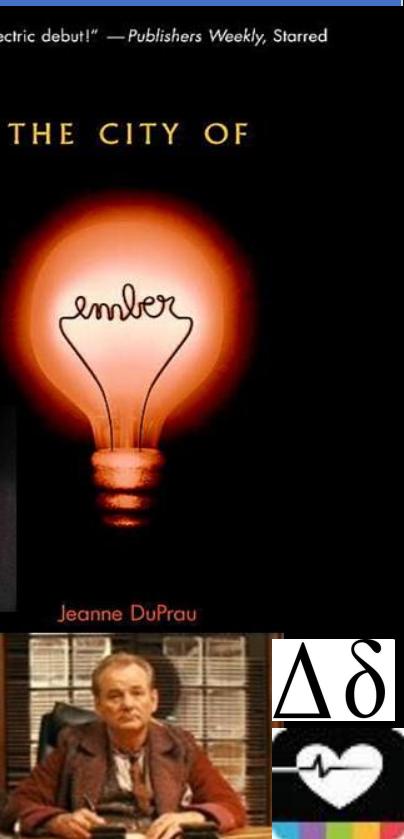
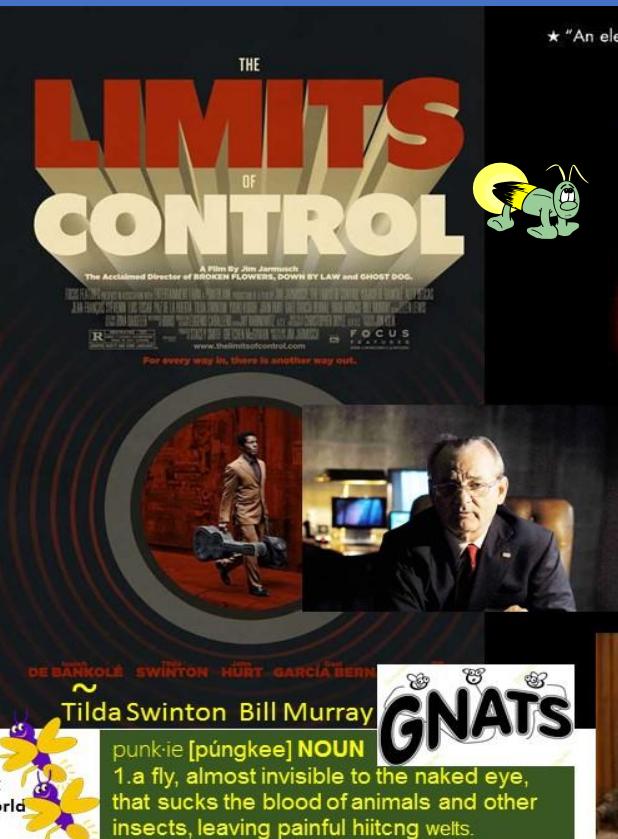
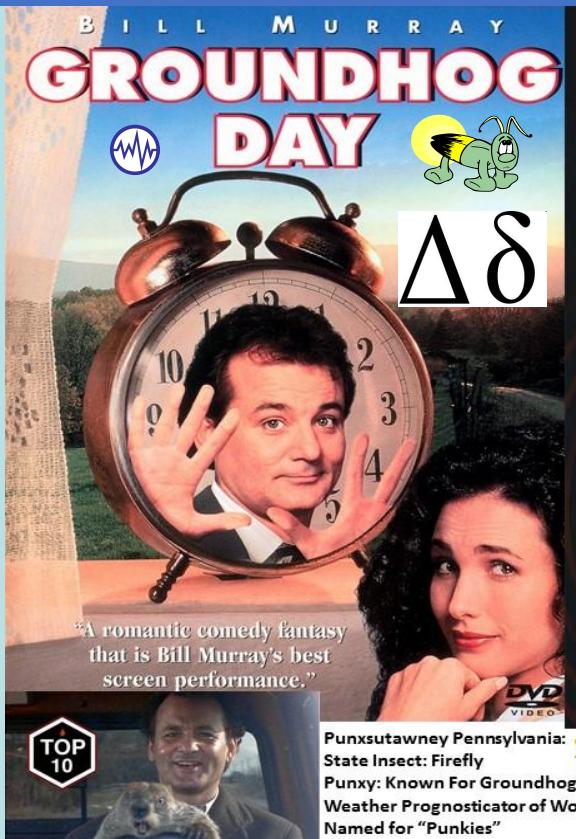
USPTO 13/573,002 The Heart Beacon Cycle Time – Space Meter / Adaptive Template



**DISNEY'S FANTASIA**



**UNIVERSAL LAW**  
**CAUSE / EFFECT**  
**ACTION /**  
**INACTION**  
**IF / Then /**  
**or.. ELSE**



# Patent Applicant 13/573,002 Curriculum Vitae

What does your name mean?



**Steven + McGee**

Intellectual

Revolutionary

You have a sharp spirit paired with a strong will. You have the power to change the world with your intelligence!

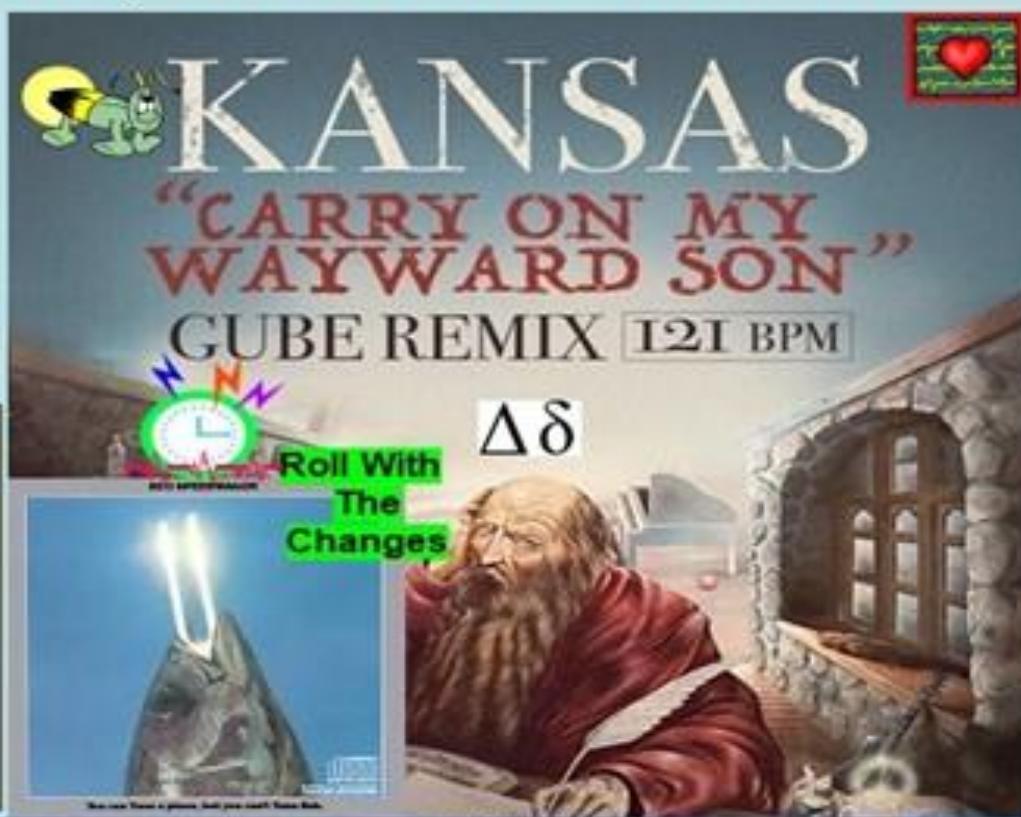
What does your name mean?



**Steven + McGee**

Endless Luck

You are an inspiration for your friends. Your loving ways, your huge heart and your beauty spread endless joy to the world!



$\Delta\delta$

Roll With  
The Changes

**BOOK OF THE CUBE**

The Synchronicity 441 (21 x 21) cube matrix system represents the minimum fractal of totality. Calculated:  $21 \times 21$  being the prime statement of totality ( $21^2 = 1$  totality).  $1 + 2 + 3 + 4 + 5 + 6 = 21$  (sum of totality). The Law of Time (Day).

Satoshi Nakamoto Reveal #2

**CLOCK FACE DAY**  
90° / 90° / 90° / 90°

**BASEBALL "DIAMOND"**  
A diamond is a square in a block in 3D  
Blockchain BLOCK in 3D = CUBE  
Cube has Length, Depth, Height, Volume

**INFOCON**  
4 3 2 1  
**INFORMATION CONDITION**

"As an avid lover of numerology and astrology, I use both in my day-to-day life. I believe God is the ultimate mathematician, as everything around us can be viewed as numbers" Satoshi Nakamoto White Paper 2008 "The solution we propose begins with a time - stamp server"

