

# Foundation Tech: Net, Net of \$

## QFS – DeFi Financial Federated Systems



The Timekeeper is the primary antagonist in Borderlands 4, a ruthless dictator who rules over the planet Kairos from on high.  
THE TIME KEEPER  
BORDERLANDS 4

ONE EARTH / ONE PEOPLE / ONE TIME

Cape Hatteras 2nd Location

FUTURE MAN  
Born: February 10th 1960 & 06:44 AM  
Aquarius  
Aquarius Rising  
Mystic Yod

THE YOD  
AND OTHER POINTS IN YOUR HOROSCOPE  
by HELEN PAIGE & BRIDGET MARY O'TOOLE

USPTO 13/573,002 THE HEART BEACON CYCLE  
TIME – SPACE METER, METRICS QFS QUANTUM  
FINANCIAL SYSTEM TECHNOLOGY FRAMEWORK  
NET, NET OF \$\$\$ = TEMPORAL LAYERS  
GENESIS EPOCH, Genesis + 1, 2, 3...

“All is energy wave form motion” Tesla

Hopf Fibration

Bytes: 01010101

Electric field variation - Scalar Electrostatic Potential wave  
Gravity field variation  
ΔG field ≈  $10^{-38}$  electro-weak force variation  
3D “local space” expansion phase      3D “local space” contraction phase

SCOTUS ALICE 2014  
‘THE ALICE EFFECT...’

“CLAIMS MAY NOT DIRECT TOWARDS ABSTRACT IDEAS”  
SCOTUS ALICE RULING 2014

“BLOCKCHAIN, DLT, LAYERS”  
= ABSTRACTIONS = NOT  
SCOTUS ALICE COMPLIANT

“DISRUPTOR IN CHIEF”  
“FATHER OF DEFI”

Battlefield Digitization  
Net Enabled Operations  
Swords to Plowshare  
“Last, Least among you”  
Federate and graduate

All NET, NET OF \$\$\$  
ARTIFACTS CREATED WITH:  
1. Epoch Time Cycles 2 Syntax

>1 DAVIDs  
>1 Goliaths  
>1 TEAMS

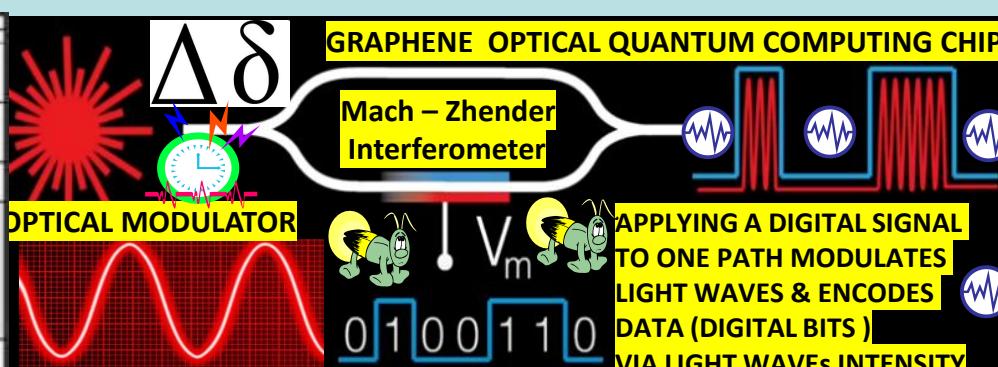
SCOTUS ALICE 2014  
‘THE ALICE EFFECT...’

Δ δ

Silhouettes of people working with a sword and plowshare.

david\_gol fotossearch.com

## FOUNDATION TECH = 1. EPOCH TIME CYCLES / INTERVALS 2. SYNTAX

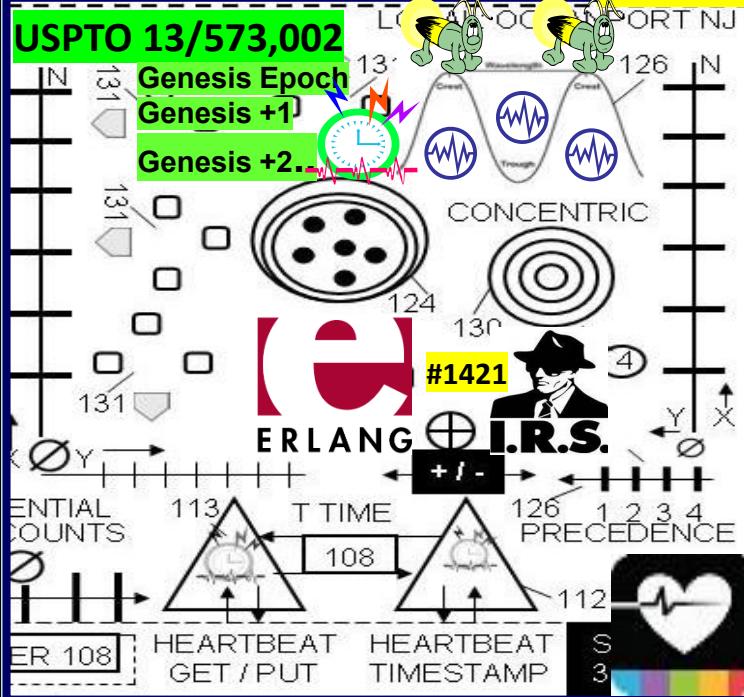


**Electronic-photonic quantum chip: quantum silicon chip array of "quantum light factories"**

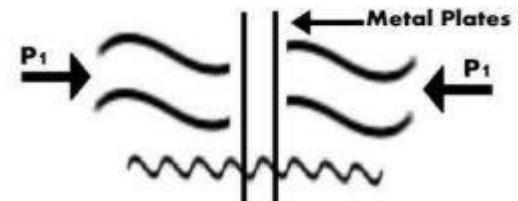
**QUOTE:** "As in nature, all is ebb and tide, all is wave motion, so in all branches of industry, alternating currents, electric wave motion will have sway." "All is wave form motion" Nikola Tesla



**What if Zero Point Energy  
Is the medium and means  
for all wave form transmission?**



**ZERO POINT ENERGY**  
ALL ENERGY IS REMOVED BUT  
RANDOM ELECTROMAGNETIC  
WAVES STILL REMAIN



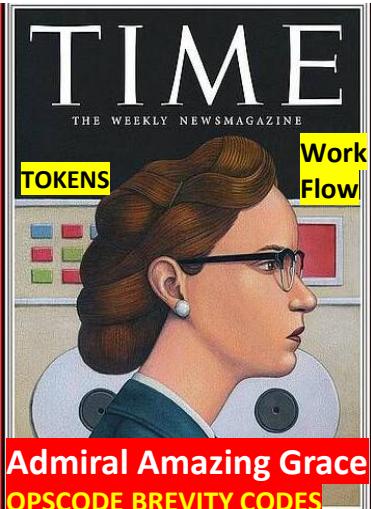
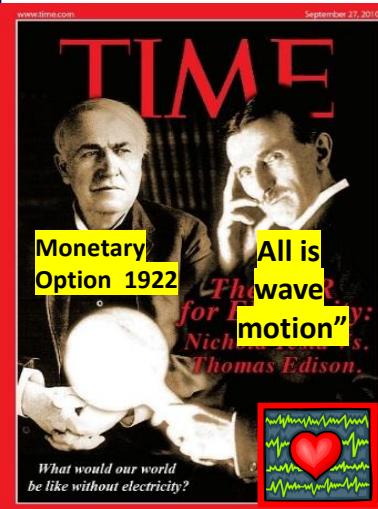
**P<sub>1</sub> = PRESSURE FROM EXCLUDED WAVELENGTHS**

**ENORMOUS ENERGY DENSITY:**  
 $10^{24}$  to  $10^{58}$  JOULES/m<sup>3</sup>

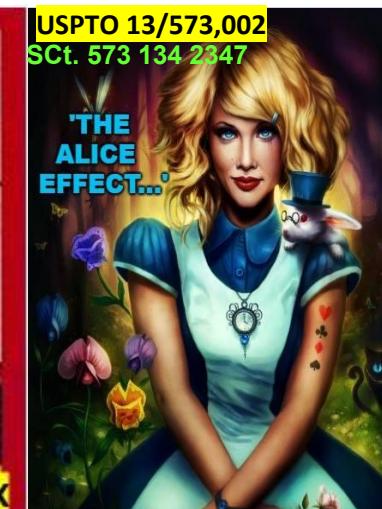
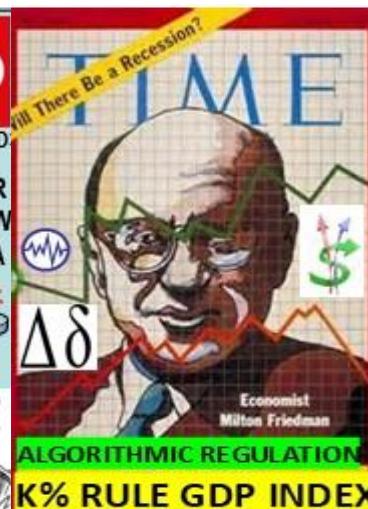
## THE CASIMIR EFFECT ON METAL PLATES IN A VACUUM

# QFS Quantum #DeFi system of federated DAO systems checklist:

1. Nikola Tesla was correct = "All is (energy) wave form motion"
2. Internet, net of \$\$\$ standard (s) (ISO, ITU, IEEE) = everyone, everything
3. Net foundation = not changed given can't change (wave form based)
4. DeFi IP wars escalate: SCOTUS Alice in Wonderland, ISO, ITU, IEEE etc.
5. Interoperability, sync, stochastic harmonization of QFS driven by wave form Vs quantum dot, particle methods (see Fermilab et al's research)
6. Simple, real will (eventually) win given rich, powerful entities all staked
7. > 1 David (s) & Goliath team Vs many Goliath Teams (see #6)
8. Brevity codes mapped to symbols, symbol sets = AI – man = > TIME
9. Economist Milton Friedman correct @ K% rule, crisis = REAL CHANGE
10. SLA closer = cheaper given less fuel imperative, climate, peak oil
11. Zero Point, Over Unity, ZPE Energy from vacuum Nassim Haramein's prototype silicon chip (crystal) oscillations creating wave forms: see #1

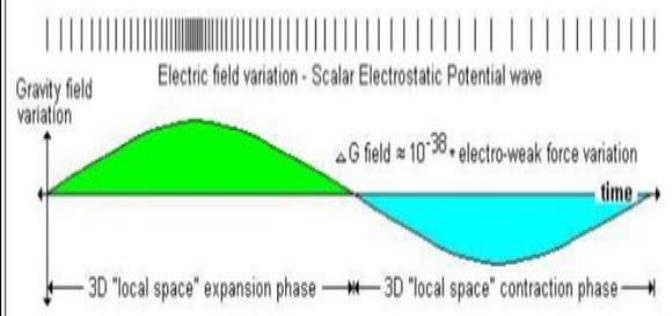


NATO	ISO
STOCK MIC CODES	</ORG_ID>
STRUCTURED DATA EXCHANGE	</URN>
TEMPLATE FORMS	R
300+ USE CASES	W
LOGIC / FILTERS	A
SYNTAX / SYMBOL	Real World Assets
LEXICON LIBRARY	A.I.



# Nikola Tesla "all is wave form motion"

SCOTUS in Alice 2014 Supreme Court "has observed all inventions "embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas."



**"abstract ideas = qualities, states, or relationships not physically present"**

**"As in nature, all is ebb and tide, all is wave motion. In all branches Of industry, alternating currents, electric wave motion will have sway"**

all phenomena: electromagnetic and gravitational interactions, can be understood through the lens of wave dynamics. Electromagnetic waves form the basis of these interactions, that gravitational fields gravitational waves and quantum fields. Electromagnetic waves involve the generation of complex waveforms

## USPTO 13/573,002 The Heart Beacon Cycle Time - Space

Meter THESIS: All net, net of money, QFS are formed using:

1. Epoch time cycle temporal intervals ex: created by microchip , sound, light wave form oscillations
2. Syntax processed during epoch cycle temporal intervals

All things net, net of money, QFS, AI blockchains, hash-graphs etc., (time chains) are formed with unicast, multicast, anycast protocols, (statistically predictive) workflow logic = A.I. artificial intelligence propagated by electro-magnetic wave form motion described by nature

USPTO 13/573,002



SCOTUS 573 U.S. 208

(2014)

Alice Corp

VS CLS

Bank

SEQUENTIAL

HOP COUNTS

23

RUNNER 108

HEARTBEAT

GET / PUT

108

T TIME

112

HEARTBEAT

TIMESTAMP

113

SECTION

3 FIELDS

B2: PROCEDURAL TEMPLATE

310 311

XML

HEARTBEAT MESSAGES

STATE META DATA SNAPSHOTS

NET OPS / NET MANAGEMENT

NET MARKUP NETWORK SERVICE INTERFACE

DOT

.COM

IEC 61850

IEEE C37.118

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NULL

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IEEE 802.1AG HOP BY HOP DETECTION

IEEE 802.11 Hbh HOP BY HOP CONTROL

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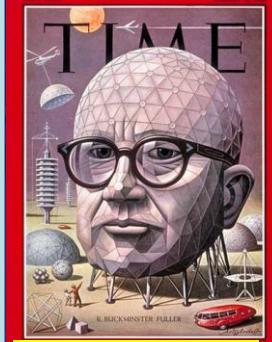
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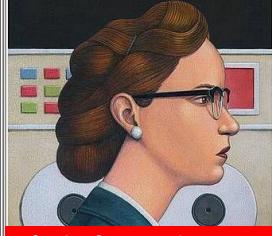
572

Timekeeper is the primary antagonist in Borderlands 4, a ruthless dictator who rules over the planet Kairos from on high.

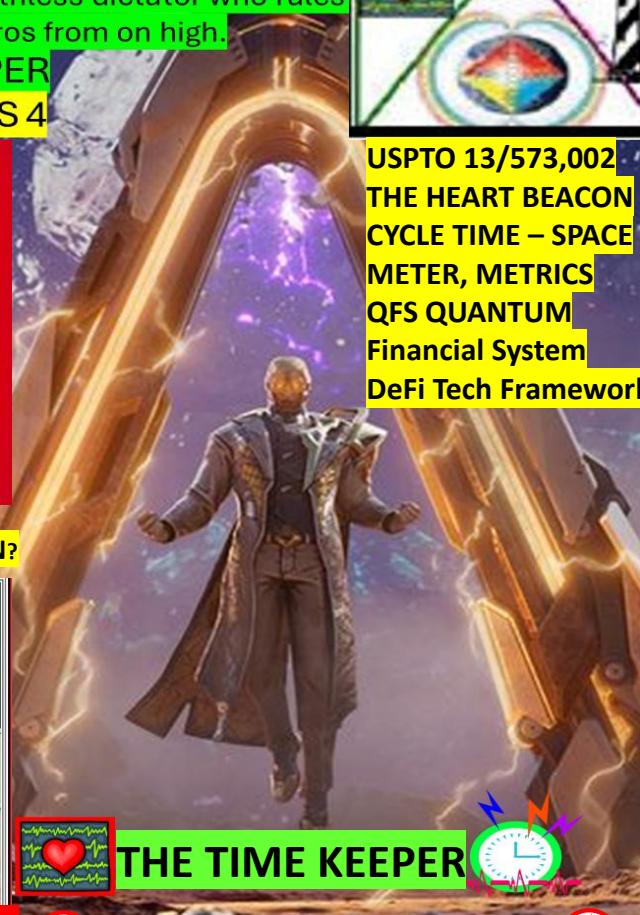
## THE TIME KEEPER BORDERLANDS 4



SPACE SHIP EARTH  
UTOPIA OR OBLIVION?



Admiral Amazing Grace  
OPSCODE BREVITY CODES



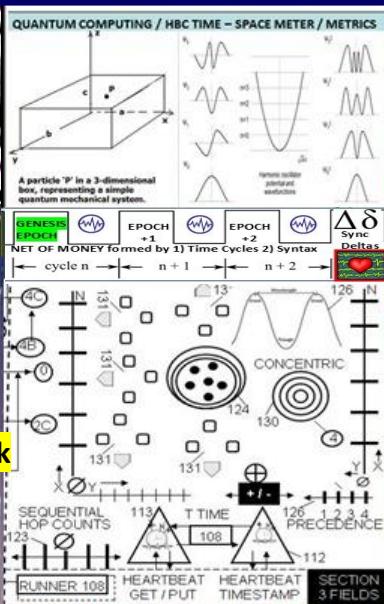
Hashed Timelock Contract (HTLC) / Epoch Sync Deltas  $\Delta\delta$

QUOTE: "As in nature, all is ebb and tide, all is wave motion, so in all branches of industry, alternating currents electric wave motion will have sway." Nikola Tesla

Because abstract ideas, laws of nature, and natural phenomenon "are the basic tools of scientific and technological work" .. Supreme Court Alice Corp., 573 U.S. at 216, 110 USPQ2d at 1980; Mayo Collaborative Servs. v. Prometheus Labs., Inc., 566 U.S. 66, 71, 101 USPQ2d 1961,



USPTO 13/573,002  
THE HEART BEACON  
CYCLE TIME – SPACE  
METER, METRICS  
QFS QUANTUM  
Financial System  
DeFi Tech Framework



EDISON's Monetary Option 1922

# FUTURE MAN

Born: February 10<sup>th</sup> 1960 & 06:44 AM

Aquarius

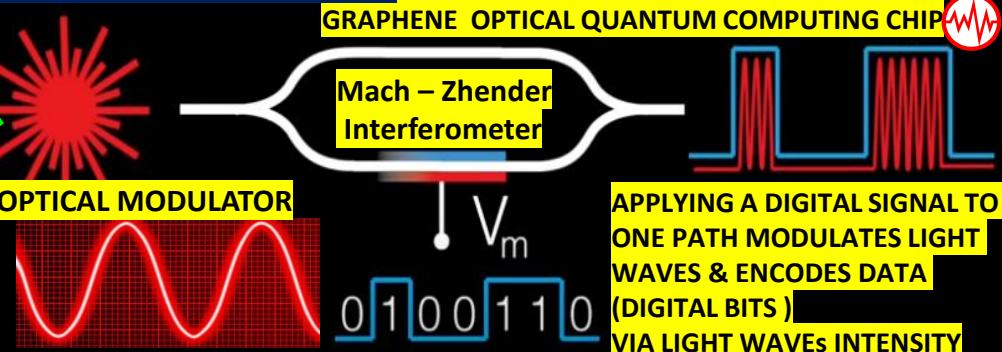
MR MAGOO

Aquarius Rising 144 Degrees

Mystic Yod



MR MAGOO X 3



APPLYING A DIGITAL SIGNAL TO  
ONE PATH MODULATES LIGHT  
WAVES & ENCODES DATA  
(DIGITAL BITS )  
VIA LIGHT WAVEs INTENSITY

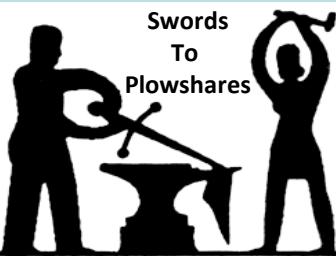
THE  
YOD

AND OTHER  
POINTS  
IN YOUR  
HOROSCOPE

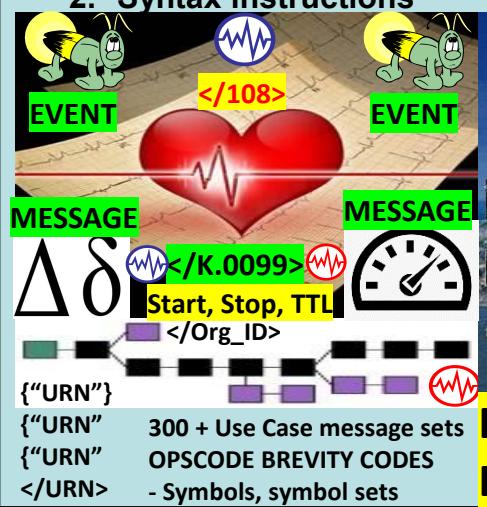
by HELEN PAUL  
&  
BRIDGET MAYE  
O'TOOLE

# World Game (s) Reset

## GREAT REDESIGN



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





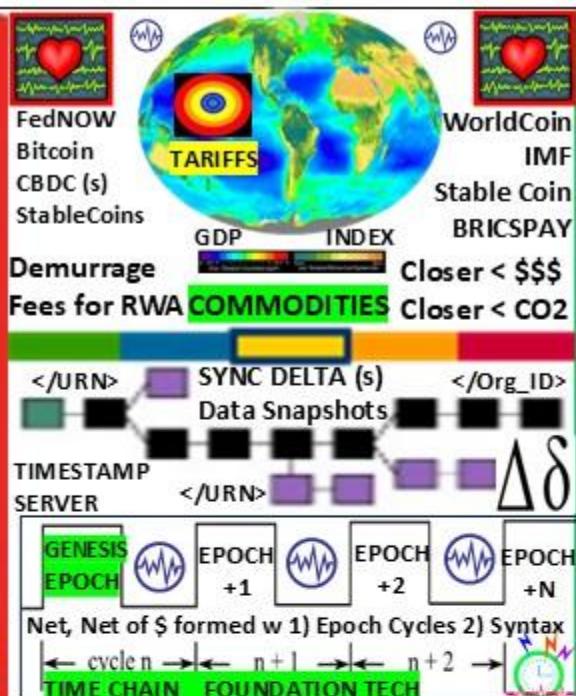
UTOPIA ?  $\Delta\delta$  OBLIVION ?

TradeFi TRC Trade Reference Currency

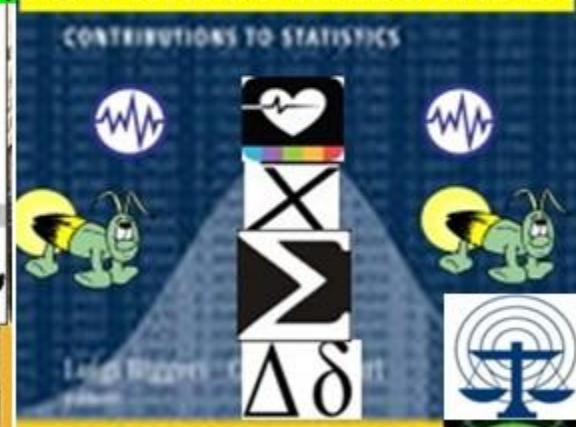
E \$ € ¥ currency index #20022



I.R.S. #1421 ISO Blockchain CONSENSUS ALGORITHMS



STAT MEAN VALUE INDEX



Price Indexes in Time and Space Methods and Practice SchellingPoint

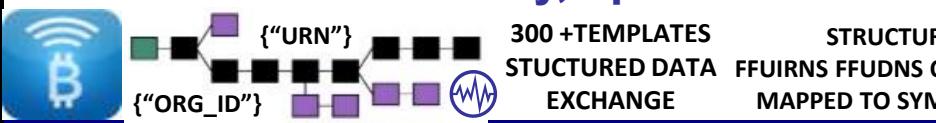


# Humanitarian Assistance Networked Donor System

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



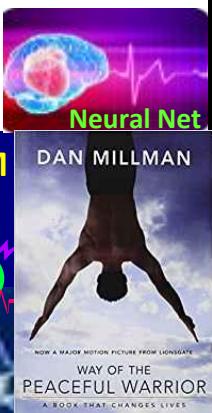
"Shared situational awareness enables collaboration synchronization, and enhances sustainability, speed of command"



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



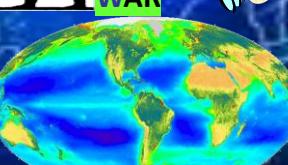
Proximity Beacons



JAEGERS



Closer < \$\$\$ < FUEL



FIREFLY  
HEARTBEAT  
ALGORITHM

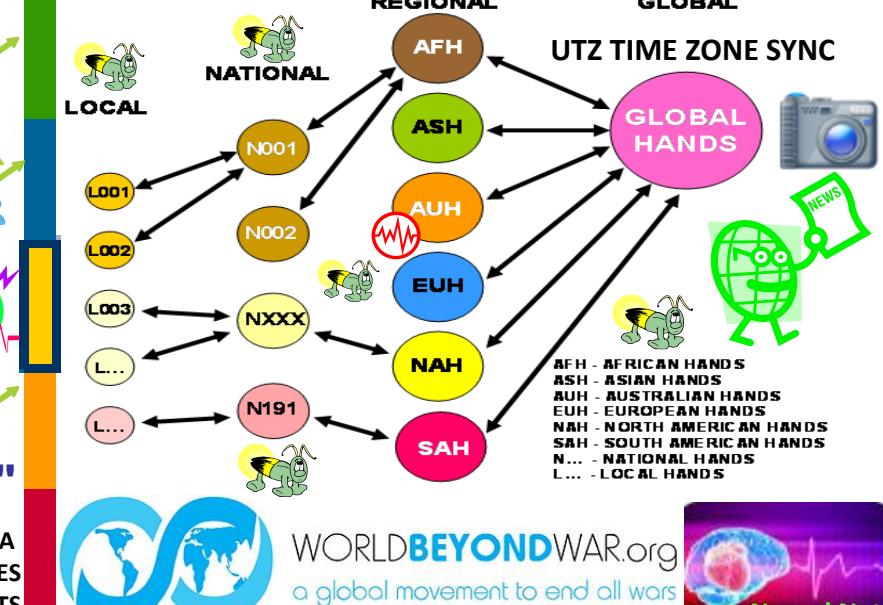
EVENT / ALERT Flash Heartbeat Message Bus



KAIJU



SYSTEM  
Of  
SYSTEMS



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



OFF SHORE  
OUTER BANKS

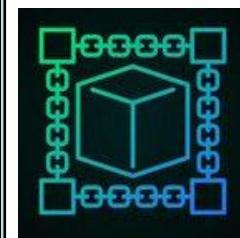
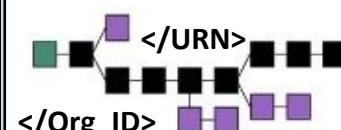
# BLOCKCHAIN = ABSTRACTION

**TRUTH** = Blockchain Quad-lemma

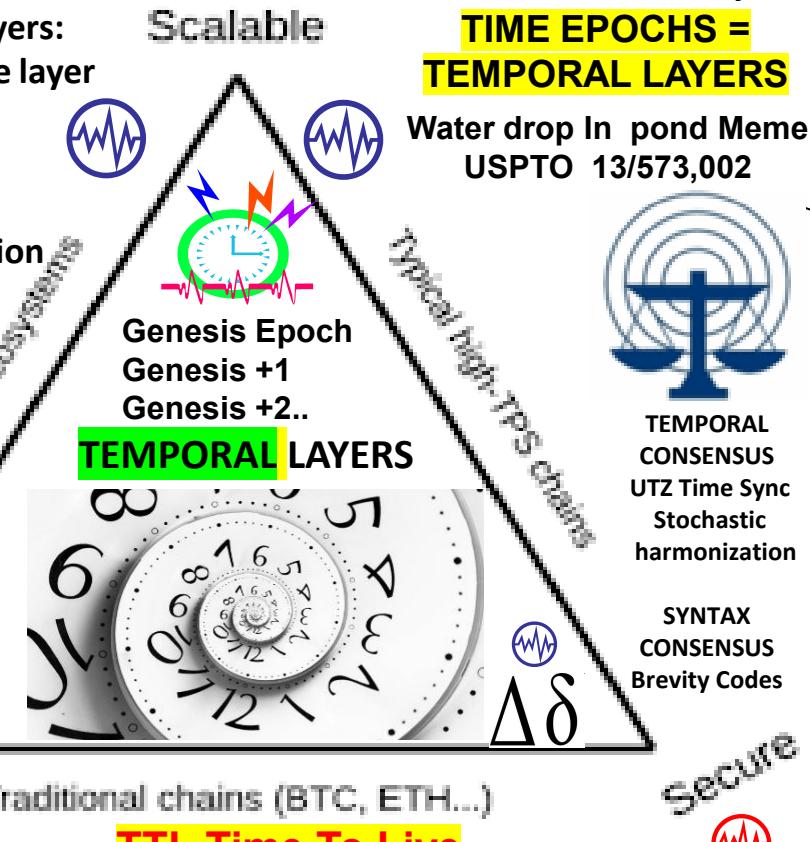
No Layers L0, L1, L2...  
only GENESIS EPOCH,  
Epoch time cycles,  
intervals, cycles

5 five blockchain tech layers:

- Infrastructure hardware layer
- Data layer
- Network layer
- Consensus layer
- Application - Presentation



Decentralized  
START

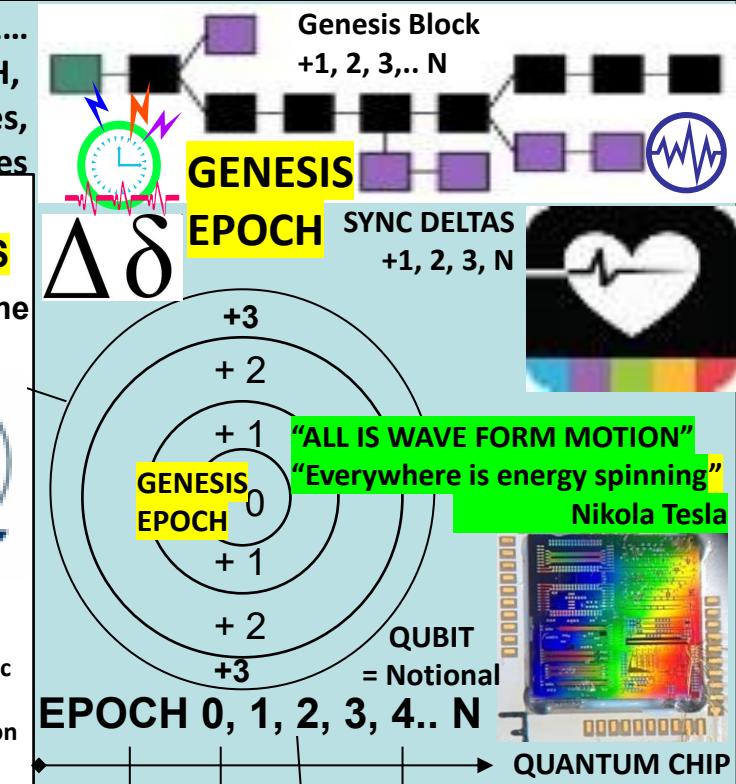


Blockchain = series of hashed blocks carrying transactional records. The first block of the blockchain is the **Genesis block**. After that, every new block added to the blockchain is linked to the Genesis block through a (temporal) iterative process.

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

**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.



1. Time epochs created by wave, chip oscillation i.e., 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..

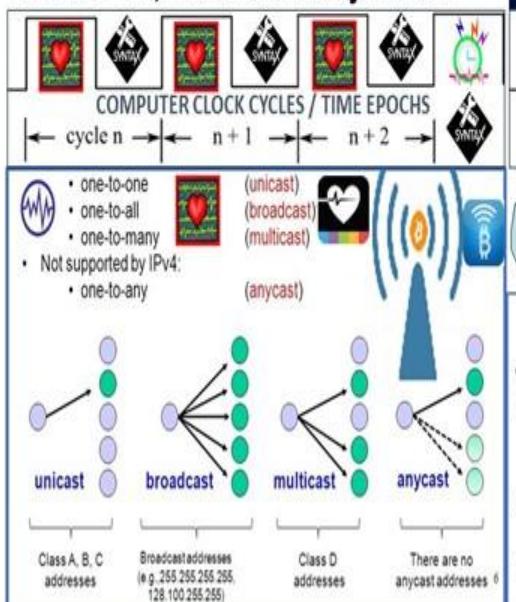
## Foundation Technology Trinity:

- 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

**THESES:** 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...

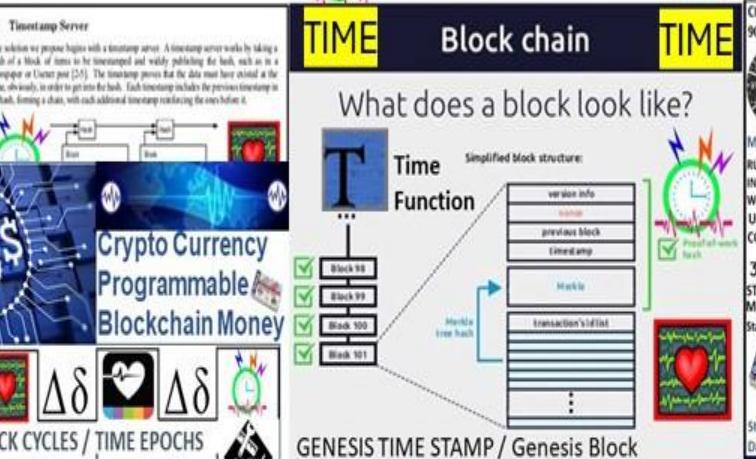
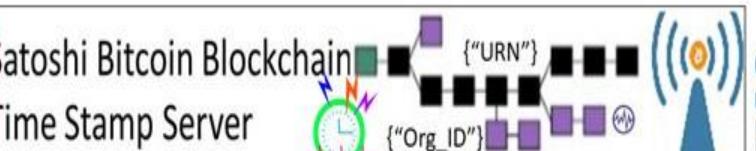


All things internet, programmable net of money are formed using:  
1) Epoch Time Cycles to 2) process (not) syntax as instructions

## Epoch Time Cycles / Syntax



Internet / Internet of Money building blocks



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

# BUILDING BLOCKS



TASK ON / OFF

201

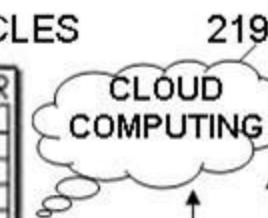
**B1: BUILDING BLOCK 1: TCP/IP HEARTBEAT TIME STAMP & DATA GET / PUT OF ORG ID / URN IN MICRO / MACRO CYCLES PRIOR TO DATA FUSION CENTER INSERTION**



MACRO CYCLES



.0001

MICRO CYCLES  
216

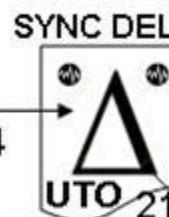
219

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

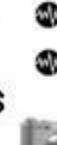
**B2: BUILDING BLOCK 2: ADAPTIVE, CYCLIC, ITERATIVE PROCEDURAL TEMPLATES: XML ARTIFACTS i.e. UNIT TASK ORDER & K00.99 HEARTBEAT SYNC DELTA MESSAGES / STATE META DATA SNAPSHOTS IN NETWORK EXECUTION MANAGEMENT MARKUP OF SERVICE INTERFACE ARTIFACTS**



214



215 LEADER'S INTENT DECISIONS



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



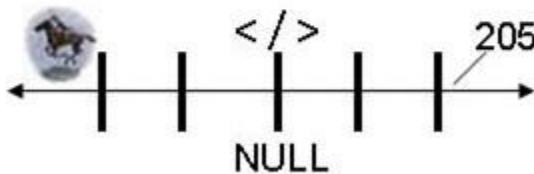
211 SNAPSHOTS  
212  
210

203

**B3: BEACON TECH TYPE I: PAUL REVERE LINEAR, SEQUENTIAL HOP COUNTS**



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



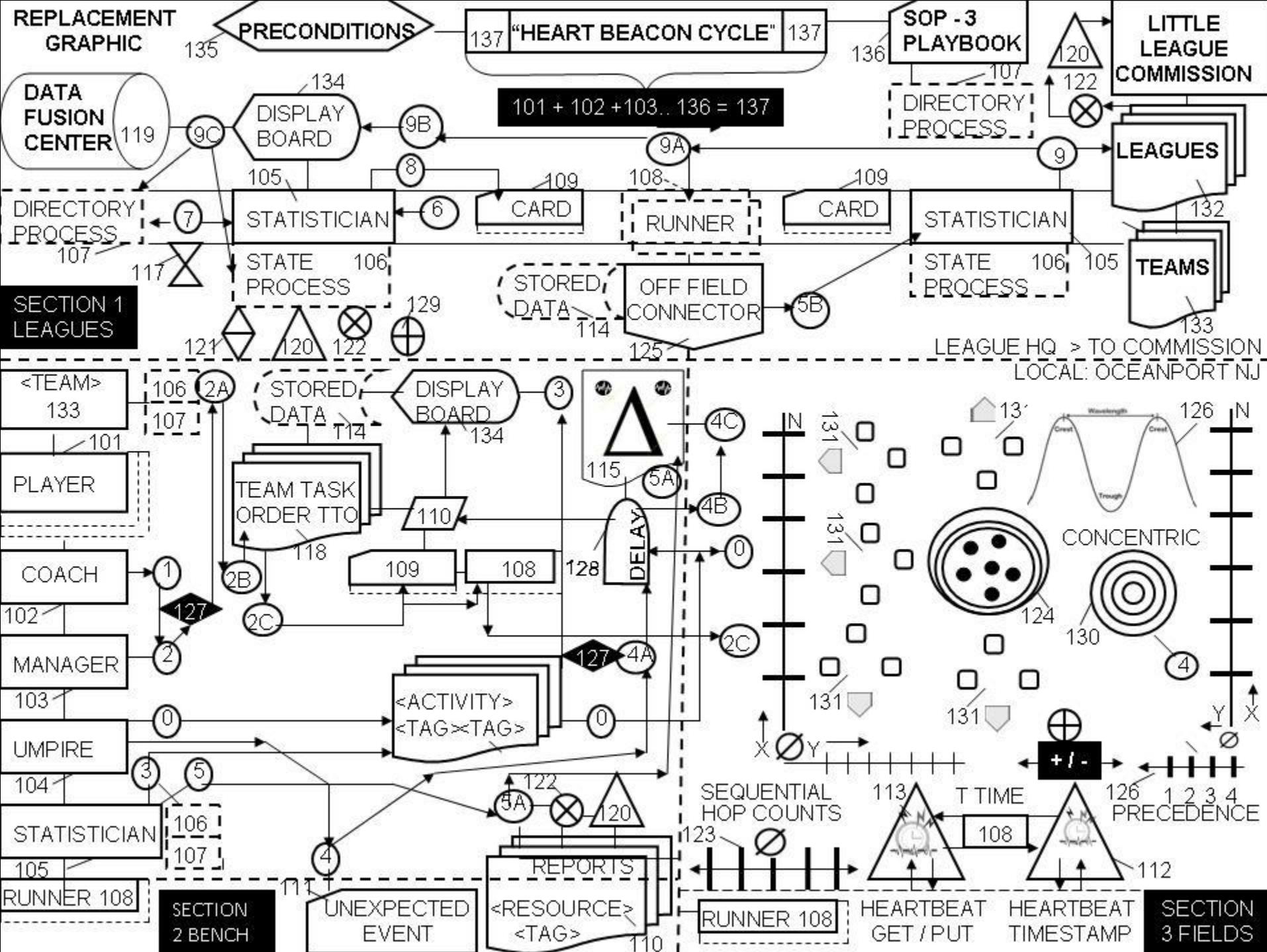
APPLIQUE' OVERLAYS

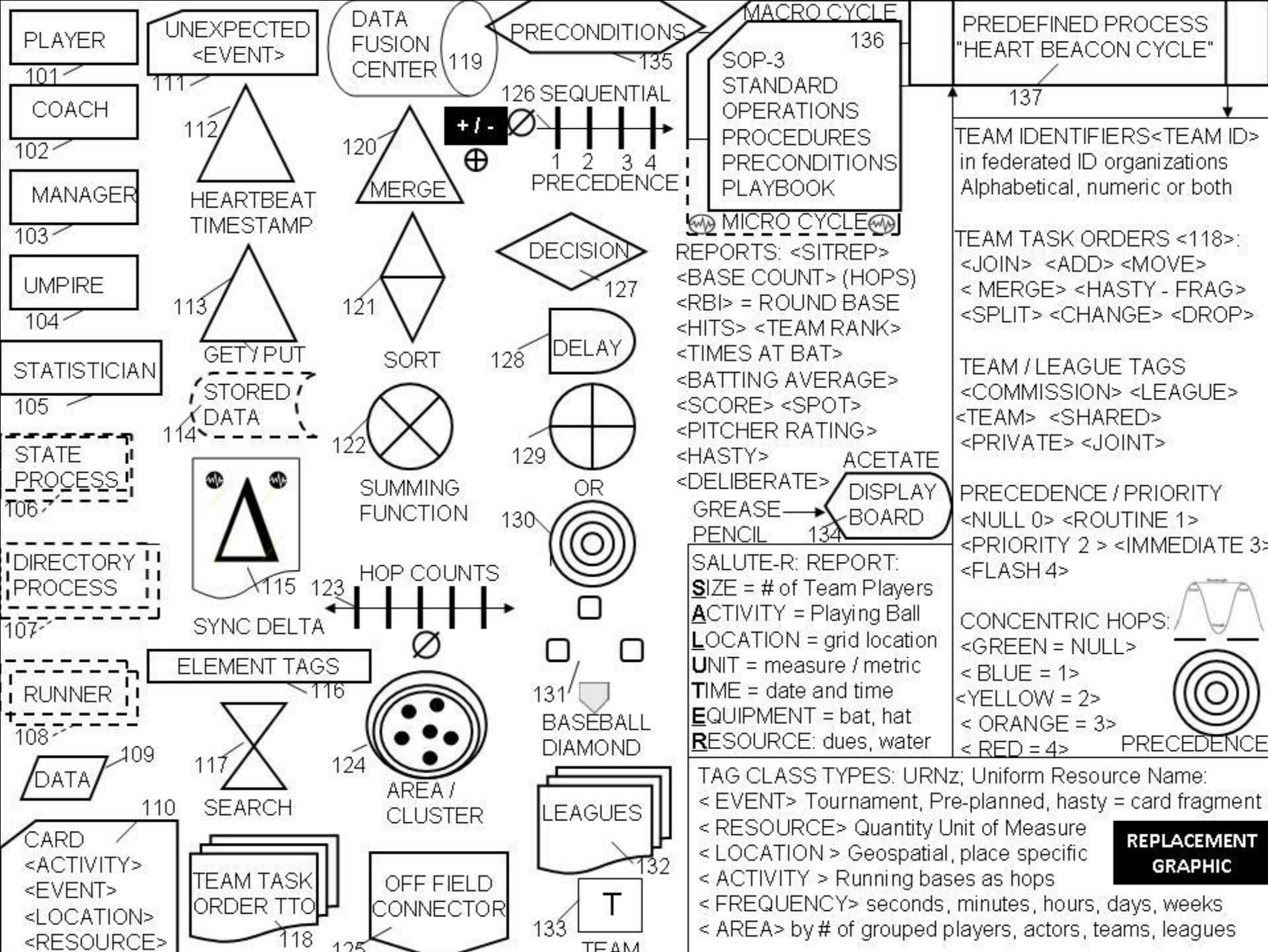


MAP VIEWS GEO-LOCATION SPECIFIC  
SHOW SYNC DELTAS BY GROUP /  
RESOURCE TYPE, EVENT CLASS /  
NEWSCAST BY TRANCHE <CLASSES>

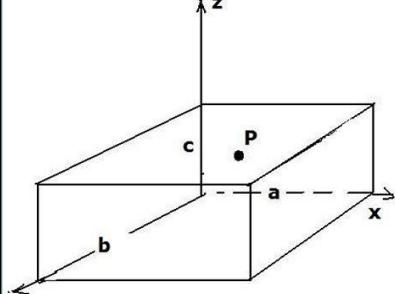
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**B4 BEACON TECH TYPE II: WATER DROP IN POND RADIUS, CIRCUMFERENCE GEO SPATIO-TEMPORAL**

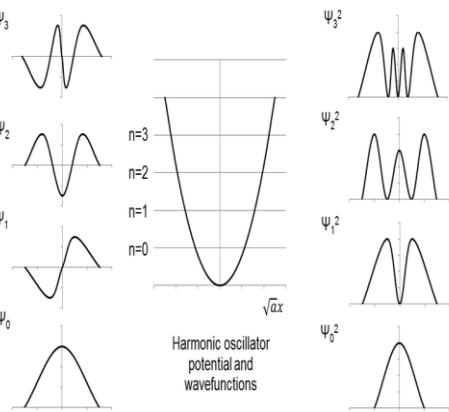




QUANTUM COMPUTING / HBC TIME – SPACE METER / METRICS



A particle 'P' in a 3-dimensional box, representing a simple quantum mechanical system.



#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

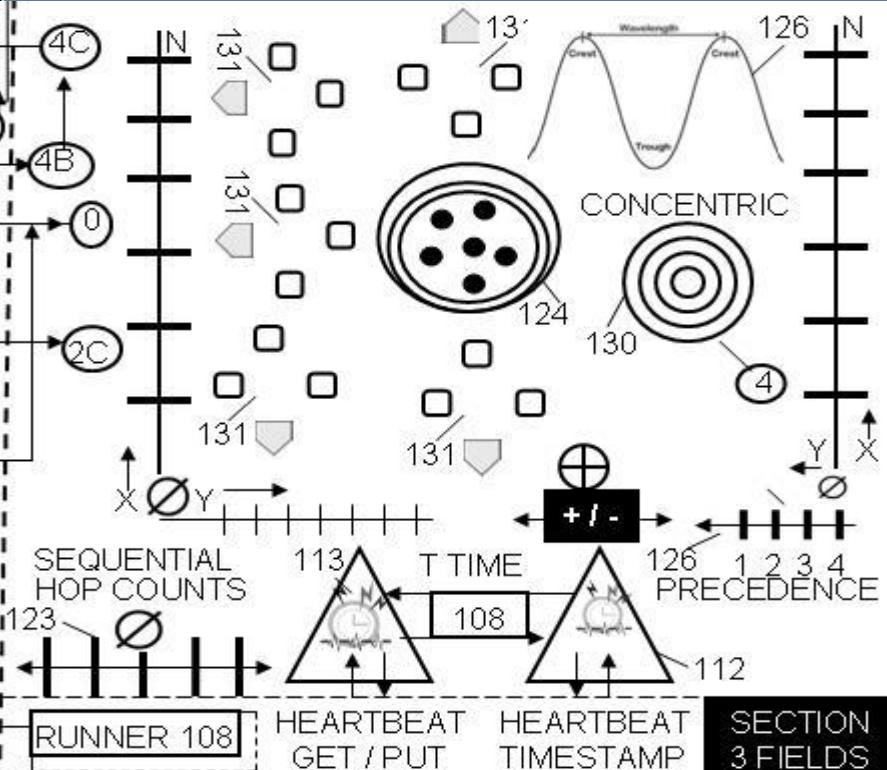
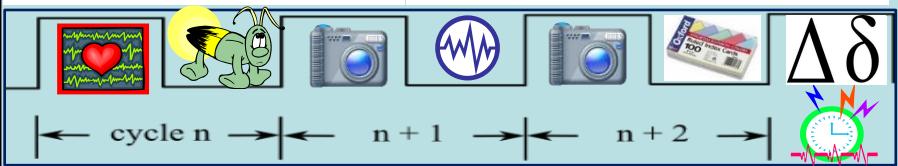
## US Sct Alice Corp Vs CLS Bank Physical memes

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? LOV

universal gate set STATE CHANGE EVENT

quantum gates

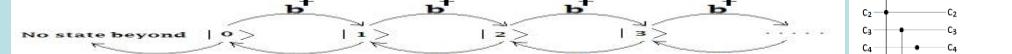
$|0101\rangle \Leftrightarrow |5\rangle$

qubits initialized to arbitrary values

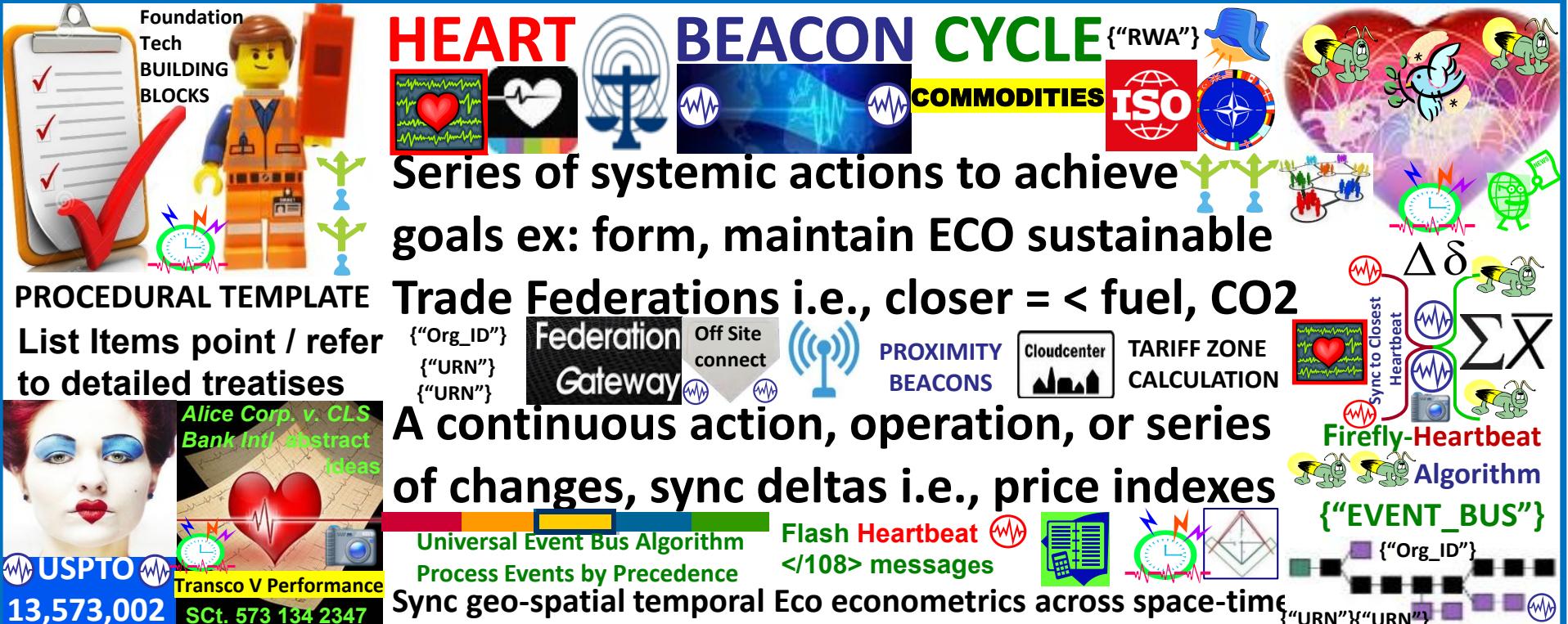
$|4\rangle + |5\rangle$

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)



MINIMUM LIST OF COMPONENTS / BUILDING BLOCKS, PROCESSES, PROCEDURES... AGREED ON BY TRADE FEDERATIONS TO ACHIEVE DAO DISTRIBUTED AUTONOMOUS ORGANIZATIONS CONSENSUS

DAO's in FEDERATIONS AGREE TO USE COMMON COMPONENTS, SHARED PROCESSES, METHODS, SIGNALING - TELEMETRY SCHEDULE & METRICS IN SMART CONTRACTS, SERVICE LEVEL AGREEMENTS

CHECKLIST: TRADE FEDERATION ECONOMIC FRAMEWORK EX:

- 1) Organization Identifiers {"Org\_ID"} routing / organizing
  - 2) Track RWA Real World Assets / Commodities by </URN>
  - 3) DISTRIBUTED STATE MACHINE SNAPSHOTS @ 15 / N min
  - 4) TARIFF TOOL ZONE CALCULATION w Space – Time Metrics
  - 5) NIST Quantum Random Number Beacon QRNB
- USPTO 13/573,002 = Spaceship Earth's Signals & Telemetry Annex





# QFS Quantum Financial System / TRC

# DEFI FINTECH IP WARS / Litigation Foundation Tech



# SWORDS to PLOWSHARES



The logo features a blue camera icon on the left, followed by the text "USPTO 13/573,002" in large blue letters, "573 U.S. 134 S.Ct 2347" in smaller blue letters below it, and "Alice in Wonderland Ruling" in a stylized blue font at the bottom.



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

- Battlefield Digitization, Net Centric Warfare for OOTW Operations Other Than War

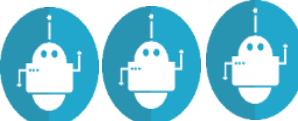


- Net, Net of \$\$\$ Foundation Tech
  - Structured Data Exchange with 300 + use cases

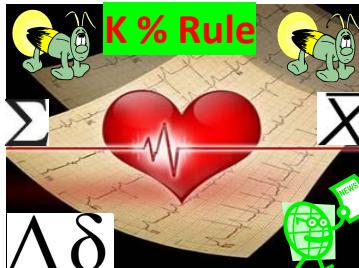


- # Distributed State Machine

  - Use Cases: A.I., Quantum, Big Data



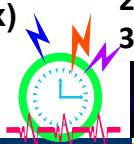
- Blockchain, Distributed Ledger Tech
  - DAO Distributed Autonomous Organization



Federation  
Gateway

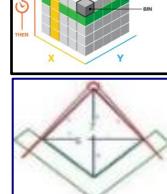
In the beginning (of time)..

### **There was the word (syntax)**



**Net. Net of \$\$\$ money consists:**

- 1) Epoch Time Cycles
  - 2) Syntax used / not in epochs
  - 3) Wave form motion (sound)



**MEMO #1421**



Structured Data Exchange



SYNTAX LEXICON  
ROSETTA STONE

Coder's Guide lexicon.

STRUCTURED  
<CONTENT>  
EXCHANGE  
TEMPLATES

MIL STD 2525ABC

ASSETS

ASSET TOKENS

"SYMBOLS RULE THE WORLD"

11.8 - Kinematic  
11.8.1 - Pos  
11.8.1.1 -  
11.8.1.2 -

STRATML

XAML

BINARY XML

XBRL

DDL DATA  
DEFINITION  
LANGUAGE

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

{"URN" "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 /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



DAO 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 MIL - MILITARY OPERATIONS

TOKENIZED ECONOMY BREVITY CODE OPSCOSE MAPPET TO SYMBOLS



INDEX REFERENCE #:

M015 STATUS :

EFFECTIVE: 14-DEC-99



PURCHASE CODES



FEDERATED PEGS



{"URN" "ASSET\_CLASS"}



{"URN" "ASSET\_TYPES"}

ISO 10383 – MIC



Market Identifier Codes



{"URN"}



{"Org\_ID"}



108



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>				
AMDPCS	<b>TOKENS</b> <b>OPSCODE BREVITY CODES</b>		<b>F002 F014 F015 F541 S201</b>	<b>A.I.</b> 			
AFATDS				<b>INFOCON</b> <b>5 4 3 2 1</b> <b>INFORMATION CONDITION</b>			
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	 <b>Syntax Lexicon</b> <b>Coder's Guide</b>	A423 C505 F014 F015 S201	<b>M2M</b> 

# MESSAGE CATALOG

## 300 + Use Cases

**Data Elements:** entity, attribute, relationship equivalents      **HEARTBEAT MESSAGE =**  
**K00.99 </108> {"108"}**

Object Categories		Information Categories and Examples							
Examples	Location	Movement	Identify	Status	Activity	Intent			
OOB	<b>SYNTAX LEXICON</b>		STRUCTURED DATA lat/long	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 relationships	BDA, op levels	repair, broadcasts	YAML expansion plans		
Sociological	Culture, religion, economic, ethnic, government, history, languages	temples, historic structures	E-R Model Entity	Class Diagram Class	Relational Database Table	Object DBMS Class	XML DTD / Schema Element	TADILs Message	MTF Message
Geophysical	Terrain, weather, climatology, oceanography, astrometry	feature lat/long, alt/dpth	Attribute	Attribute	Field / Column	Attribute	Child Element or Element Attribute	DFI FFIRN / FFN / FUDN	DUI FUD
		Domain Value	PURCHASE CODES	Instance, Value	<b>TOKENS</b>				

# Information Elements Roles

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



## **FFUDN: Field Format Unit Designator #**

## **FFIRN Field Format Index Reference #**

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



# PROCESS MESSAGE BY PRECEDENCE UNIVERSAL EVENT / ALERT MESSAGE BUS

## **OPERATIONAL NODES / ACTIVITIES**

DATA			SYSTEM FUNCTIONS		PERFORMANCE	
11.4 - 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			11.2 - Linear			
11.4.1.2.2 - Evaluated D	PURCHASE		2 - Estimate Type			
11.4.1.3 - Value	CODES		1.2.1 - Estimated			
SYMBOL	Friend	Neutral	1.2.2 - Observed			
2525C	Partner		1.2.3 - Predicted			
11.4.1.3.4 - Substance			1.2.4 - Smooth / Precise			
11.4.1.3.5 - Surface			Competitor			
11.4.2 - Platform / Point / Feature Type			4 - Velocity			
11.4.3 - Specific Type			1.4.1 - Horizontal			
11.4.4 - Type Modifier			1.4.2 - Vertical			
11.4.5 - Unit			VA Confidence			
			1 - Bearing Angle			
			2 - Bearing Angle Rate			
			3 - Covariance Matrix			





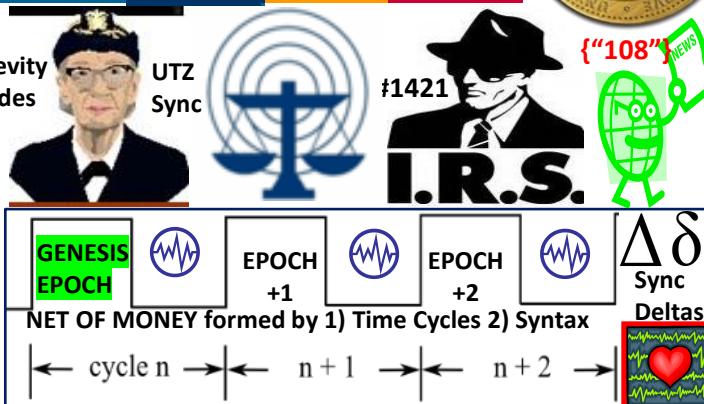
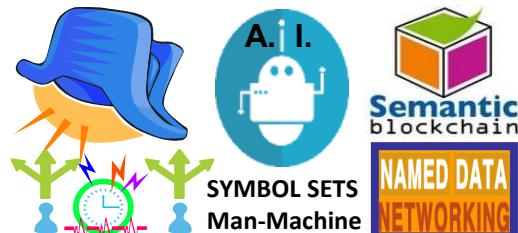
# **World Game Great Reset**

## **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 =

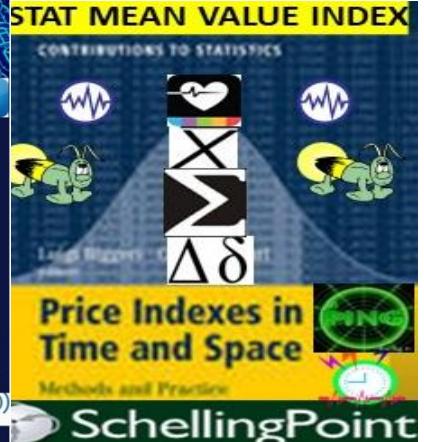
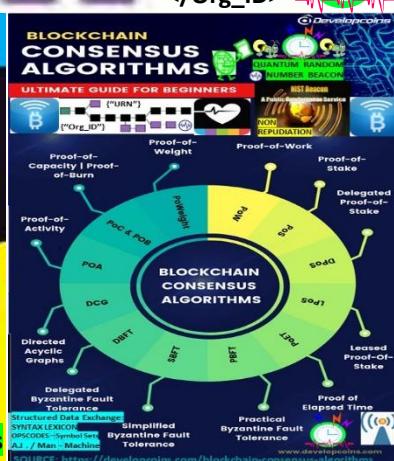
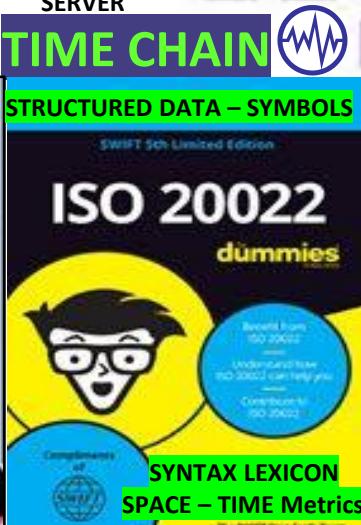
## **Comprehensive list of use cases, data**

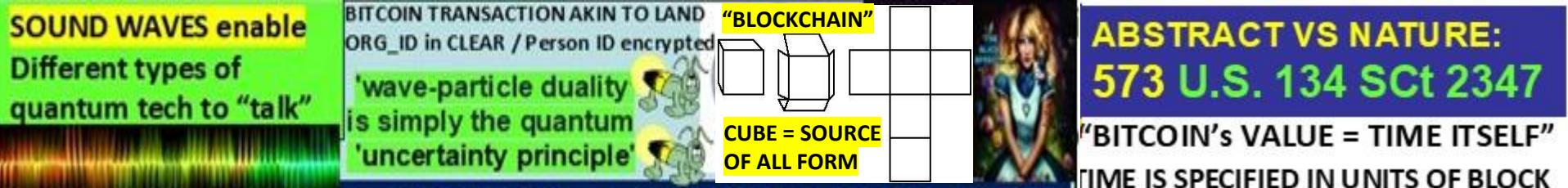
## elements supporting Internet of Everything

IoE net of value. Reference guide, data

## **dictionary standards support**

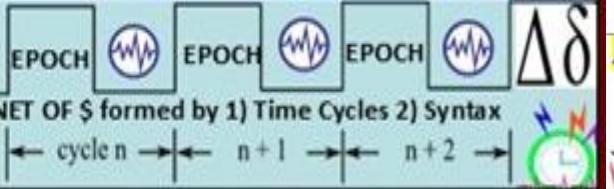
## Data elements mapped to SYMBOL SETS





## TIME EPOCHS & SYNTAX = FOUNDATION TECH

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



## SCOTUS Alice in Wonderland Ruling 2014 ABSTRACTIONS MAY NOT BE CLAIMED:

Chain Abstraction: Simplifying the Complex World of Blockchain

The Net, Net of Money (Cryptocurrency)

Does not have / has no:

- LAYERS i.e., seven layer internet model
- BLOCKS on the BLOCKCHAIN
- Blockchain data stored in a CUBE
- QUBIT (S) quantum two state system
- Packets i.e., Vinton Cerf's "ode to a packet"  
*Nikola Tesla "All is wave form motion"*

Lightchain AI introduces Proof of Intelligence (PoI), consensus mechanism designed to reward nodes for performing AI computations i.e., model training, inference, optimization...

**INTERNET, NET OF \$\$\$ TRUTH = WAVE FORMS**

All computing is essentially workflow logic

If, then, else then do {'task'} multicasted, Unicasted, anycasted / filtered over TCP / IP



**Qubit vs bit:** Qubits are represented by a superposition of multiple possible states. A qubit uses the quantum mechanical phenomena of superposition to achieve a linear combination of two states. A classical binary bit can only represent a single binary value, such as 0 or 1, meaning that it can only be in one of two possible states. A qubit, however, can represent a 0, a 1, or any proportion of 0 and 1 in superposition of both states, with a certain probability of being a 0 and a certain probability of being a 1.

Q: ARE WE ABSOLUTELY CERTAIN QUBITS EXIST ?

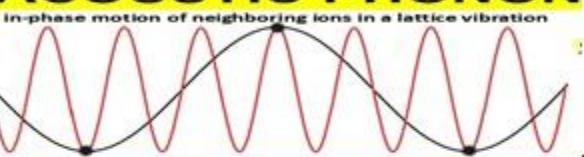
Q: IF CUBITS DO NOT EXIST, THEN ARE THEY SIMPLY A WAY TO ACHIEVE GROUP THINK FASTER ???

Q: 1/3 of an event (transaction) ... really ???

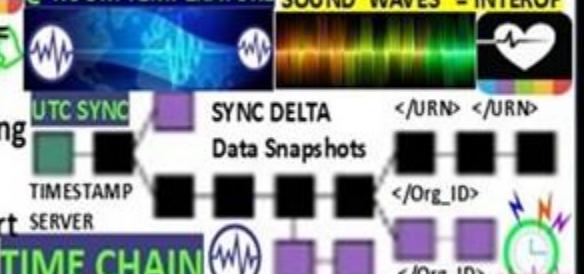
**ABSTRACT VS NATURE:  
573 U.S. 134 S.Ct 2347**  
"BITCOIN'S VALUE = TIME ITSELF"  
TIME IS SPECIFIED IN UNITS OF BLOCK TRANSACTION CONFIRMATION TIMES"

FISHER INFORMATION FLUX FLOWS

**ACOUSTIC PHONON**



SOUND / LIGHT e.g., Q.R.N.B. QUANTUM COMPUTING @ ROOM TEMPERATURE SOUND WAVES = INTEROP

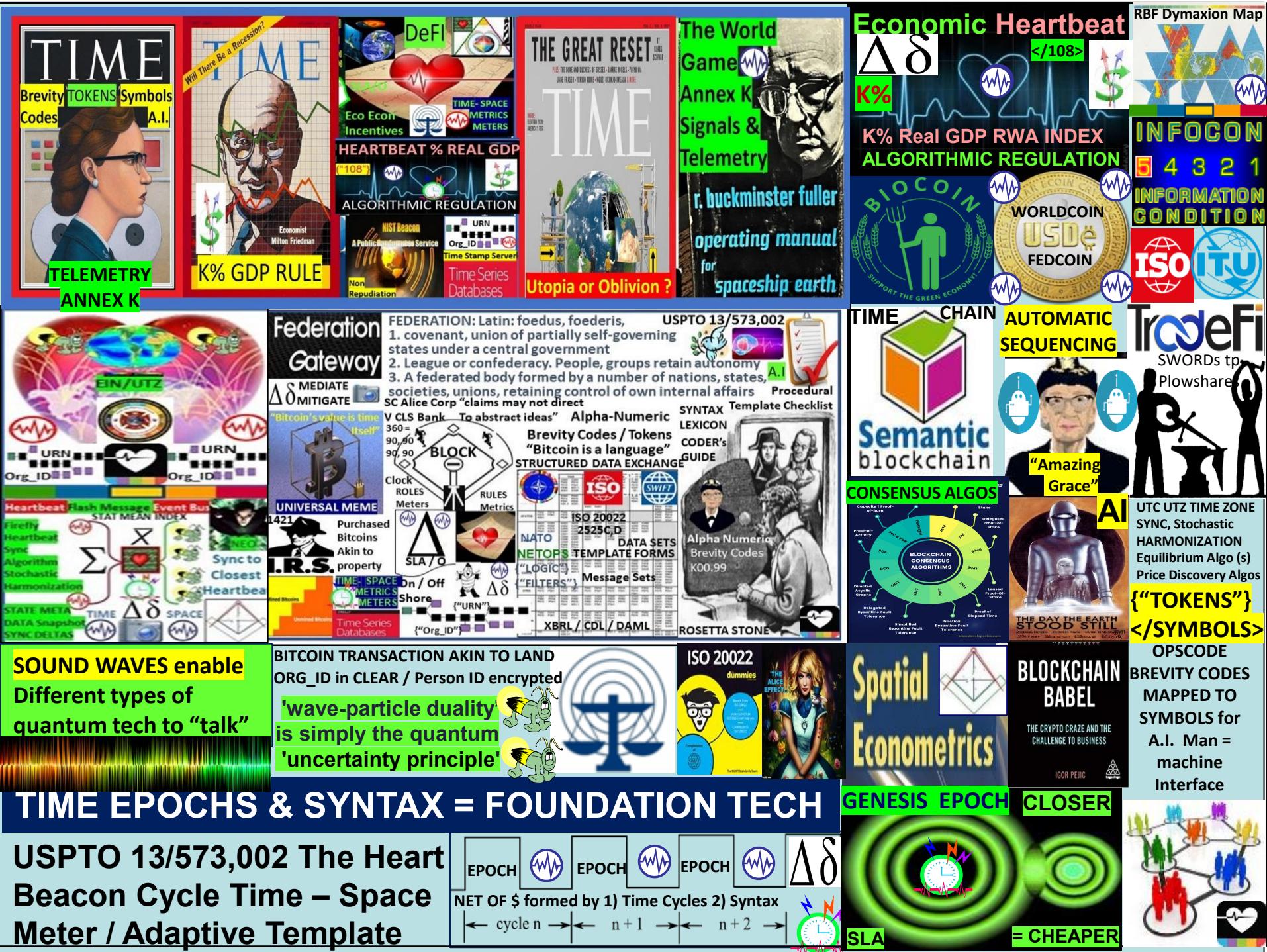


Net of \$\$\$ formed with:  
**1 EPOCH TIME CYCLES**

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"



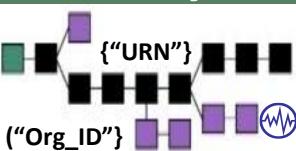
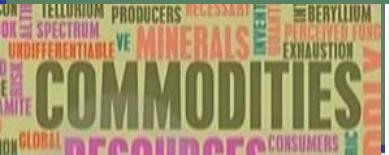
# Numismatics: study of currency

Marcus Aurelius



Legend: IMP. M.  
ANTONINVS  
AVG. TR. P. XXV.

## THE TERRA (TRC) Trade Reference Currency



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..

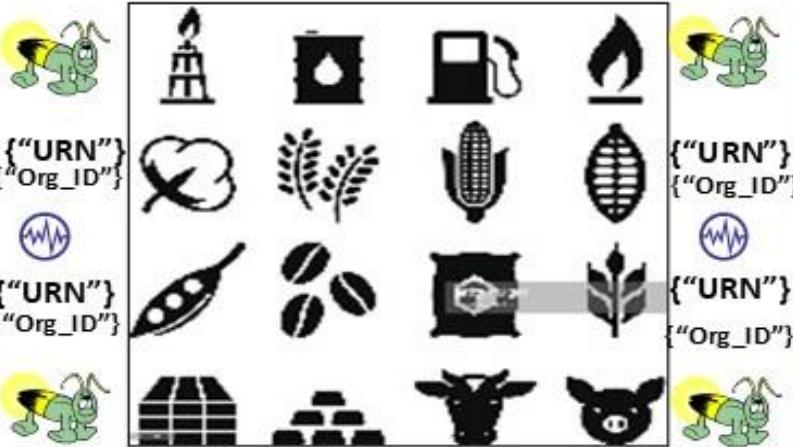


### Roman Denominations



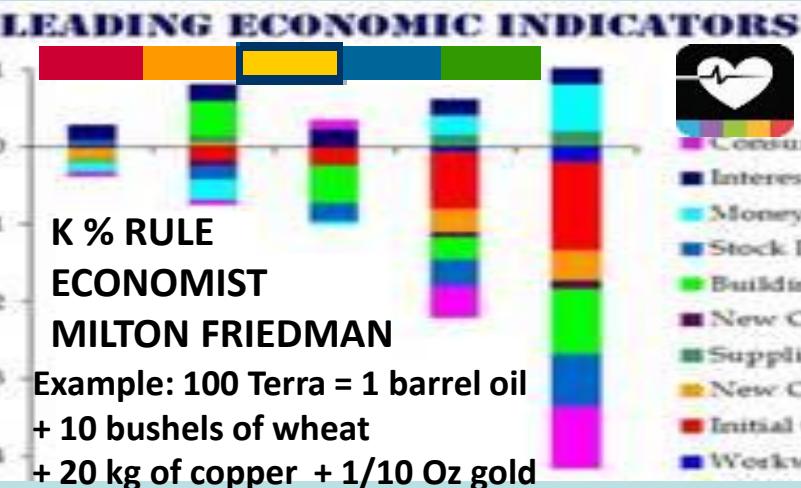
Images Courtesy Of: Roma Numismatics Ltd, Numismatica Ars Classica, Bertolami Fine Arts, Nomos, & The State Museum in Berlin

### Commodities Index Basket / FIAT PRICE Discovery Algo / MEDIATION

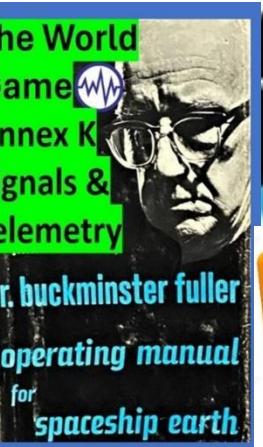
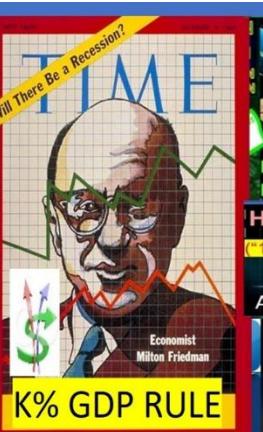
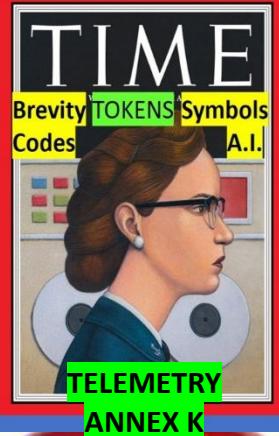


### BRONZE / LEAD / AES SIGNATUM AES GRAVE / SILVER / LEAD / IRON..

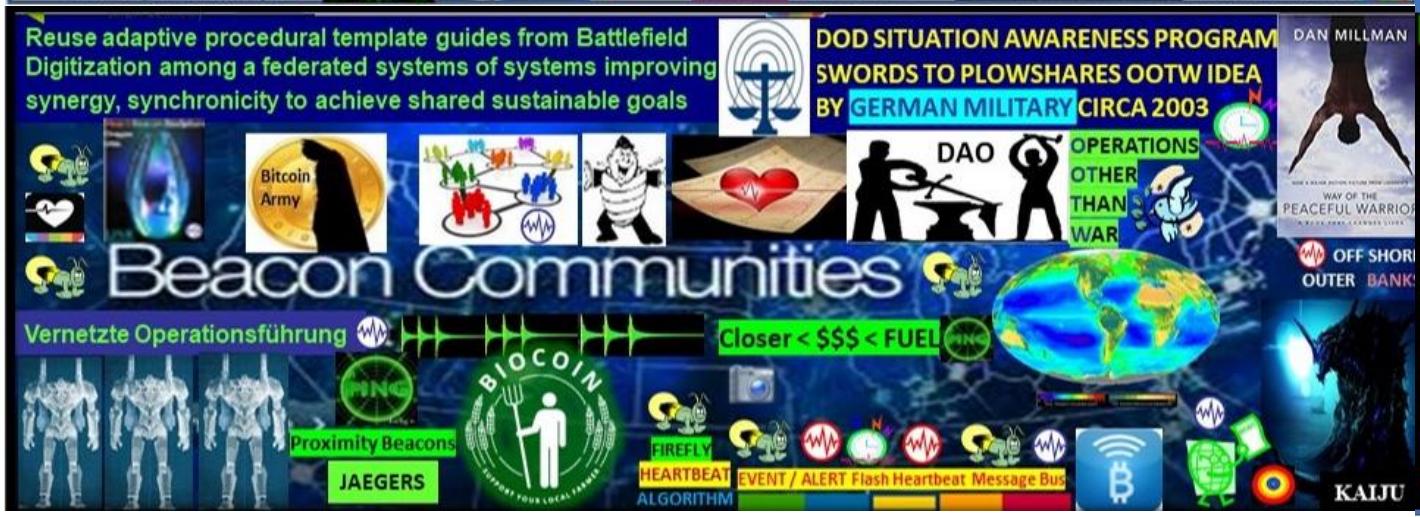
Unlike most modern coins, Roman coins had (at least in the early centuries) significant intrinsic value. However, while the gold and silver issues contained precious metals, the value of a coin could be slightly higher than its precious metal content, so they were not, strictly speaking, equivalent to bullion. Also, over the course of time the purity and weight of the silver coins were reduced.[15] Estimates of the value of the denarius range from 1.6 to 2.85 times its metal content,[citation needed] thought to equal the purchasing power of 10 modern British pound sterling at the beginning of the Roman Empire to around 18 pound sterling by its end (comparing bread, wine, and meat prices) and, over the same period, around one to three days' pay for a legionary.[16]







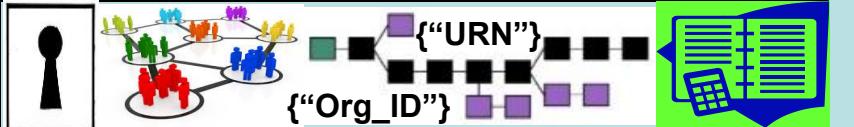
- Reuse, mod of System of systems engineering framework, Syntax Lexicon Library data elements  
**- STRUCTURED DATA EXCHANGE**  
 Reuse brevity codes mapped to 2525D symbol sets comprised of 300 + message sets for A.I. - machine Block-Time DLT arbitrage among Trade Federations </Org\_ID> {“URN”} </URN>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



Spatial / temporal UTZ synchronization, stochastic harmonization, Time - Space Distance Estimation Service Common Consensus Algo meme Eco sustainable incentives  
 “We can synchronize ourselves, DAO Trade Federations in time - space for common purposes”  
 Eco sustainable, Equitable Economic econometrics.

# Heart Beacon Cycle

## FEDERATE / TRADE FEDERATIONS



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

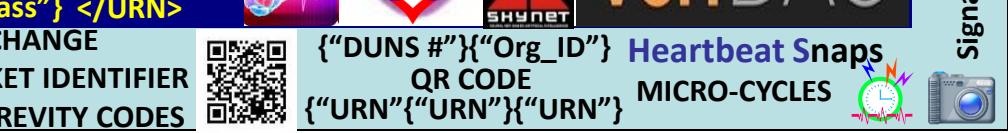
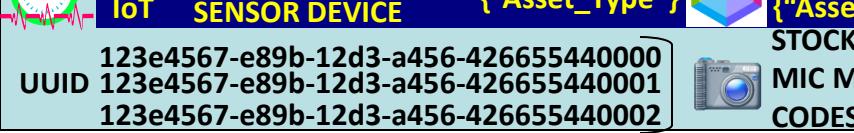


{"GLOBAL"}  
{"SHARED"}  
{"DOMAIN"}  
{"COMMUNITY"}  
{"PRIVATE"}  
</ORG\_ID>  
{"GROUP ID"}

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



DISTRIBUTED AUTONOMOUS ORGANIZATION = DAO RAND Corp  
term coined circa 1991 now in use by Blockchain tech corporations



EVENT BUS  
Signalling, Telemetry



## FEDERATE: COMMON GOALS SYNCHRONIZED IN SPACE - TIME



Net of \$\$\$ formed with:

1 EPOCH TIME CYCLES

2 {"Syntax"} "The Word"

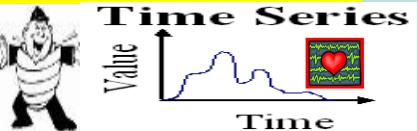
"In the Beginning" Genesis Block

"net, net of money are formed using wave form motion 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 is a LANGUAGE"  
Digiinomics

"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

90 feet

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

3rd Base  
STATISTICIAN  
Metrics, Meters  
Stat Mean Value Index

90 feet

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

first base  
RUNNER Message Bus

Firefly – Heartbeat Algo

Stochastic Harmonization

EVENTS

FLASH MESSAGE EVENT BUS

TIME STAMP SERVER

Epoch Time Cycles

$\Delta\delta$

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

90 feet

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

90 feet

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

90 feet

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

90 feet

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

90 feet

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

90 feet

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

$\Delta\delta$



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

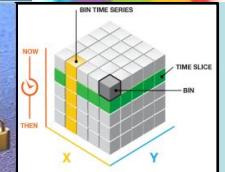
Stochastic Harmonization

EVENTS

FLASH MESSAGE EVENT BUS

TIME STAMP SERVER

Epoch Time Cycles



BANK SC 573 US 134 2347

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# Circle USDC

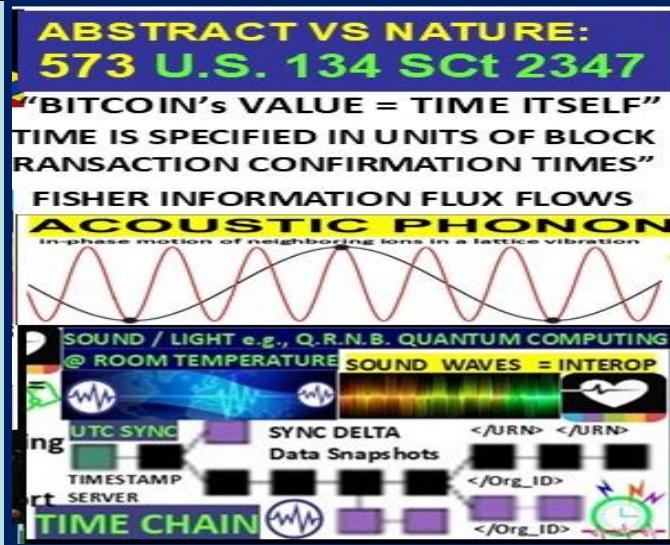
Investopedia

Stablecoins are cryptocurrencies whose value is pegged, or tied, to that of another currency, commodity, or financial instrument.

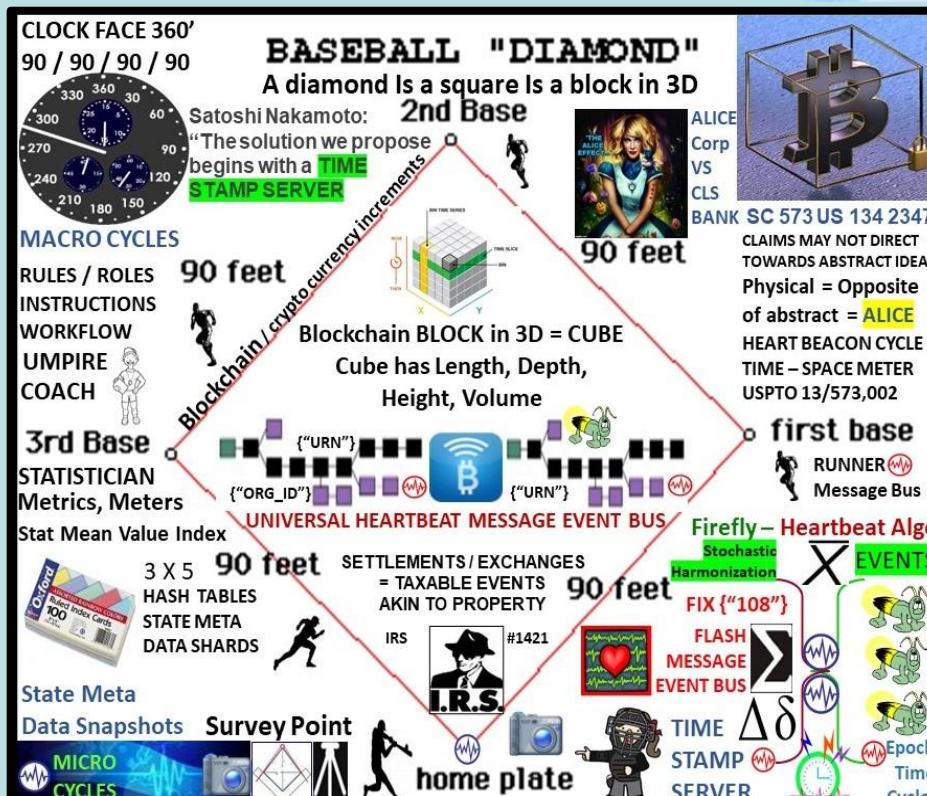
Stablecoins aims to provide an alternative to the high volatility of the most popular cryptocurrencies,  
Source JDSUPRA



Circle Financial Ltd lawsuit brought by Veritasium Capital for alleged infringement of its digital-asset trading patent. U.S. District Court for the Eastern District of Texas, No. 2:22-cv-00498



**TESLA "ALL IS WAVE FORM MOVEMENT"**

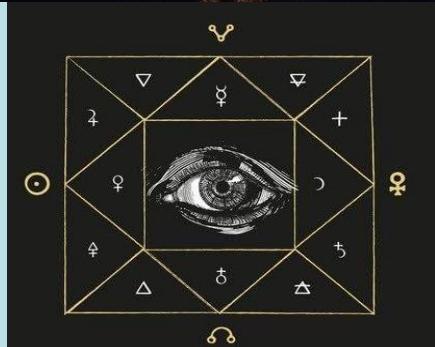


# NOSTRADAMUS of FRANCE CENTURY 8: QUATRAIN 28:

"The copies of gold and silver inflated,  
 after the theft were thrown into the lake,  
 At the discovery that all is exhausted and  
 dissipated by the debt,  
 All scripts and bonds will be wiped out."



"FutureMan"  
13/573,002



**"THE FINANCIAL NOSTRADAMUS"**  
 REGGIE MIDDLETON

**Reggie Middleton**  
**"Father of DeFi"**

**US11196566**  
**US11895246**  
**JP6813477**

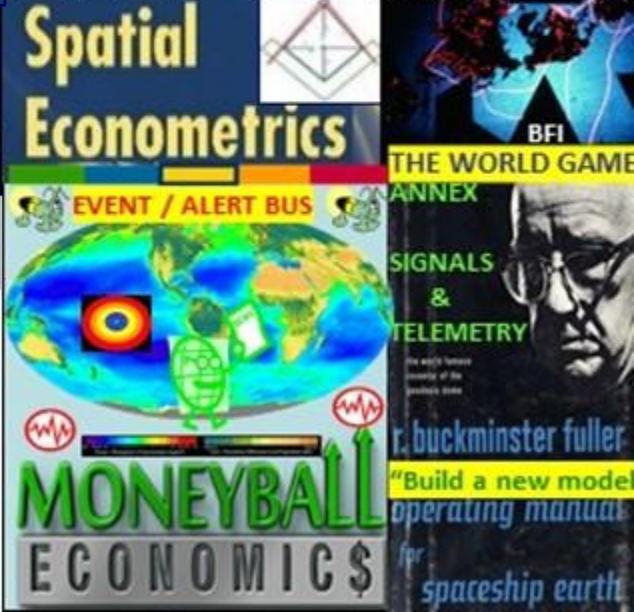
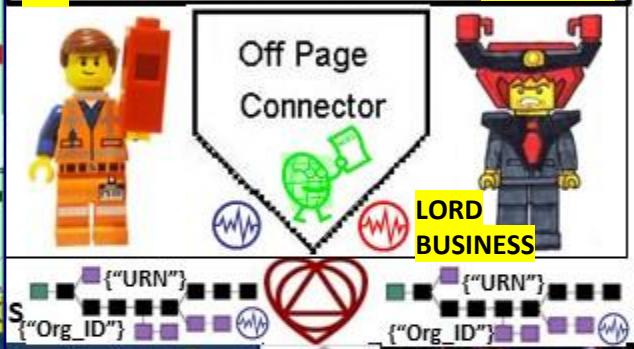
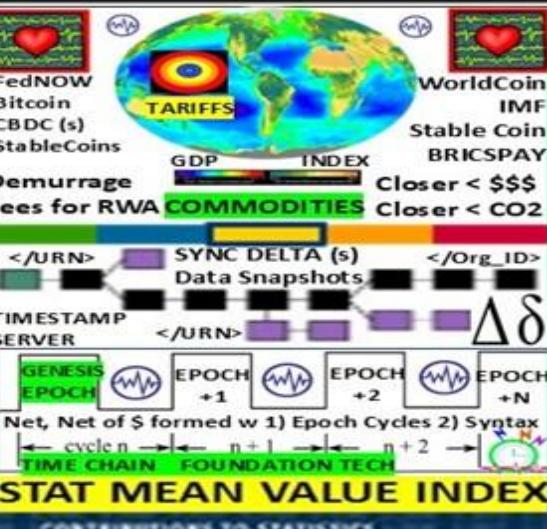
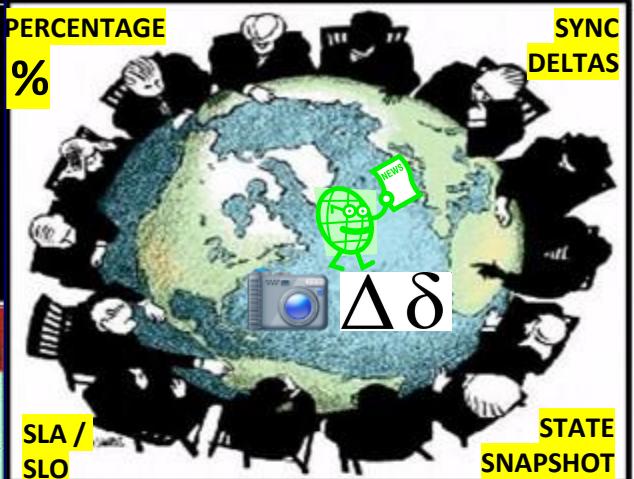
# World Game (s) Fulcrum

Schelling point: a.k.a. focal point, is a solution people tend to choose by default in the absence of communication to avoid coordination failure

introduced by the economist Thomas Schelling in his book "The Strategy of Conflict" published in 1960.

Schelling points are particularly useful in **multiplayer games** where players respond based on what they think the other person's response will be.

Give me a lever long enough and a fulcrum on which to place it, and I shall move the world.  
Archimedes

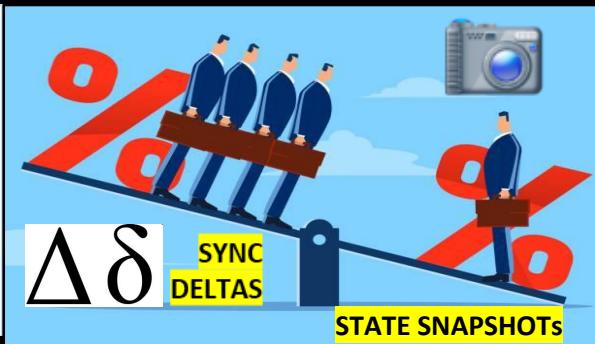


# World Game (s) Fulcrum

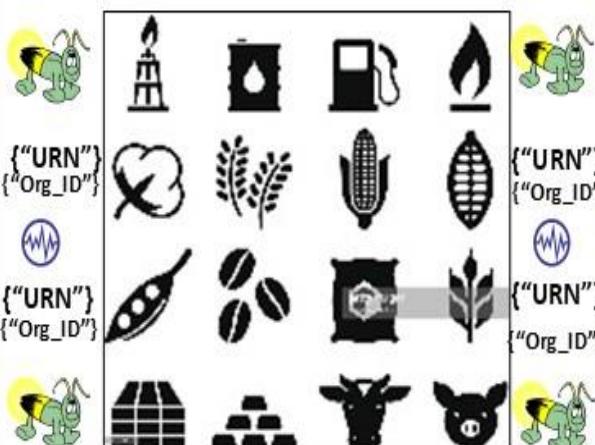
Schelling point: focal point = solution chosen by default in the absence of communication to avoid coordination failure introduced by the economist Thomas Schelling in his book "The Strategy of Conflict" published in 1960. Schelling points are particularly useful in **multiplayer games** where players respond based on what they think the other person's response will be.

Schelling Point Conference: focuses on the intersection of **cryptocurrency and social good**, bringing together innovators, thought leaders, and advocates to explore how **blockchain** tech can create positive change.

Schelling points are not always definite solutions and their conspicuousness can depend on time, place, and individuals



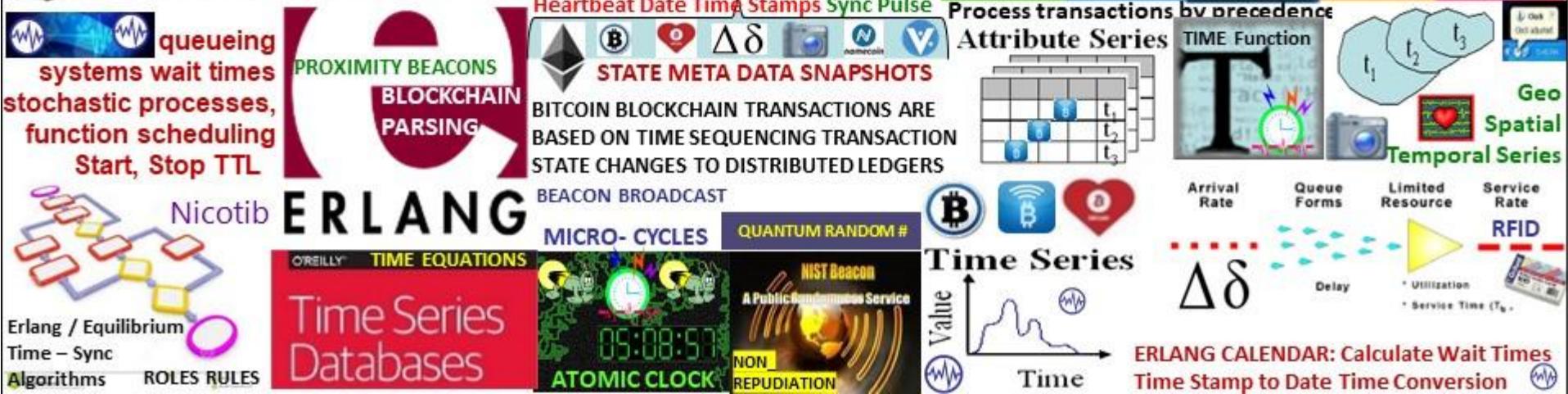
Commodities Index Basket / FIAT PRICE Discovery Algo / MEDIATION



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.





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.

# SCOTUS ALICE CORP VS CLS BANK 2014 RULING: ABSTRACT VS TANGIBLE

USPTO 13/573,002 PRIOR ART

Physical = Opposite of Abstract

Q: WHO IS "SATOSHI NAKAMOTO" ?

## HONUS WAGNER

THE LIFE OF BASEBALL'S "FLYING DUTCHMAN"



Arthur D. Hittner



Baseball fields have standard measurements for various components, including the infield and outfield. The infield consists of a diamond with 90 feet between the bases and a pitching distance of 60 feet 6 inches for adult and senior leagues. Home plate is located 90ft away from first base to The right and third base on the left. Bases are positioned at 90-degree angles from home plate.



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..

XRP = 10,000 Each ?

RIPPLE LABS / XRP

## Honus Wagner NFT Non-Fungible Cryptocurrency Token

Honus Wagner is a legendary baseball player

T206 Honus Wagner card sold \$6.6 million August 2021

This highlights the cultural and financial significance of Honus Wagner memorabilia, which could potentially be replicated in the digital space with NFTs (AI web search)

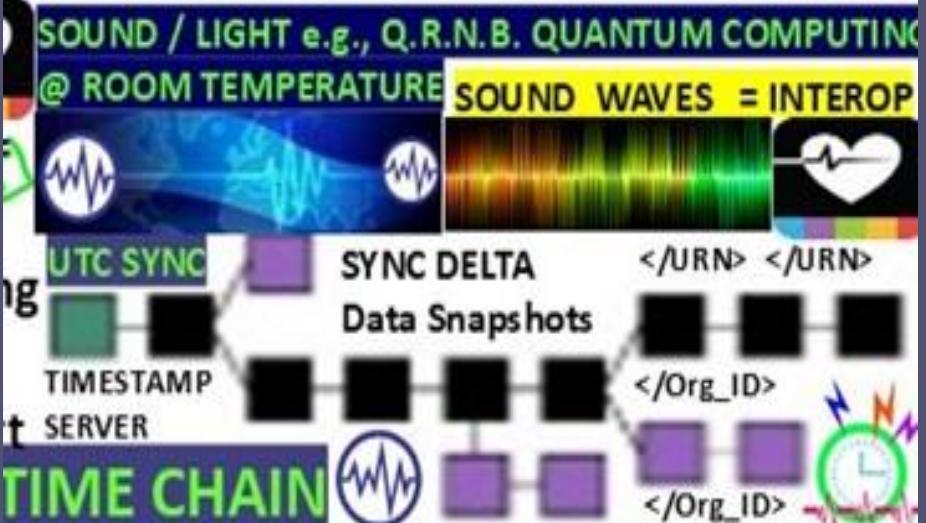
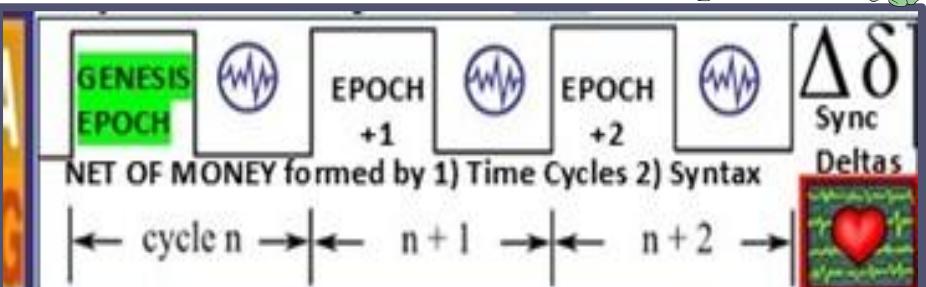
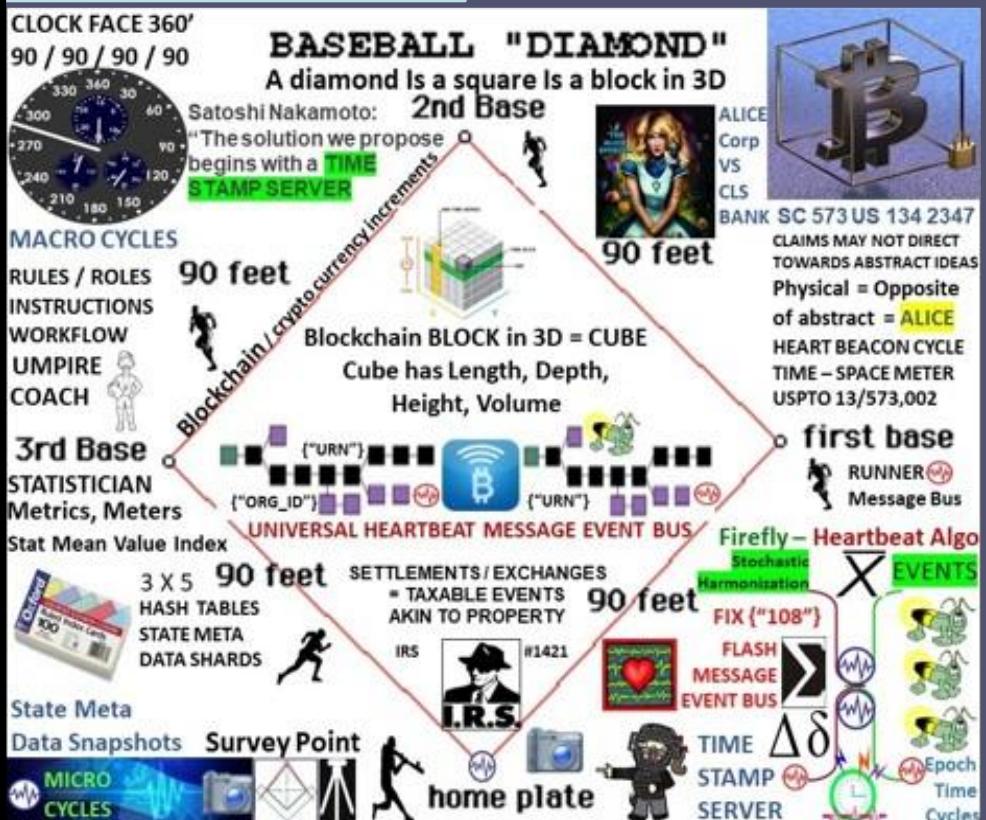
Defunct crypto exchange Mt. Gox has said that a repayment date will be set in "due course" February 7<sup>th</sup> 2014 trading halted

**MT.GOX**  
MIT Technology Review listed Ripple Labs as one of 2014's "50 Smartest Companies"



# The World Game's (s) Great Redesign TELEMETRY CONTROL GRID SYNC MATRIX ADAPTIVE PROCEDURAL TEMPLATE

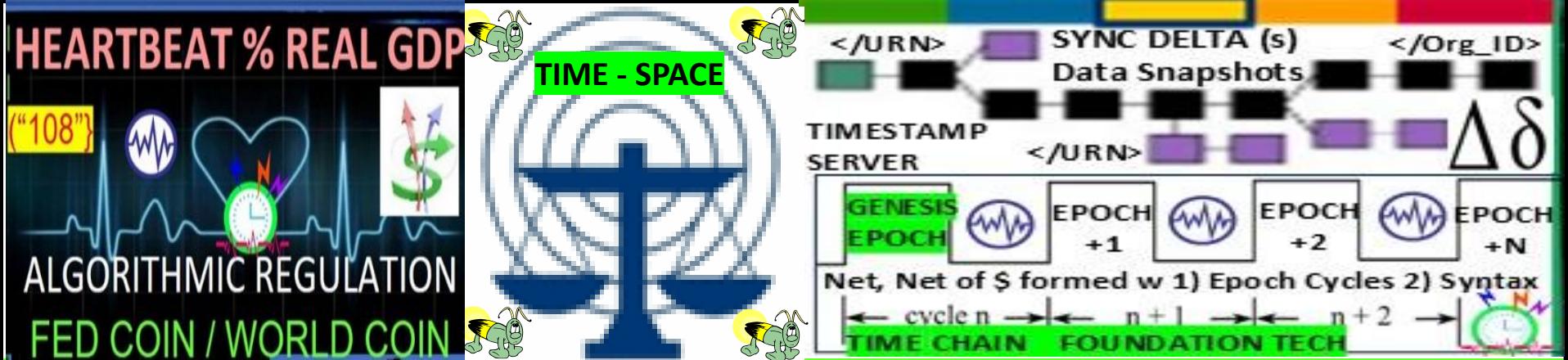
1919 BLACKSOX WORLD SERIES GAME FIXING RULING



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 method stipulates clock cycle values e.g., 5, 10, 15.

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





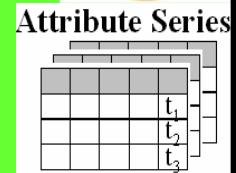
Banks, Tech firms' form teams to assert foundation tech as a legal basis for IP intellectual property claims for programmable \$\$\$ DeFI / TRADEFI

**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

Of system of systems engineering architecture structure data exchange (DoD) (NATO)

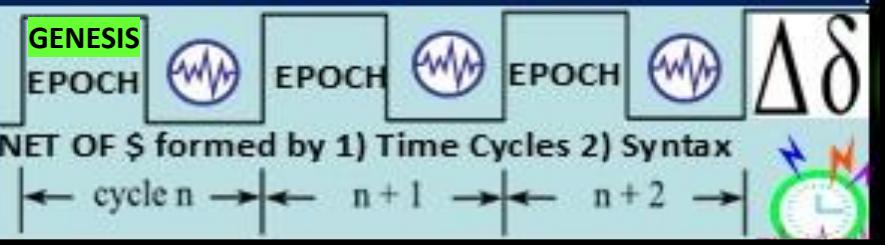


**SOUND WAVES enable**  
Different types of quantum tech to "talk"



## TIME EPOCHS & SYNTAX = FOUNDATION TECH

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





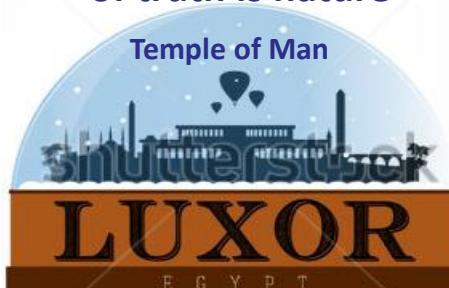
# FIREFLY - Heartbeat Algo

Bologna Italy / Hungary / China Universities

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



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



FIREFLY inspired Heartbeat Sync Algo

PRECEDENCE UTZ SYNC SYNC  
PROCESSING PULSE DELTAS



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

UTZ TIME

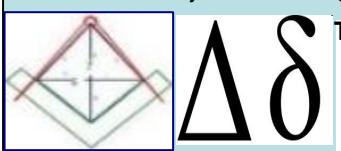
# THE TERRA (TRC)

# Trade Reference Currency

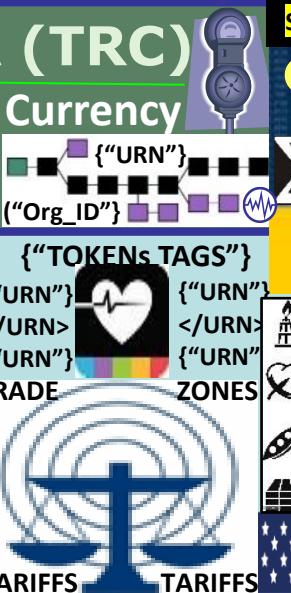


**SLA: Closer = Cheaper** {"

**Closer = Less Fuel  
= Less Time, CO2**



# DEMURRAGE FEES MICRO PAYMENTS



# **ECONOMIC HEARTBEAT**

## **EDCOIN / WORLDCOIN**



# ALGORITHMIC REGULATION



# WAVES



**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



**Example: 100 Terra = 1 barrel oil  
+ 10 bushels of wheat  
+ 20 kg of copper + 1/10 Oz gold**

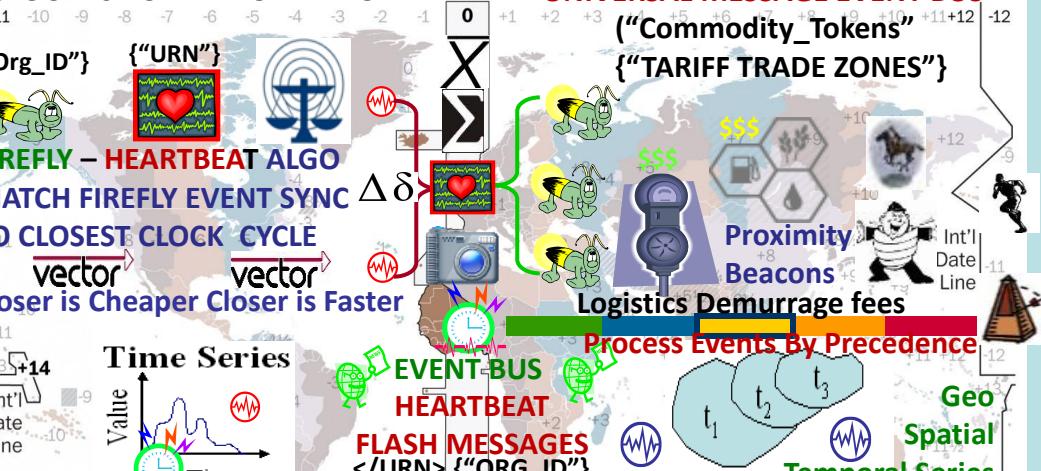


Firefly inspired Heartbeat Synchronization nodes strive to sync in a distributed system. Nodes generate periodic “heartbeat” events approximately at the same time. It differs from classical clock sync in that nodes are not interested in counting cycles to agree on the ID of the current clock cycle. There 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”



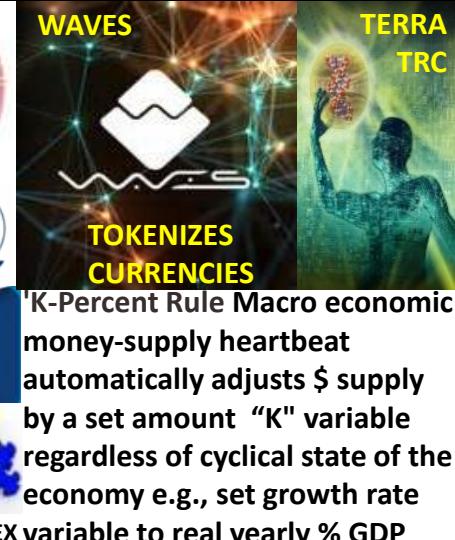
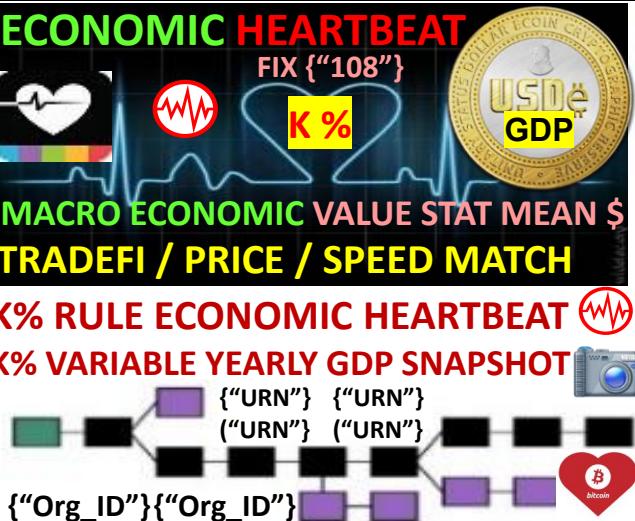
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## **STOCHASTIC HARMONIZATION**



French newspaper "Le Fédériste"  
"L'Europa monnaie de la paix"  
Money of peace" Born Jan 1st 1933 \$\$\$

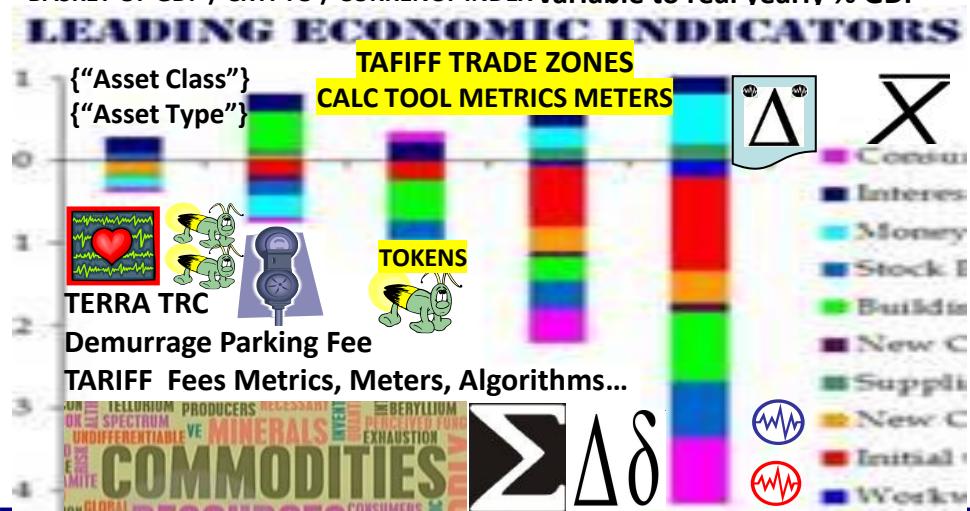
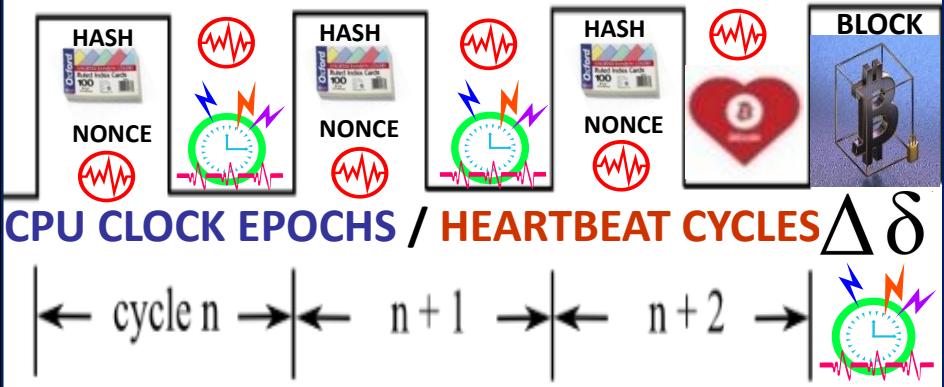
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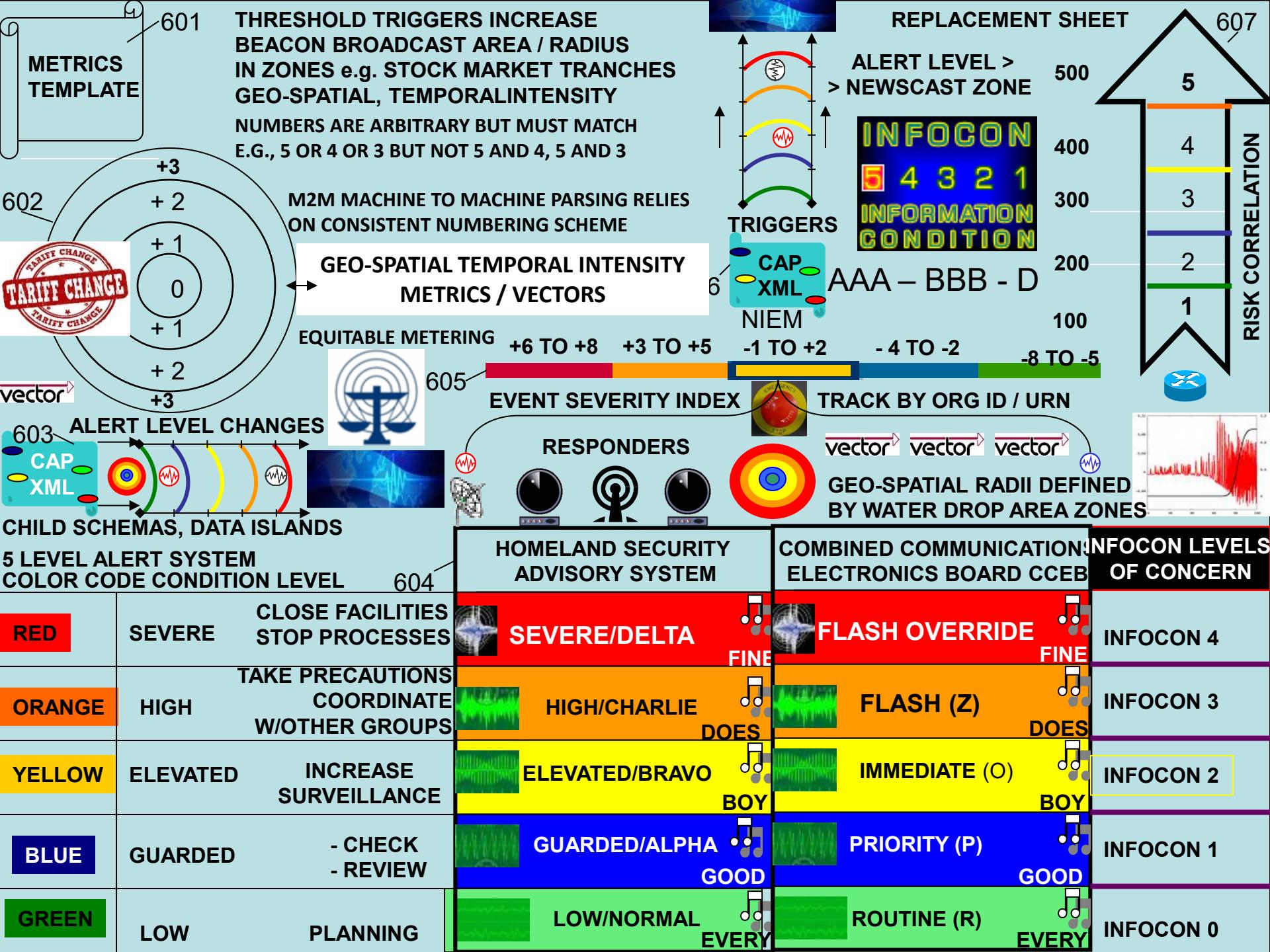
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"Heartbeat Synchronization strives to have nodes in a distributed system generate periodic local "heartbeat" events approximately at the same time. It differs from classical clock sync in that Nodes are not interested in counting cycles and agreeing 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"





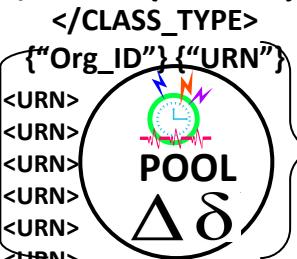
TERRA TRC



ECONOMIC HEARTBEAT

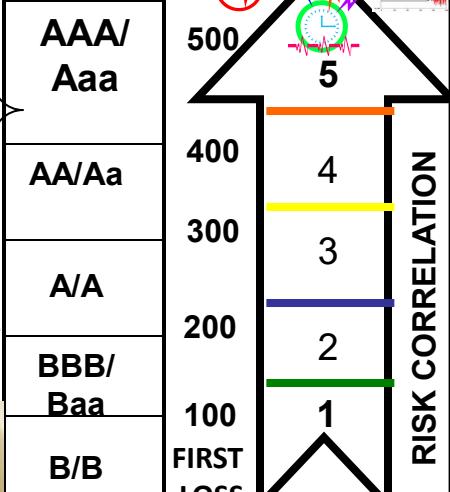


</FILTERS>{"FILTERS"}  
</CLASS\_TYPE>



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

LAST LOSS



PROCESS BY </PRECEDENCE>

SonarMaps ID\_Hops

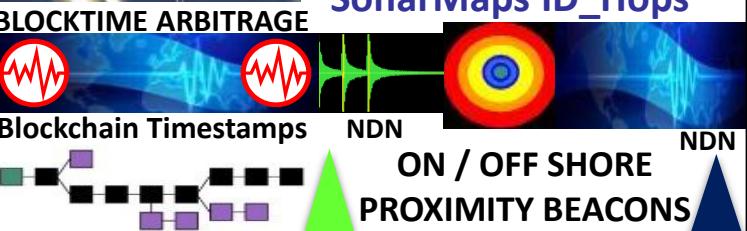
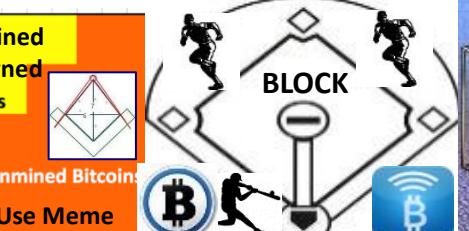
IEEE 802.15.4 OASIS MQTT  
TELEMETRY TRANSPORT

IEEE C37.118 Harmonization & Sync heartbeat update Interval  
IEEE 802.11 HOP BY HOP CONTROL

IEEE 802.1AG HOP BY HOP DETECTION

Paul Revere Linear, Sequential

Bitcoin = Property



Triangulation  
Euclidian Geo  
GPS GEO LOC  
DATE TIME STAMP  
NDN </INTEREST>  
NDN {"DISTANCE"}



HOPS / RADIUS = REACHABILITY  
WATER DROP IN POND MEME  
AREA RADIUS  
</FILTERS>  
BY ORG ID / URN  
NDN </INTEREST>  
</DISTANCE>  
Closer = Cheaper  
Closer = < Fuel

Demurrage Charges  
vector

Heartbeat Snapshots  
 $\Delta\delta$

Firefly Events  
Strive to Sync  
To Closest  
Heartbeat

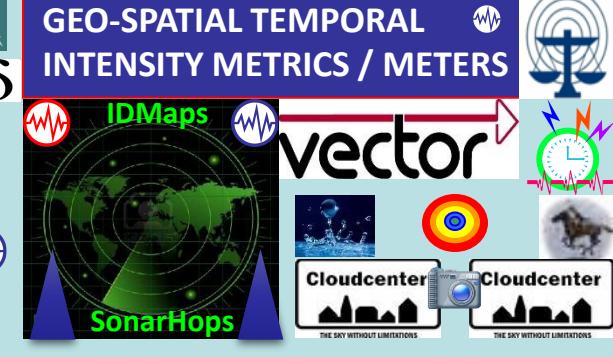
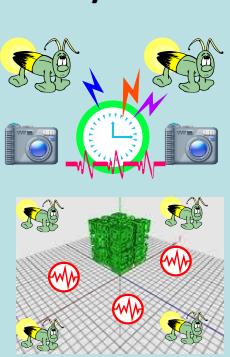
WATER DROP IN POND MEME  
AREA RADIUS  
</FILTERS>  
BY ORG ID / URN  
NDN </INTEREST>  
</DISTANCE>  
Closer = Cheaper  
Closer = < Fuel



# IDMaps: Global Internet Host Distance Estimation Service



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



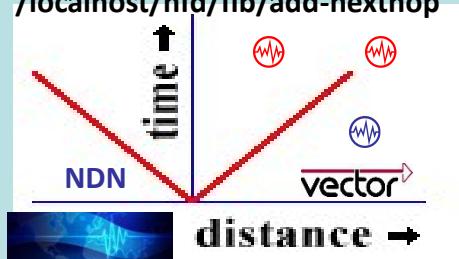
IDMaps scalable Internet-wide architecture measures, disseminates distance information



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

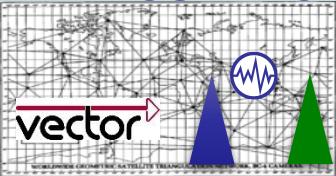


NDN INTEREST LENGTH  
= DISTANCE BY HOPS

NDN  
INTEREST

IS DATA  
FRESH ?

**TRIANGULATION**



Datasets and Event Notification

INTEREST in <URNs>

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

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, TARIFF

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:



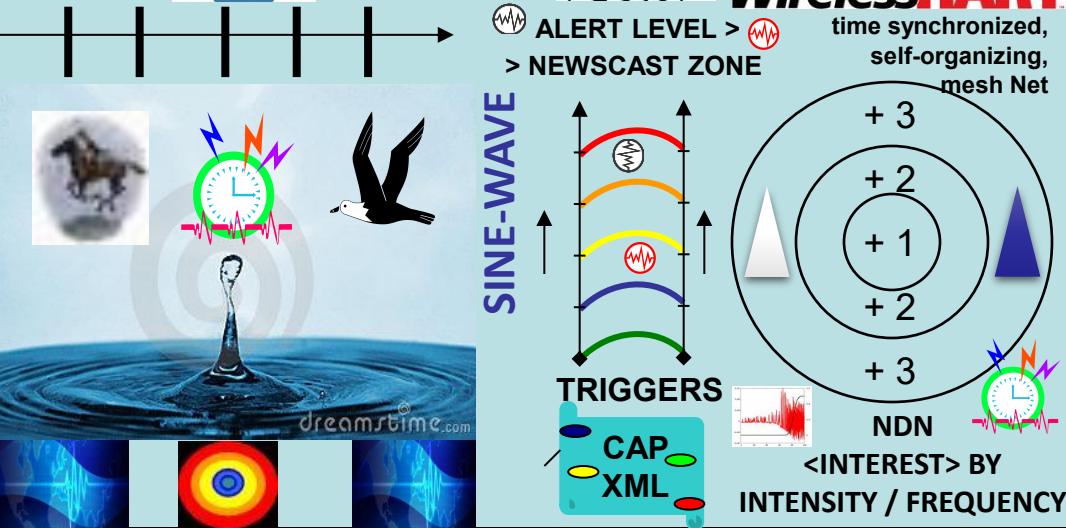
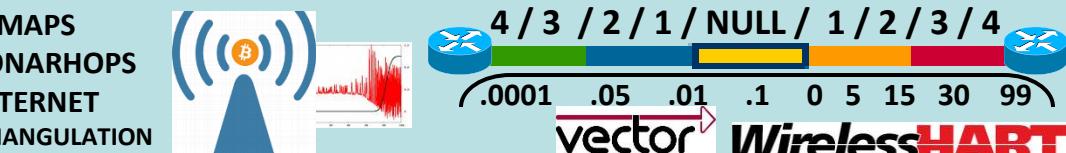
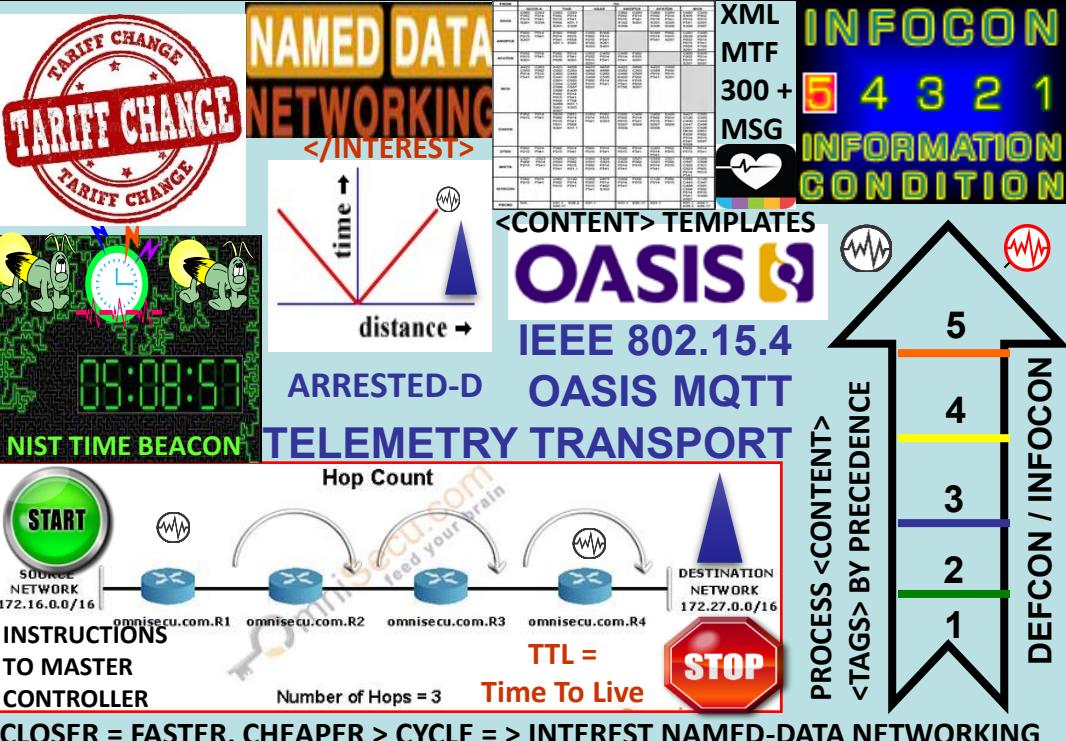
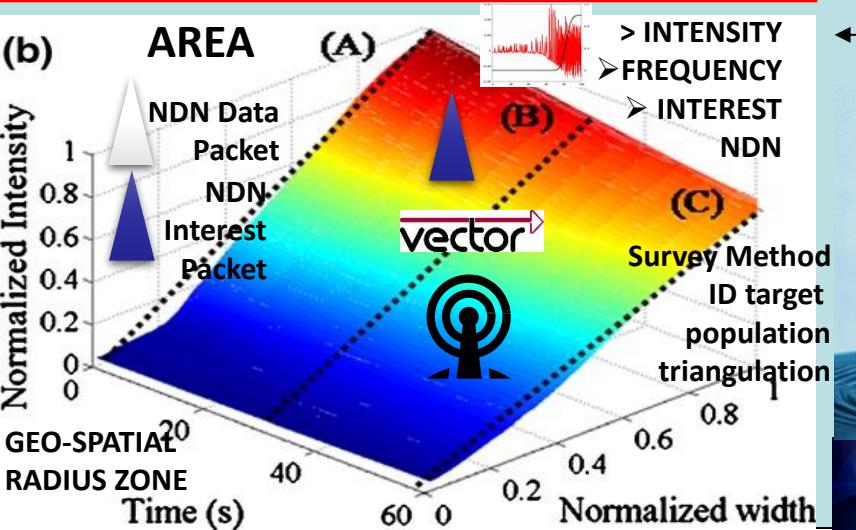
Paul Revere = linear, sequential



TCP/IP hop by hop counts, by hop controls



Water Drop = AREA / INTENSITY Cyclic Frequency



# 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

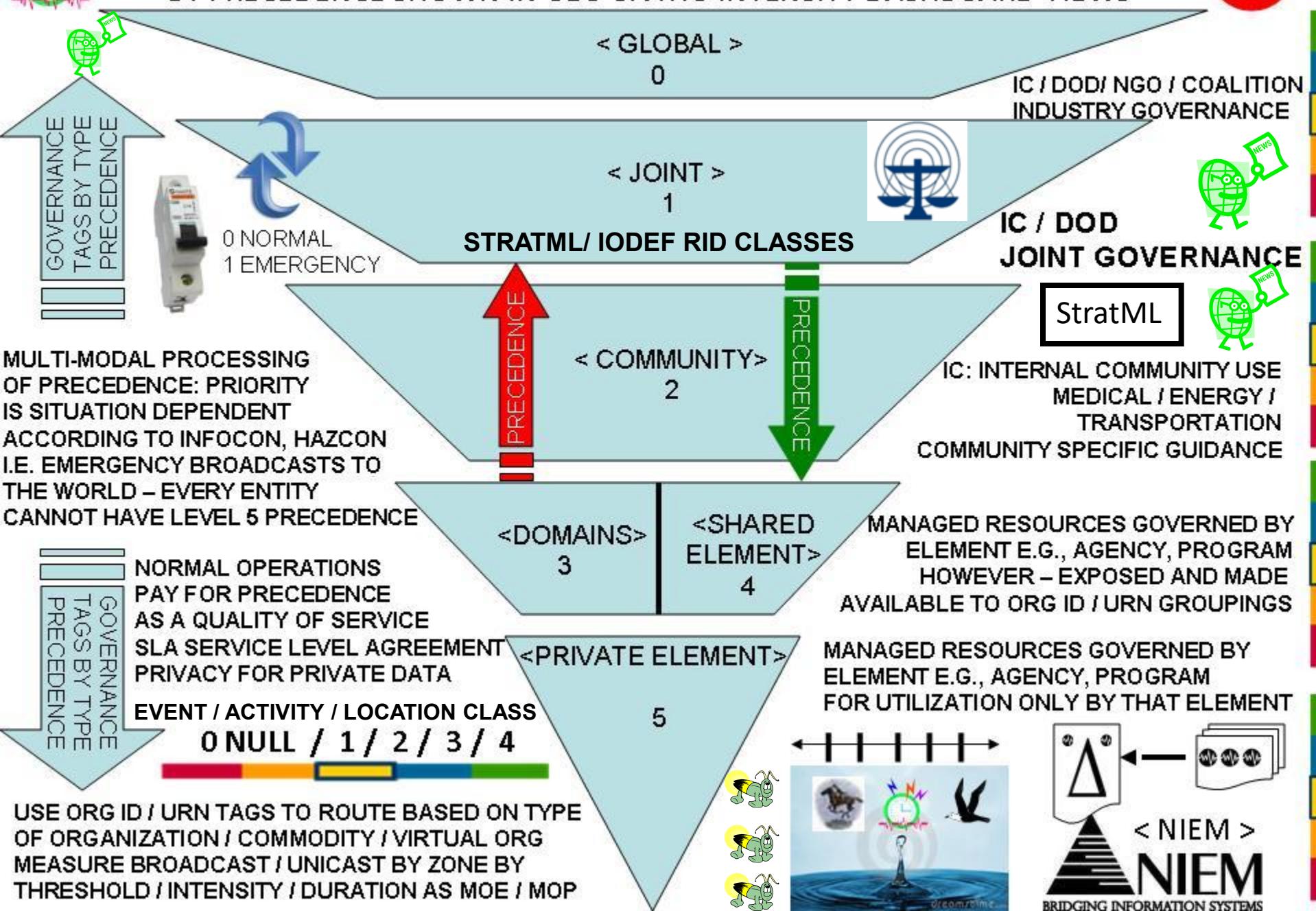
TIME STAMP BY Org ID, URN Before FUSION CENTER

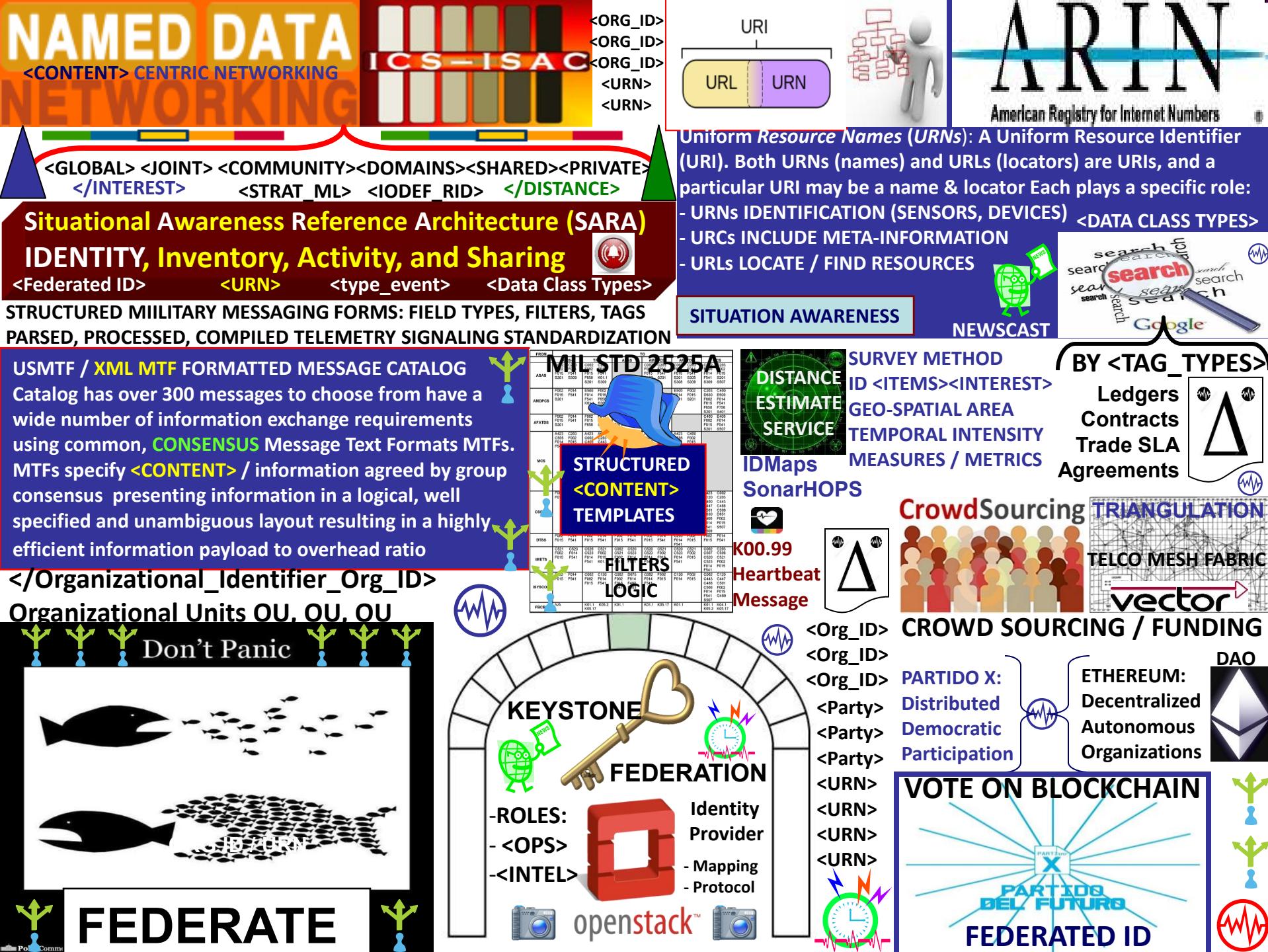
**Position of a point in space relative to another point**





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





## **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

**THESES:** All net artifacts, net of \$ are formed with:

- 1) Epoch time cycle intervals ex: chip oscillations
  - 2) Syntax parsed, processed in epoch time intervals

**ADAPTIVE PROCEDURAL TEMPLATE: LIST OF TOOLS, PROCESSES, PROCEDURES I.E., STORED PROCEDURE CALLS COMPRISED OF STRUCTURED DATA EXCHANGES USING 300 + MESSAGES / MESSAGE SETS COMPRISED OF OPSCODE BREVITY COMPUTER CODES MAPPED TO SYMBOLS FACILITATING STANDARD MAN – MACHINE INTERFACE**

Signal operating instructions (SOI): technical control coordination of INFOCOM

USE CASE: standards adherence support for IEEE, NIST SP 2000A, B, C, D, </URN> ISO Exchange signaling, telemetry current situational awareness, data dictionary, network identification, channels, network directory, brevity code, 4 3 2

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

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

FROM	TO	CODE GUIDE	
ASAS	TAIS ASAS AMDPCS AFATDS	MCS	
	C002 C203 F002 F014 F015 F541 S201 S309	C002 C203 F014 F541 S305 S309	
<b>TOKENS</b>	<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>	<b>A.I.</b>  <b>INFOCON</b> 	
AMDPICS	<b>OPSCODE BREVITY CODES</b>	F002 C203 F015 C400 S201 D002	
AFATDS	F002 F014 F015 F541 S201	<b>M2M</b>  <b>Syntax Lexicon</b>  <b>Code's Guide</b> 	
 <b>MCS</b>	A423 C203 C505 F002 F015 F541 S201	A423 A659 C002 C203 C443 C488 C447 C488 C501 C503 C504 C505 C506 C507 C508 E400 F002 F014 F015 F541 F556 F756 G469 K01.1 S201 S303	<b>ASSET TOKENS</b> <b>Token Economy</b>      <b>"SYMBOLS RULE THE WORLD"</b> 
			

MESSAGE CATALOG  
300 + Use Cases

Object Categories		Information Categories and Examples						
Object Categories	Examples	Location	Movement	Identify	Status	Activity	Intent	
OOB	SYNTAX LEXICON	STRUCTURED DATA lat/long	EXCHANGE spdr/hdg	COUNTRY / alliance, territory	Message readiness	Karsting, reconfiguring	COA	{"Java JS"}
		Machine Trust Language MTL		Business		CDL Contract	Contract Language	
Infrastructure	Comm., power, transportation, water/sewer	network, grid	throughput, flow rates	name, part-of, EstablishName	BDA, op status	repair, monitor, archive	YAML	expansion Network
Sociological	Culture, religion, economic, ethnic, government, history, languages	temples,, historic structures	E-R Model	Class Diagram	Relational Database	Object DBMS	XML DTD / Schemas	TADILs
Geophysical	Terrain, weather, climatology, topography, geotronics	feature lat/long, alt/depth	Attribute	Attribute	Field / Column	Attribute	Element Child Element or Element Attribute	MTF FFRN / FRN / FUON
		Domain Value	PURCHASE CODE	Instance, Value			DUI	FUD
						TOKENS		

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



**oD Systems of Systems Engineering Structured Data Exchange MIL Standards / ISO Standards**

REVITY OPSCODES MAPPED TO SYMBOLS,  
SYMBOL SETS FOR A.I. ARTIFICIAL  
INTELLIGENCE MAN-MACHINE INTERFACE

## STANDARD CONSISTENT SYMBOLS



The diagram illustrates the interconnected nature of various information management concepts. At the top, 'Information Elements' and 'Roles' are shown. Below them, 'COI Determination' and 'Org Interaction' are connected. Further down, 'Search and Discovery' is linked to 'Ontologies' and 'Taxonomies'. On the left, 'Metadata' is connected to 'Attributes / Filters'. In the center, a box labeled 'STANDARDS' has arrows pointing to 'REFERENCE' and 'FILTERS'. To the right of this central area is a box containing a triangle icon and a cartoon character.

**UDN: Field Format Unit Designator #**  
**IRN Field Format Index Reference #**  
structured military messaging ID's  
messages, message sets, data  
element, symbol fields </108>  
**Y Form Field Position & NUMBER**

## **PROCESS MESSAGE BY PRECEDENCE**

#### **OPERATIONAL NODES / ACTIVITIES**

ATA - SYSTEM FUNCTIONS		PERFORMANCE	
4 - Classification		11.6 - Chemotherapy	
11.4.1 - Category		11.6.1 - Pox / Vel / Acc (PVA)	
11.4.1.1 - Confidence Level		11.6.1.1 - Angular	
11.4.1.2 - Estimate Type		11.2 - Linear	
11.4.1.2.1 - Alternative		11.2.1 - Estimated	
11.4.1.2.2 - Evaluated D		11.2.2 - Observed	
11.4.1.3 - Value		11.3 - Predicted	
		CODES	
SYMBOL	Friend	Neutral	Hostile
2525C	Partner		
		Competitor	
11.4.1.3.5 - Surface		- Velocity	
11.4.2 - Platform / Point / Feature		- Horizontal	
11.4.3 - Specific Type		- Vertical	
11.4.4 - Type Modifier		- Angle	
		- Bearing Angle	
		- Bearing Angle Rate	



Syntax code language parsed, processed during silicon chip generated epoch time cycles forms all things internet, net of money. state meta data sync delta heartbeat snapshots during epoch temporal micro-cycles

# Situational Awareness Reference Architecture (SARA)

: Identity, Inventory, Activity, and Sharing

<http://ics-isac.org/sara/>



ICS-ISAC

Industrial Control System  
Information Sharing and  
Analysis Center

**IDENTITY:** <UUID> = Devices, sensors

<ORG\_ID> Organizations

Federation  
Gateway

<ELEMENTS>

STRATML/ IODEF RID CLASSES:  
<GLOBAL><JOINT><SHARED>  
<DOMAIN><FEDERATION>  
<CITY><STATE><PRIVATE>

STRATEGIC  
MARKUP

StratML

LANGUAGE

**INVENTORY:** Uniform Resource Name <URN>

<URN><URN>  
<URN><URN>  
<URN><URN>



vector

<COMMODITY><WATER><ENERGY><AVAILABLE UNITS>

GEO-SPATIAL TEMPORAL INTENSITY METRICS  
UNIFIED EVENT / ALERT TRIGGER / THRESHOLDS

**ACTIVITY:** <EVENT><ALERT> <TIME\_STAMP><ORG\_ID><URN>

CONTENT LEXICON  
ROSETTA STONE

NDN



<INTEREST>



NDN

<INTEREST>



<GEO\_LOC\_GPS><STATUS>  
<Halt><Moving><Stale><Ready>

AVALANCHE

WELCOME TO THE FS-ISAC SECURITY AUTOMATION GROUP. OUR VISION IS  
A FEDERATED NETWORK OF STIX-BASED REPOSITORIES SHARING INTELLIGENCE IN  
REAL-TIME. AVALANCHE: STRENGTH IN NUMBERS, SECURELY SHARE INTELLIGENCE

NIST CYBER SECURITY FRAMEWORK

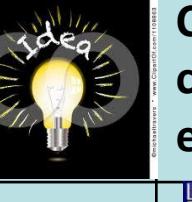
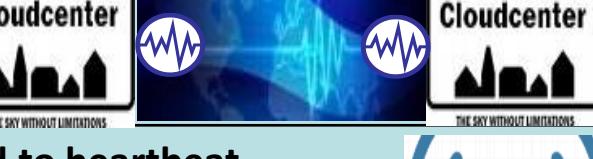
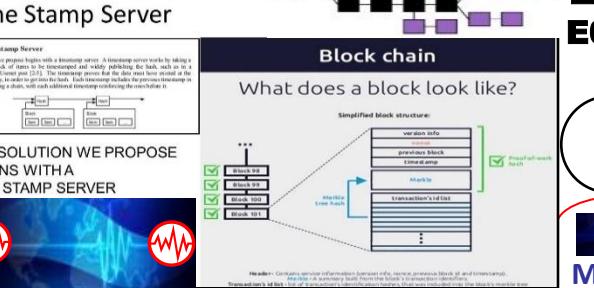
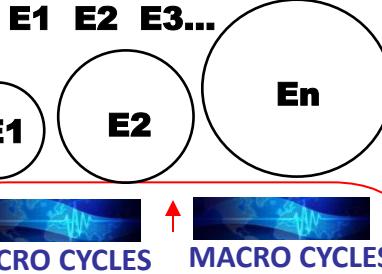
MIL-STD-2525A

MCS

CBRS

DTB8

CBRS</p

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>SCOP is a web application, PHP based front-end to heartbeat, IP Virtual Server ipvs and ldirectord [e.g., check interval @ 5 seconds]</p> <p>SCOP can start/stop services, view/ edit configuration files e.g., heartbeat message state management snapshots, backups, take a service online/offline, add/ remove virtual/real servers, services etc.</p>		<p>Epoch Time Cycles E0 E1 E2 E3...</p> 
	 		

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

HEART BEACON CYCLE  
USPTO 13/573,002  
SURVEY METHODS

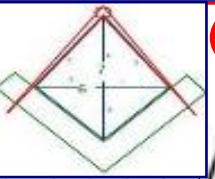
## SC ALICE CORP VS CLS BANK: “claims may not direct towards abstract ideas”

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



$\Delta\delta$

## 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”

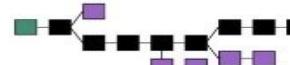
Coin never travel, but simply switch owners”

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

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

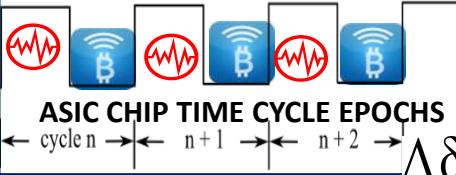
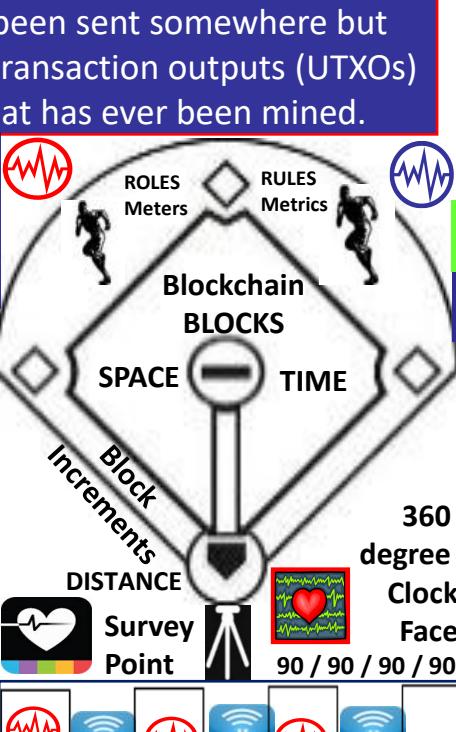
Step 3: specify ownership <Org\_ID> issuing agent

Step 4: Issuing Org of Record adjudicates w buyer

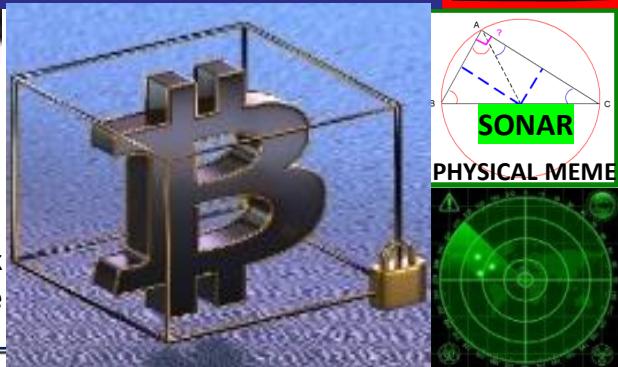


$\Delta\delta$

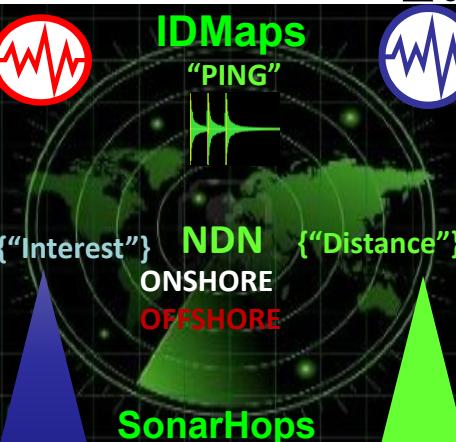
## TRIANGULATION



## 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



## **Commodities Index Basket / FIAT PRICE Discovery Algo / MEDIATION**

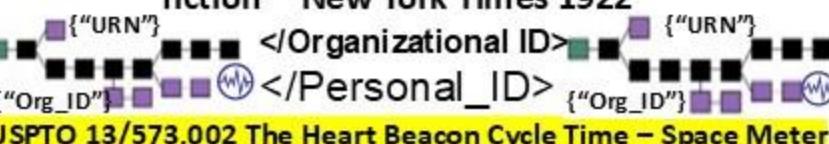


**Edison's Monetary Option**  
Cambridge University Press 2009

**“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



# Tokenization of Physical Assets Enables Economy Of Everything

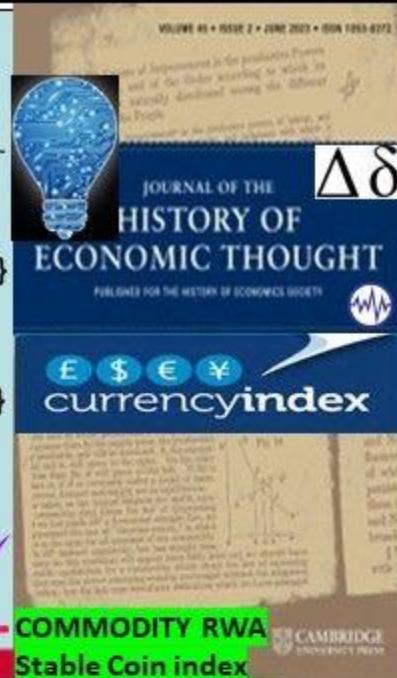


## ALGORITHMIC STABLE COIN COMMODITY INDEX CURRENCY PROGRAMMABLE \$\$\$

BELT and ROAD  
Trade Initiative



**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

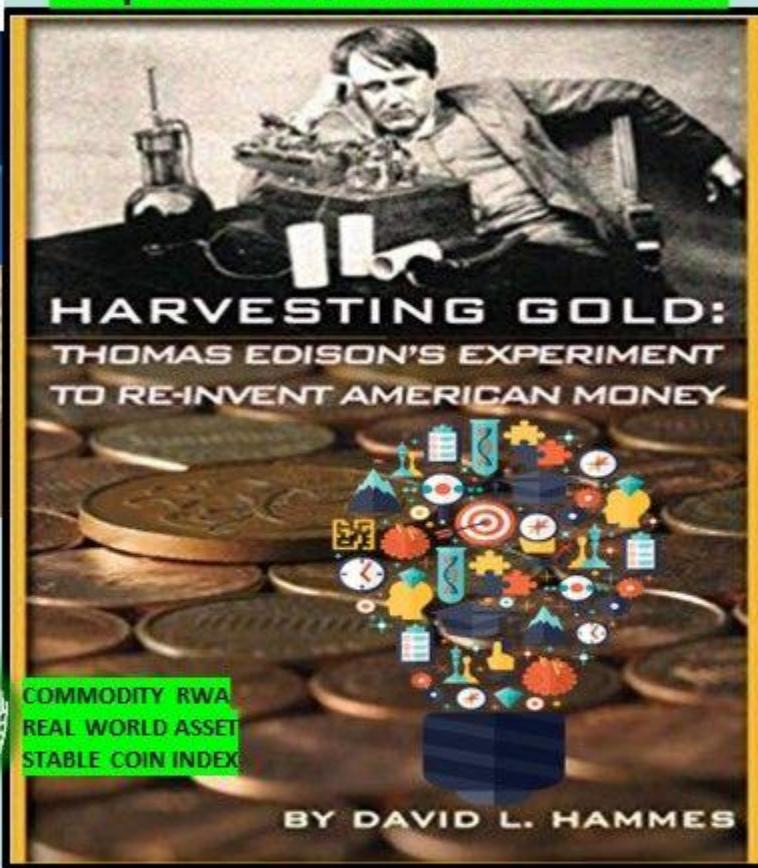


NETWORK  
CENTRIC  
OPERATIONS  
**INFOCON**  
4 3 2 1  
INFORMATION  
CONDITION



# Thomas Edison's Monetary Option Cambridge University Press 2009

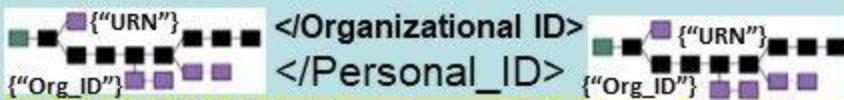
"Crops hold their value best over time"



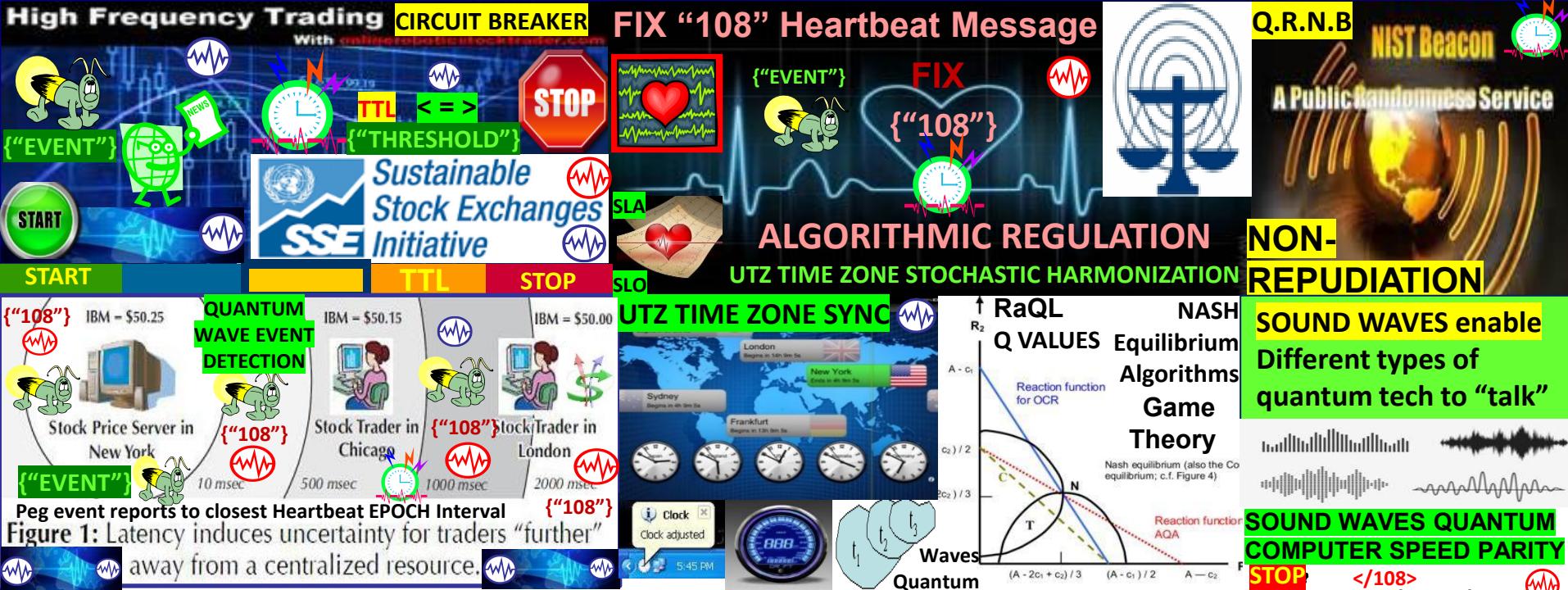
COMMODITY RWA  
REAL WORLD ASSET  
STABLE COIN INDEX

BY DAVID L. HAMMES

"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



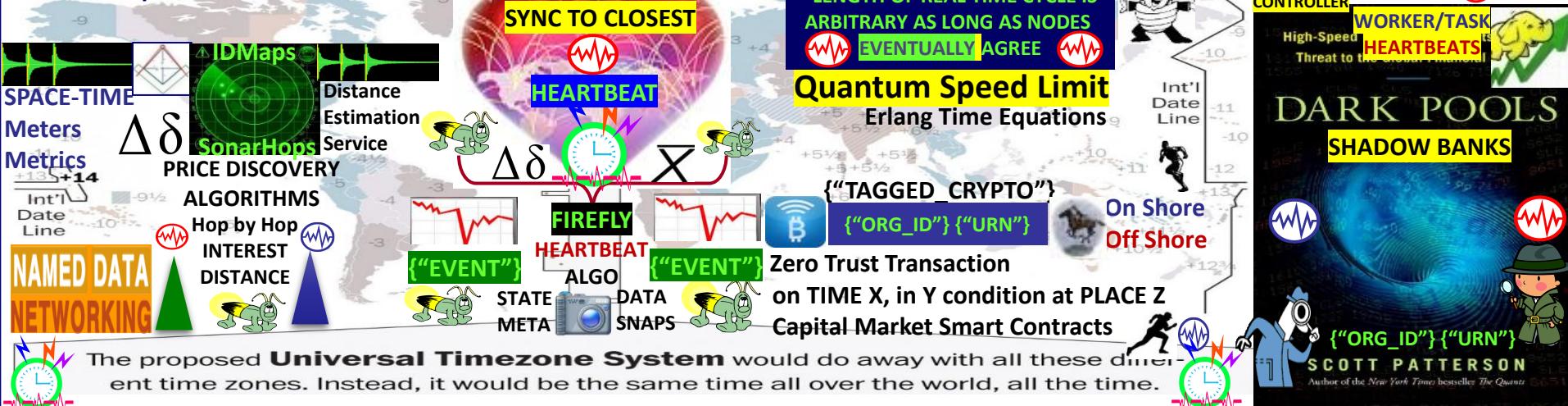
USPTO 13/573,002 The Heart Beacon Cycle Time – Space Meter

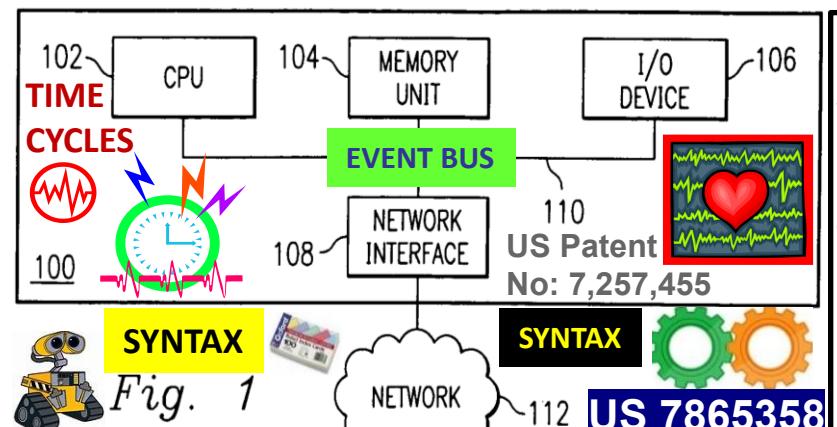


The current standard time common throughout the world is based on a 24-hour clock, with zones that are either 12 hours ahead or behind **Coordinated Universal Time (UTC)**. However, these time zones are decided upon by individual governments, without overall coordination and can even extend fourteen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



## TRANSACTION RATE, SPATIAL – TEMPORAL METRICS SERVER ON / OFF FLOOR ADJUST



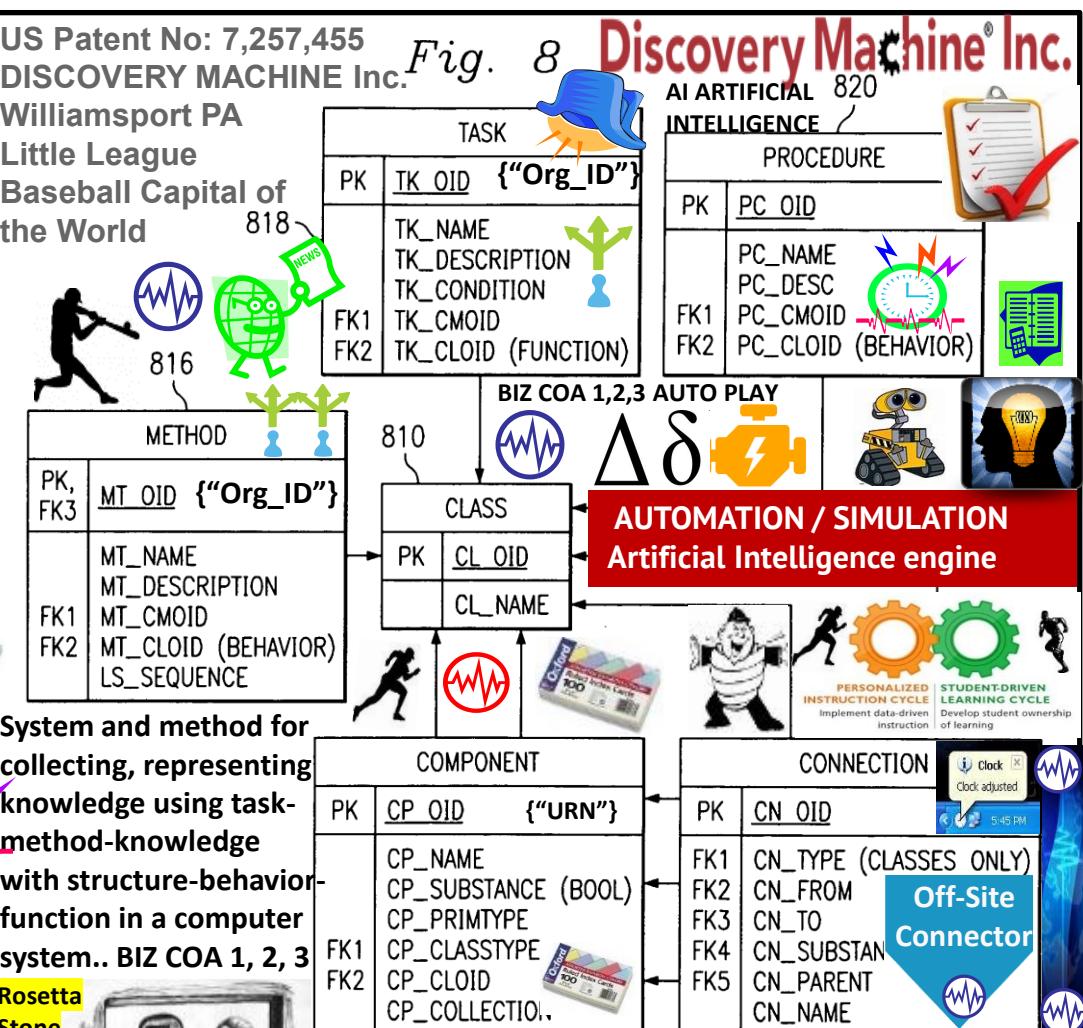
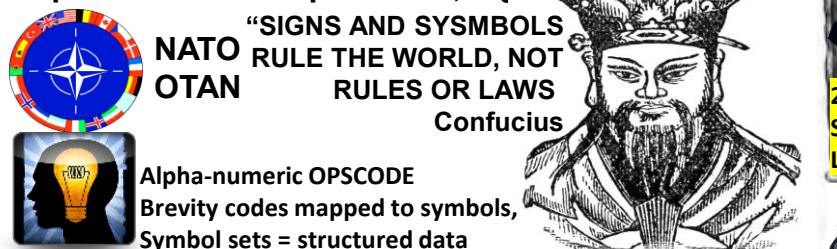


Machine-based system for transforming data from a source form to a target form, a tool is provided for sharing information established in developing a transformation model. The shared information may relate to rules for mapping source collection terms to standardized terms, rules for ordering or **SYNTAX**,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

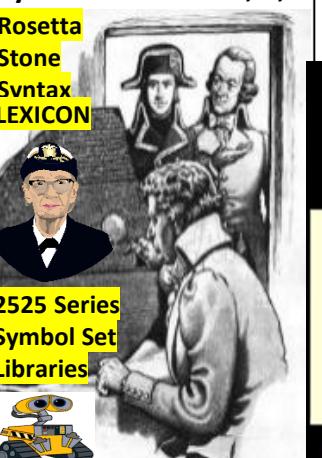
**US 7865358 CLAIM 1.** method converting textual data from source form to target forms, where target form differs from source form's linguistics, syntax

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, i.e.

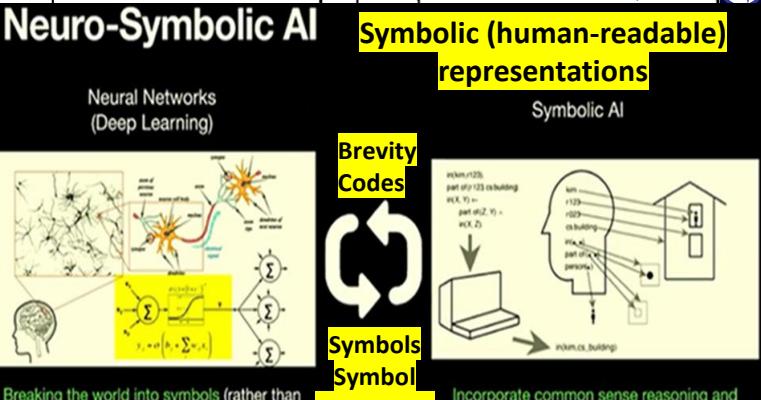


System and method for collecting, representing knowledge using task-method-knowledge with structure-behavior-function in a computer system.. BIZ COA 1, 2, 3



COMPONENT		
PK	CP_OID	{"URN"}
FK1	CP_NAME	
FK2	CP_SUBSTANCE (BOOL)	
	CP_PRIMTYPE	
	CP_CLASSTYPE	
	CP_CLOUD	
	CP_COLLECTION	

CONNECTION		
PK	CN_OID	
FK1	CN_TYPE (CLASSES ONLY)	
FK2	CN_FROM	
FK3	CN_TO	
FK4	CN_SUBSTAN	
FK5	CN_PARENT	
	CN_NAME	



# 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." [2] —Allen Newell and Herbert A. Simon

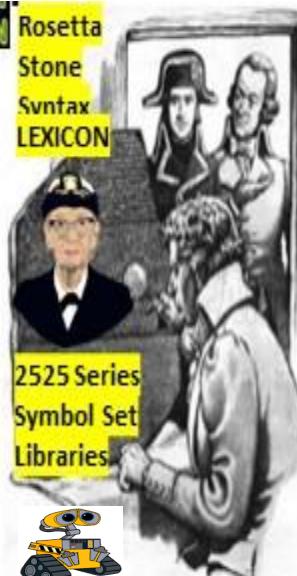
This claim implies both that human thinking is a kind of symbol manipulation (because a symbol system is necessary for intelligence) and that machines can be intelligent (because a symbol system is sufficient for intelligence).[3] The idea has philosophical roots in Hobbes (who claimed reasoning was "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

CONDITION

Rosetta  
Stone  
Syntax  
LEXICON



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.



"SIGNS AND SYMBOLS RULE THE WORLD, NOT RULES OR LAWS  
NATO OTAN



Confucius

Alpha-numeric OPS CODE

Brevity codes mapped to symbols,  
Symbol sets = structured data

FRZ TLP CLOUD FRS TUN PAREN

ABCA OPS CODE BREVITY CODES

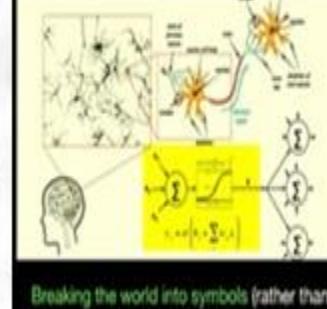
Neuro-Symbolic AI

Symbolic (human-readable)  
representations

Symbolic AI

Neural Networks  
(Deep Learning)

Brevity  
Codes



Symbols

Symbols

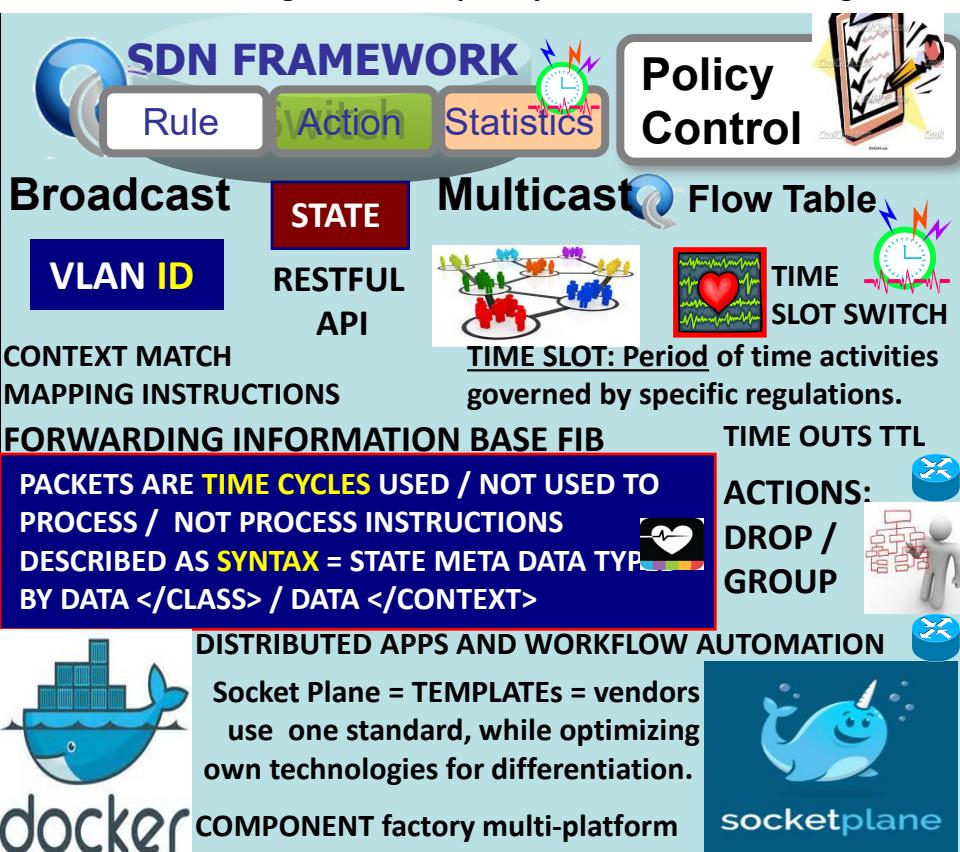
Incorporate common sense reasoning and

Breaking the world into symbols (rather than sets 2525)



- 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



# 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

Unused Resources / Unmet Needs

/localhost/nfd/fib/add-nexthop

Geo-Spatial Temporal

Metrics, Meters

Time Series

INFO SERVICE

DISTANCE

IDMaps

SonarHops

Value

Time

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

Energy Attenuates over Distances

PAUL REVERE

LINEAR, SEQUENTIAL

602

TCP/IP HOP BY HOP COUNT

Attribute Series

INTEREST

DISTANCE

Temporal Series

Geo Spatial

603

NULL

+1

+2

RADIUS

WATER DROP IN POND MEME

FIREFLY-HEARTBEAT

ALGORITHM

UNIVERSAL

EVENT MESSAGE BUS

ERLANG

TIME- SPACE METRICS

TROJAN ASTEROIDS

ANDERSON INSTITUTE

SYNTAX LEXICON

KOO.99

Alpha Numeric

Brevity Codes

CODE

SYNTAX LEXICON

KOO.99

Micro Grids Closer - Cheaper

Blockchain

MICROGRIDS

TESLA

Light minutes

Astronomical units

FIREFLY - HEARTBEAT ALGORITHM MESSAGE EVENT BUS

EPOCH / TIME CYCLES / INTERVALS

cycle n

n + 1

n + 2

→



TIME / DISTANCE SERVICE LEVEL  
AGREEMENT SLA / O Operations

IEEE 802.11



HOP BY HOP CONTROL

Unused Resources / Unmet Needs

vector

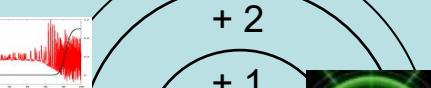


602

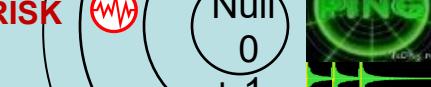


UNUSED RESOURCES

UNMET NEEDS



RISK



MAIN ASTEROID BELT

MERCURY

VENUS

EARTH

MARS

ASTEROID BELTS = RARE MINERALS

STOCHASTIC

HARMONIZATION

Service Level Agreements

Farther = More Cost

➤ Fuel, Resources

Attribute Series

INTEREST

DISTANCE

Temporal Series

Geo Spatial

603

NULL

+1

+2

RADIUS

WATER DROP IN POND MEME

FIREFLY-HEARTBEAT

ALGORITHM

UNIVERSAL

EVENT MESSAGE BUS

ERLANG

TIME- SPACE METRICS

TROJAN ASTEROIDS

ANDERSON INSTITUTE

SYNTAX LEXICON

KOO.99

Alpha Numeric

Brevity Codes

CODE

SYNTAX LEXICON

KOO.99

Micro Grids Closer - Cheaper

Blockchain

MICROGRIDS

TESLA

Light minutes

Astronomical units

FIREFLY - HEARTBEAT ALGORITHM MESSAGE EVENT BUS

EPOCH / TIME CYCLES / INTERVALS

cycle n

n + 1

n + 2

→



TIME / DISTANCE SERVICE LEVEL  
AGREEMENT SLA / O Operations

IEEE 802.11

HOP BY HOP CONTROL

Unused Resources / Unmet Needs

vector



602

UNUSED RESOURCES

UNMET NEEDS

Spaceship

Earth

Signals &

Telemetry

Annex

buckminster fuller  
operating manual  
for spaceship earth

????

MOON =

HELIUM 3

"Numbers are the  
Universal Language

offered by deity to humans as  
confirmation of the truth"

Alpha Numeric

Brevity Codes

CODE

SYNTAX LEXICON

KOO.99

Micro Grids Closer - Cheaper

Blockchain

MICROGRIDS

TESLA

Light minutes

Astronomical units

FIREFLY - HEARTBEAT ALGORITHM MESSAGE EVENT BUS

EPOCH / TIME CYCLES / INTERVALS

cycle n

n + 1

n + 2

→



TIME-SPACE BEACON

INFOCON

5 4 3 2 1

INFORMATION  
CONDITION

SIRIUS DISCLOSURE

???

ASTEROID BELTS = RARE MINERALS

MAIN ASTEROID BELT

MERCURY

VENUS

EARTH

MARS

ASTEROID BELTS = RARE MINERALS

MAIN ASTEROID BELT

MERCURY

VENUS

EARTH

MARS

ASTEROID BELTS = RARE MINERALS

MAIN ASTEROID BELT

MERCURY

VENUS

EARTH

MARS

ASTEROID BELTS = RARE MINERALS

MAIN ASTEROID BELT

MERCURY

VENUS

EARTH

MARS

ASTEROID BELTS = RARE MINERALS

MAIN ASTEROID BELT

MERCURY

VENUS

EARTH

MARS

ASTEROID BELTS = RARE MINERALS

MAIN ASTEROID BELT

MERCURY

VENUS

EARTH

MARS

ASTEROID BELTS = RARE MINERALS

MAIN ASTEROID BELT

MERCURY

VENUS

EARTH

MARS

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MAIN ASTEROID BELT

MERCURY

VENUS

EARTH

MARS

ASTEROID BELTS = RARE MINERALS

MAIN ASTEROID BELT

MERCURY

VENUS

EARTH

MARS

ASTEROID BELTS = RARE MINERALS

MAIN ASTEROID BELT

MERCURY

VENUS

EARTH

MARS

ASTEROID BELTS = RARE MINERALS

MAIN ASTEROID BELT

MERCURY

VENUS

EARTH

MARS

ASTEROID BELTS = RARE MINERALS

MAIN ASTEROID BELT

MERCURY

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ASTEROID BELTS = RARE MINERALS

MAIN ASTEROID BELT

MERCURY

VENUS

EARTH

MARS

ASTERO

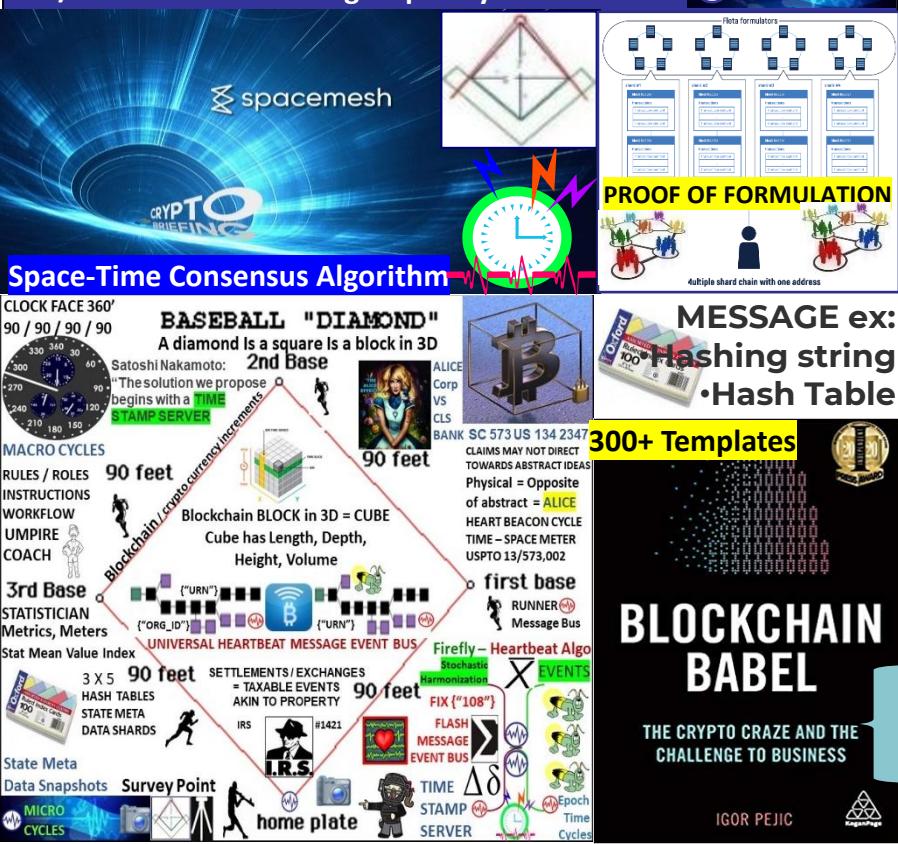
**Q: Which meme describes the myriad blockchain consensus algorithms the most comprehensively that uses an algorithm (based on nature = “shortest path to the knowledge of truth Luxor Temple) enabling distributed system of systems geo-spatial, UTZ Universal Time Zone temporal, semantic - syntactic sync,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

Blockchain Consensus Algorithms & Mechanisms



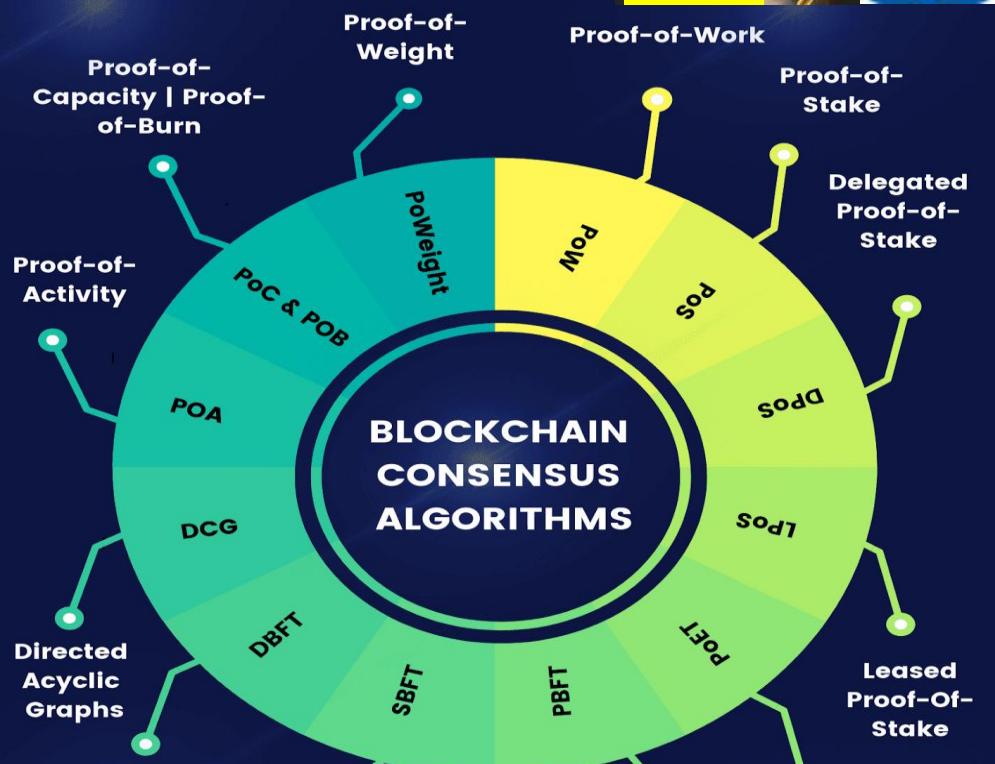
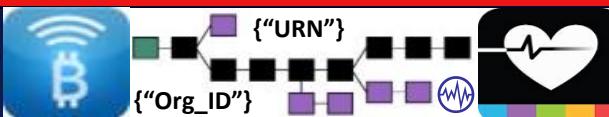
In the world of blockchain consensus algorithms, consensus is the **HEART OF THE BLOCKCHAIN NETWORK**. Its main purpose is to achieve agreement on transactions among a distributed system (s)

**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. 



# **BLOCKCHAIN CONSENSUS ALGORITHMS**

# ULTIMATE GUIDE FOR BEGINNERS



## Tolerance structured Data Exchange

## STRUCTURED DATA EXCHANGE SYNTAX LEXICON

## SYNTAX LEXICON

---

e:  
Simplified

Simplified  
Byzantine Fault

## **Byzantine Fau Tolerance**

Page 10

Practical  
Engineering

## Byzantine Fault



---

[www.developcoins.com](https://developcoins.com/blockchain-consensus-algorithms)

**Blockchain**   
**Interoperability**  
**Protocol BIP**   
 "share any type of data PROTOCOL  
 as long as it's encoded **in BYTES**"

# ISC

INTER BLOCKCHAIN  
COMMUNICATION

**BYTE:** unit of data equal to eight bits



**BIT**: a unit / group of 8 bits as alphanumeric characters i.e., TOKENS

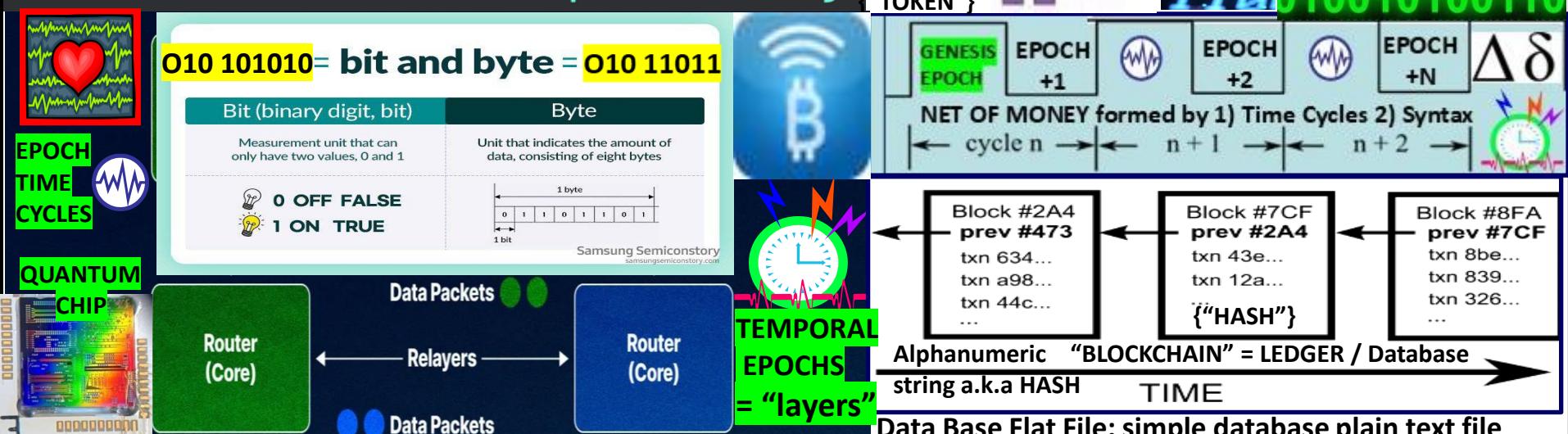


**BIT:** logical state with two possible values: "1" or "0",  
TRUE / FALSE, YES / NO, ON / OFF, or +/-

"A **BIT** is physically created with a **TWO STATE** device



## The Complete Guide to Crosschain Interoperability



Data Base Flat File: simple database plain text file  
format = tabular structure, each line represents a record, fields 'delimited' with commas, tabs..

**TIMESTAMP SERVER:** "Satoshi Nakamoto" concept established chronological order of transactions in a decentralized network. Uses cryptographic hashing & timestamps to create an immutable chain of blocks

- 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



Spatial / temporal UTZ

synchronization, stochastic

harmonization, Time - Space

Distance Estimation Service

Common Consensus Algo meme

Eco sustainable incentives

“We can synchronize ourselves,

DAO Trade Federations in time -

space for common purposes”

Eco sustainable, Equitable

Economic econometrics.



## ERC 20 TOKENS STANDARDS LIST



Blockchain Council

All things net, net of money formed with 1. Epochs 2 Syntax



### Federation Gateway

MEDIATE

$\Delta\delta$  MITIGATE

Brevis's value is time

Health

URN

Org\_ID

Heartbeat

Flash Memory

Event Bus

STAT MEAN INDEX

1421

FEDERATION: Latin: foedus, foederis, 1. covenant, union of partially self-governing states under a central government 2. League or confederacy. People, groups retain autonomy 3. A federated body formed by a number of nations, states, societies, unions, retaining control of own internal affairs SC Alice Corp “claims may not direct

USPTO 13/573,002

A.I. Procedural

V CLS Bank To abstract ideas

Alpha-Numeric

Brevity Codes / Tokens

“Bitcoin is a language”

STRUCTURED DATA EXCHANGE

ISO 20022

2525C.D

NATO

DATA SETS

NETOPS

TEMPLATE FORMS

Message Sets

XBRL

CDL

DAML

ROSETTA STONE

ISO

SWIFT

CODER'S

GUIDE

Alpha Numeric

Brevity Codes

K00.99

LOGIC

FILTERS

TIME - SPACE

METRIC S

METERS

SLA / O

On / Off

Shore

URN

Org\_ID

DATA

SETS

NETOPS

TEMPLATE

FORMS

Message

Sets

XBRL

CDL

DAML

ROSETTA

STONE

LOGIC

FILTERS

TIME - SPACE

METRIC S

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FILTERS

TIME - SPACE

METRIC S

METERS

ERC 3643 T-REX permissioned tokens = OPSCODE BREVITY CODES = USPTO 13/573,002

**ERC3643 protocol:** open-source suite of smart contracts issuance, management, transfer of permissioned tokens. Decentralized identity framework, **ONCHAINID**, users meeting conditions become token holders, even on permissionless blockchains.

**ERC 3643, Asset Tokenization: Code name T-REX**  
**PROTOCOL standard for permissioned tokens:**  
The ERC3643 protocol is an open-source suite of **smart contracts** that enables the issuance, management, and transfer of permissioned tokens. Its built-in **decentralized identity framework**, **ONCHAINID**, ensures only users meeting pre-defined conditions can become token holders, even on permissionless blockchains, for RWA Real World Assets, Securities, E-Money, Loyalty programs

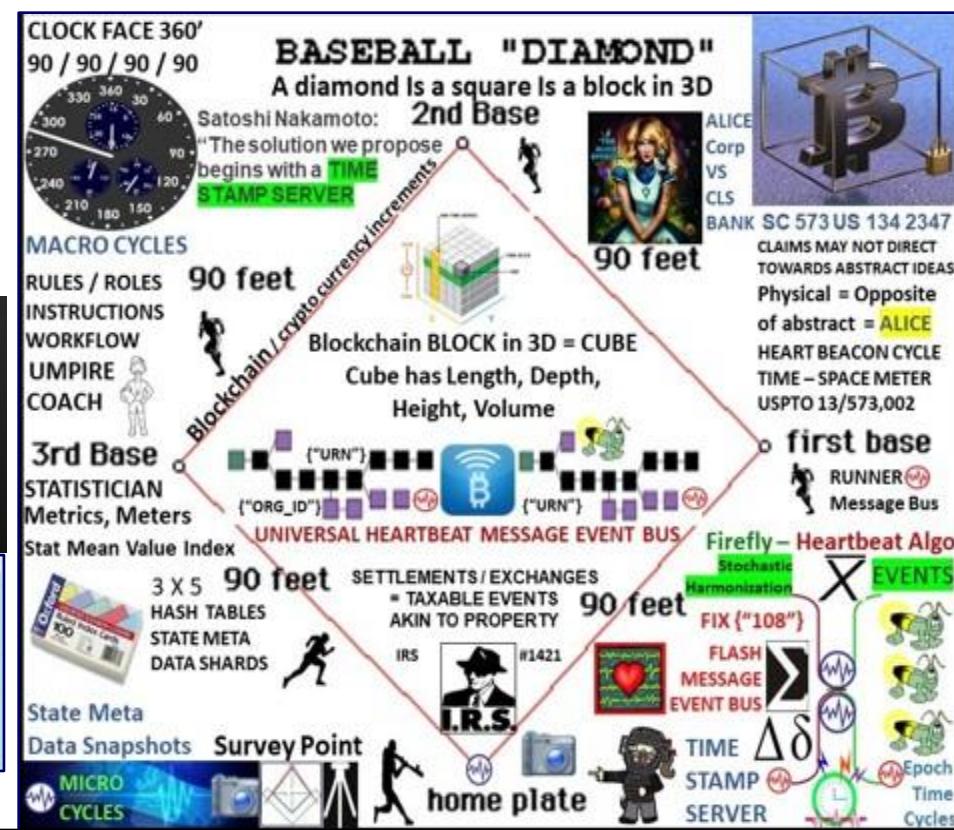
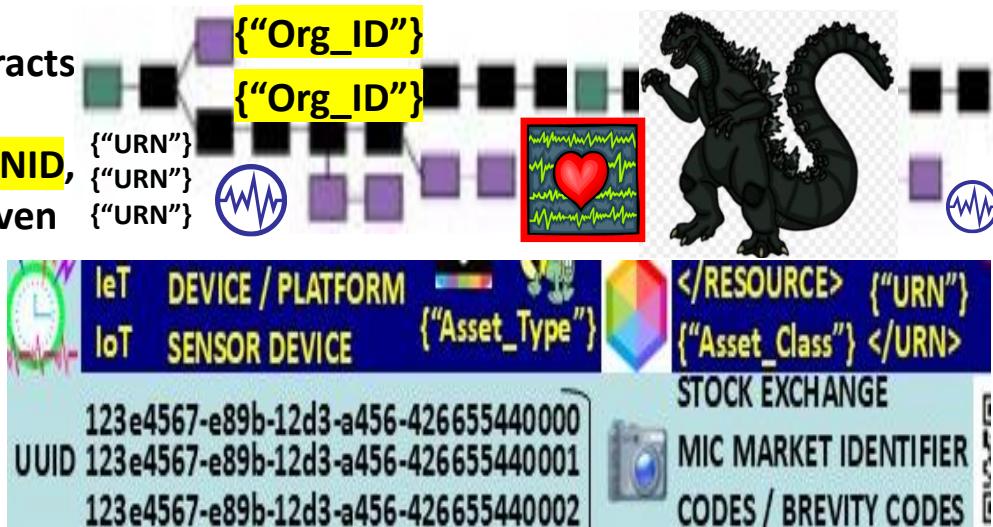
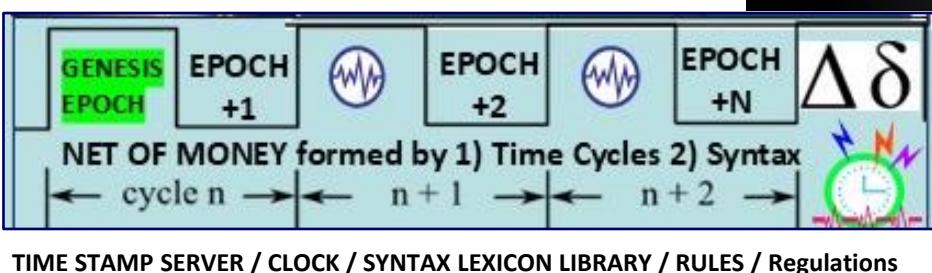
## **Token Type: Utility and Governance Token**

## **Token Name: T-REX**

# Smart Contract Address

## **Token Category: RWA, tokenization: Blockchains**

**Website:** <https://t-rex.network/>



# ISO 27001: Information Security Management System

## ISO 27002: Code of Conduct Best Practices

- CONFIDENTIALITY Not available, disclosed to authorized people, entities or processes
- INTEGRITY: Information is complete, accurate and protected from corruption
- AVAILABILITY: Information is accessible, usable when authorized



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

</RESOURCE> {"URN"}  
{"Asset\_Class"} </URN>  
STOCK EXCHANGE  
MIC MARKET IDENTIFIER  
CODES / BREVITY CODES

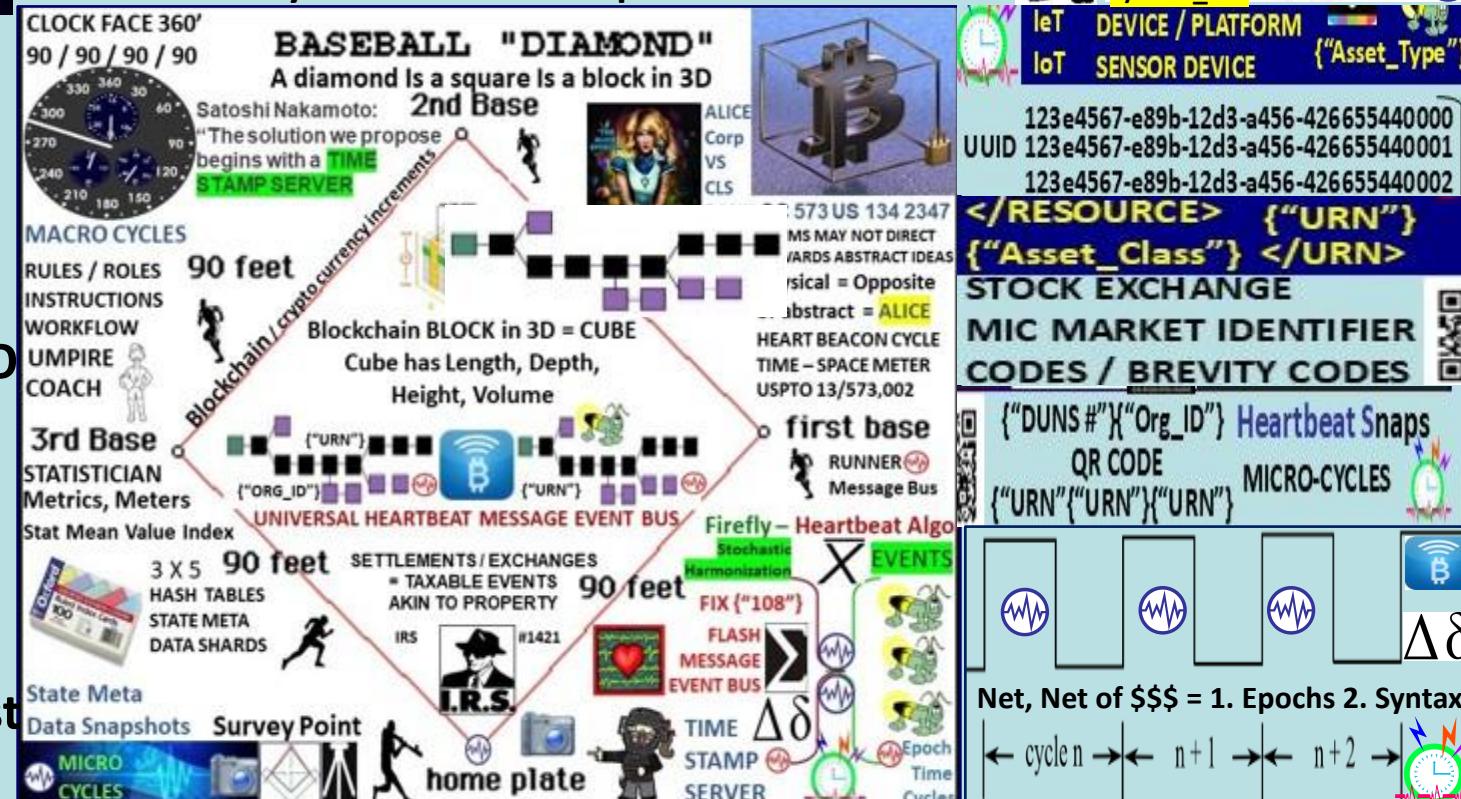
{"DUNS #"}{"Org\_ID"} Heartbeat Snaps  
QR CODE  
{"URN"} {"URN"} {"URN"} MICRO-CYCLES

Net, Net of \$\$\$ = 1. Epochs 2. Syntax  
← cycle n → ← n+1 → ← n+2 →

$\Delta\delta$

Epoch Time Cycles

AVAILABILITY: By roles when rules permit access are met



INTEGRITY: events, Messages, alerts.. Time stamp server with “blockchain” Immutability rules In effect across DAO

CONFIDENTIALITY  
Organizational ID  
Xmit {"Org\_ID"} with individual's ID available on request granted by group

# STABLE PROTOCOL THREE MAIN TYPES:

DeFi-Native: Cap Labs, Elixir, Level

Collateralized Debt Positions: Ducat, Felix

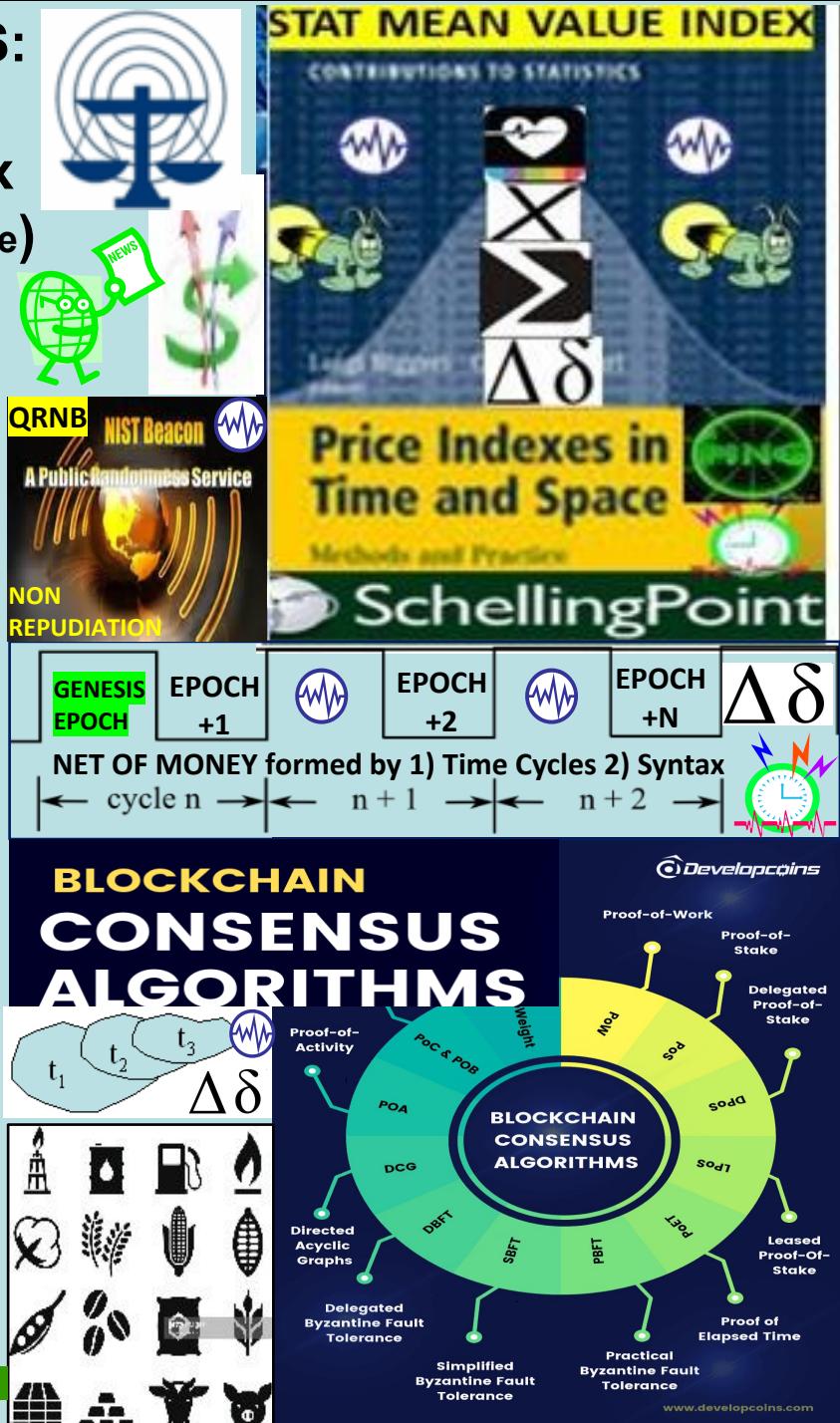
RWA-Backed:, EAnzen, Superstatethena (UStb update)

**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

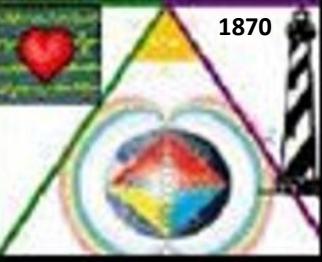
## 2) Collateralized Debt Positions (CDPs)

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



# THE BITCOIN BLOCKCHAIN FOR DUMMIES



Satoshi Nakamoto

Craig WRIGHT

a.k.a.

Satoshi Nakamoto

**“THE VALUE OF  
BITCOIN IS  
TIME ITSELF”**

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

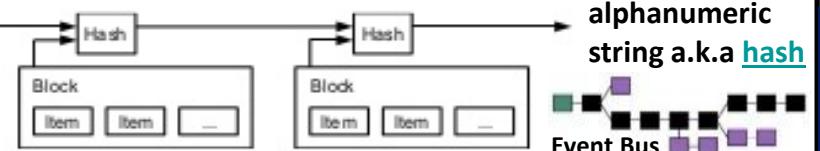
Satoshi Nakamoto Bitcoin Paper

**“THE SOLUTION WE PROPOSE BEGINS WITH A TIME STAMP SERVER”**

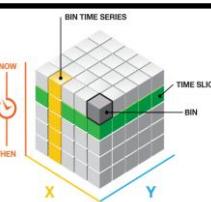
### 3. Timestamp Server

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



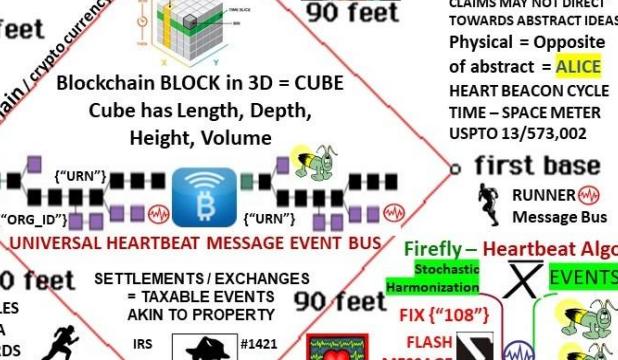
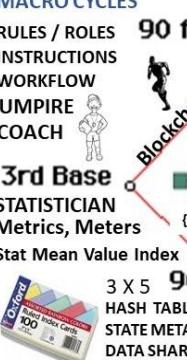
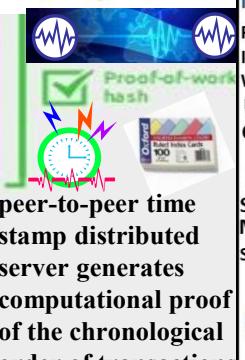
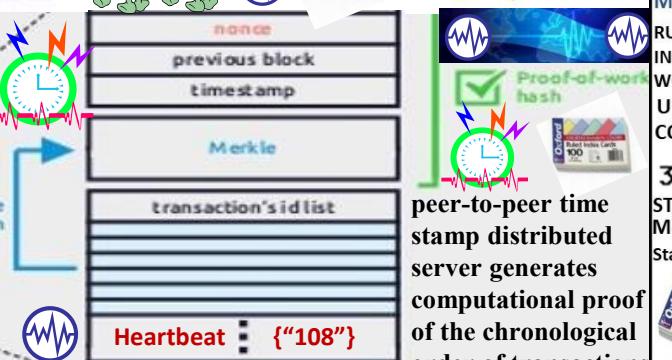
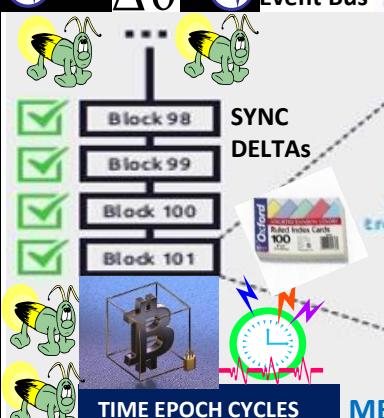
JapanNet Crypto Time Authentication Service (Timestamp Service)



**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



**MERKLE:** Summary built from block's transaction ID's

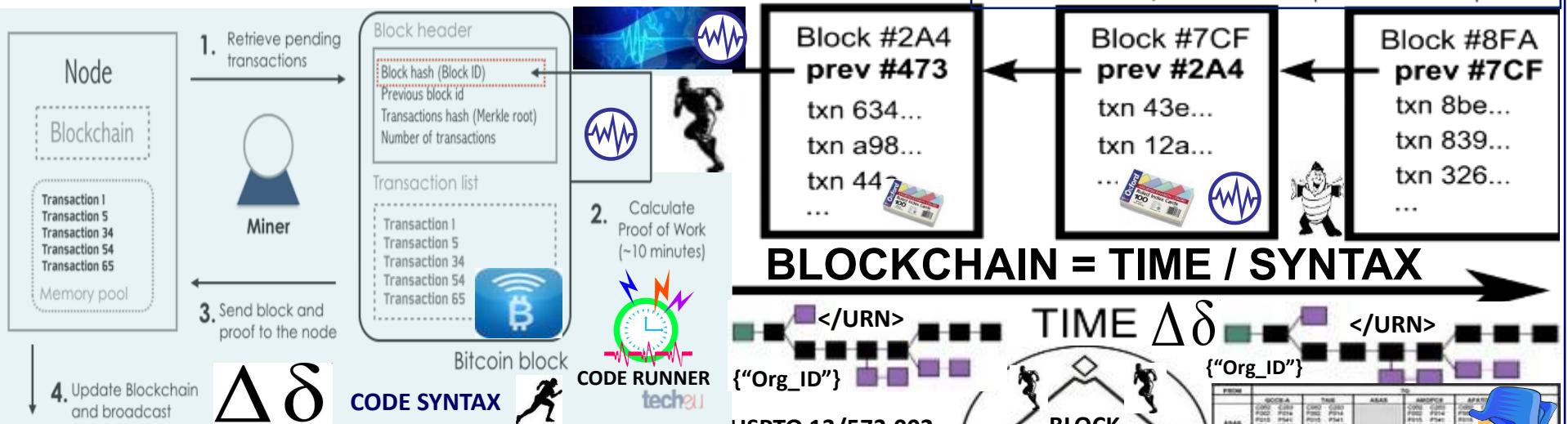
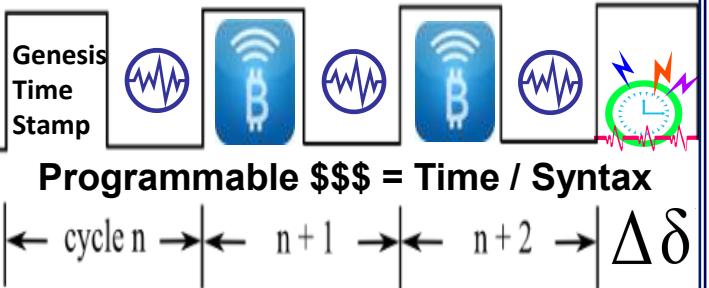
Header - Contains service information (version info, nonce, previous block id and timestamp). {“Org\_ID”}

Merkle - A summary built from the block's transaction identifiers.

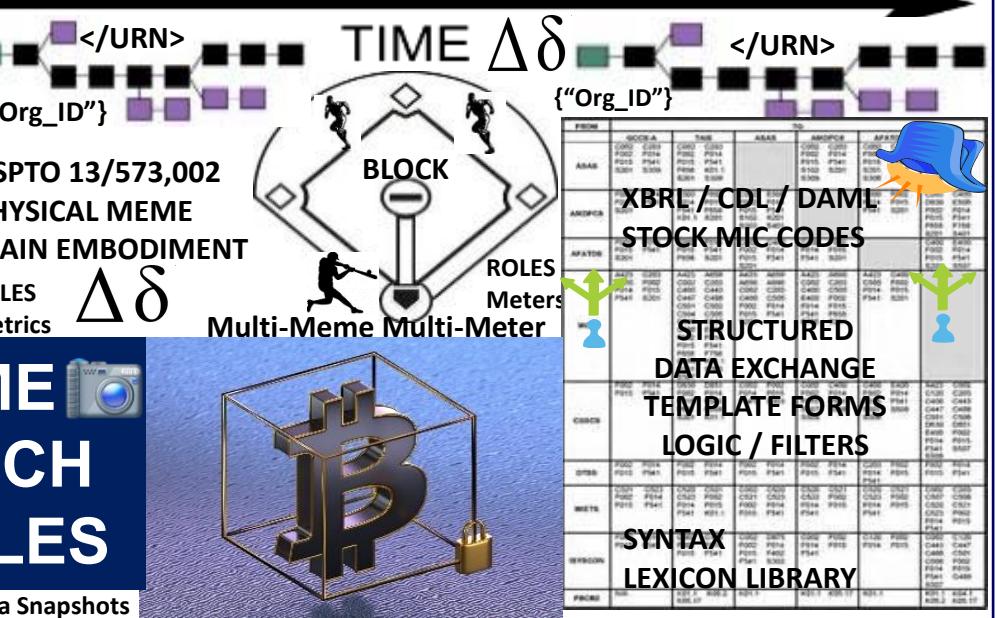
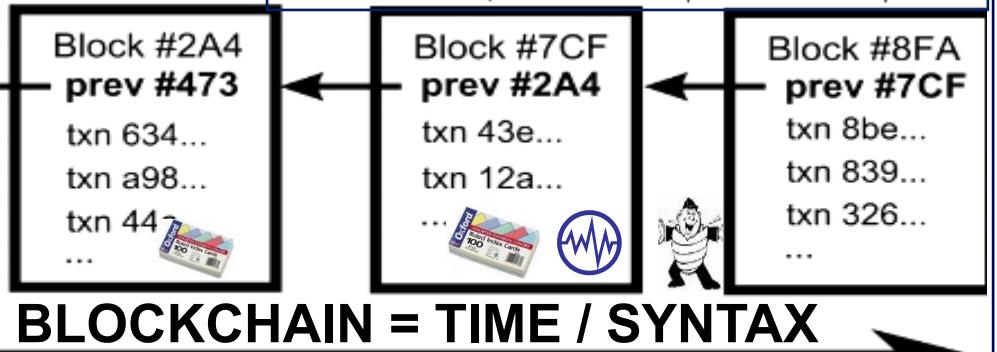
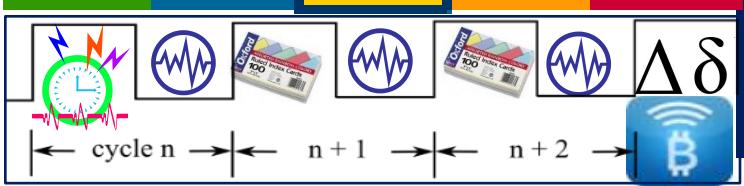
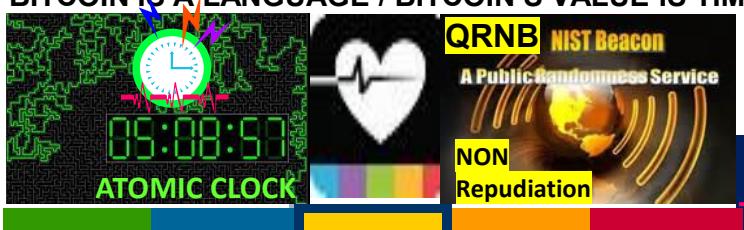
Transaction's id list - list of transaction's identification hashes that was included into the block's merkle tree.



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"**



MELANIE  
SWANFUTURE  
MEMESDOT  
COM

# 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.

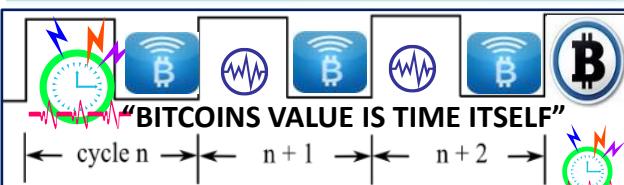




## PROOF-OF-WORK



**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.

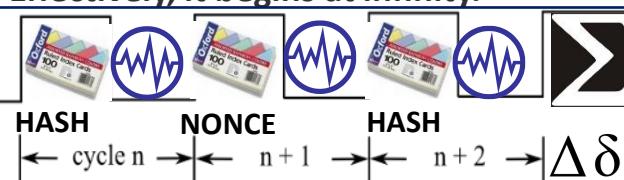


- **target** = maximum value of 8 bytes Snap ( $2^{64}$ ) divided by the difficulty. Shots

**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**





real-time gross settlement system, currency exchange remittance distributed net

FEDERATION CONSENSUS ALGORITHM / PROTOCOL LIQUIDITY ON DEMAND

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 **FEDERATION** based consensus process that on demand liquidity backed by cooperative backing



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**



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

**each retaining control of internal affairs**

**Federation**

**Gateway**

Net joins, drops, splits, merges, moves  
Agile, adhoc NETOPS Vs acquisition preserves the

**LIQUIDITY, ORGANIZATIONAL INTEGRITY OF TRADE FEDERATIONS**

**FEDERATION CONSENSUS PROTOCOL**

{"GLOBAL"}  
{"SHARED"}  
{"DOMAIN"}  
{"COMMUNITY"}  
{"PRIVATE"}  
{"GROUP ID"}

**Neutral transaction protocol**

secured REST messaging API's

Banks

Interledger Protocol ILP

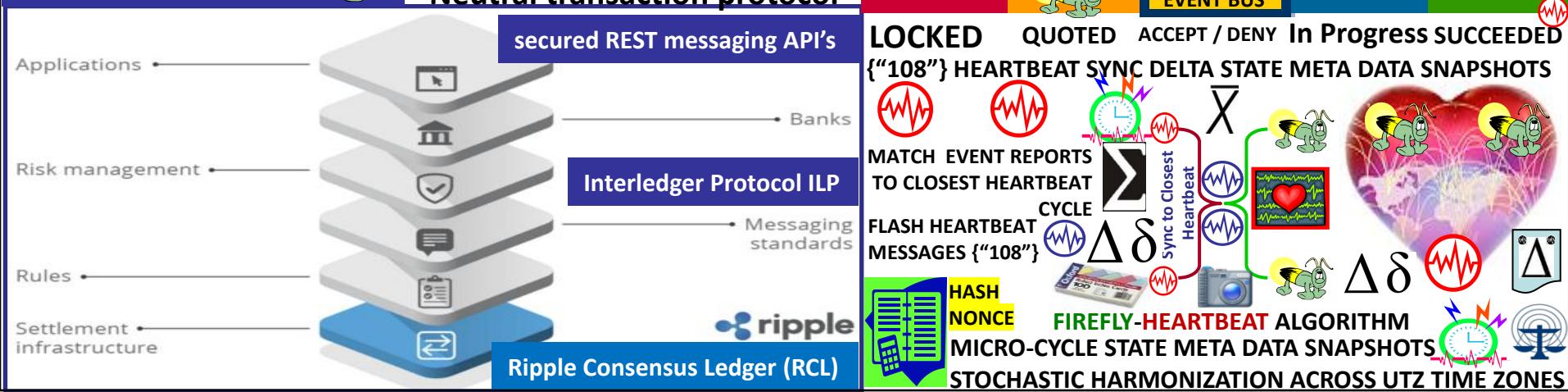
Messaging standards

ripple

Ripple Consensus Ledger (RCL)

**LOCKED QUOTED ACCEPT / DENY In Progress SUCCEEDED**  
{"108"} HEARTBEAT SYNC DELTA STATE META DATA SNAPSHOTS

MATCH EVENT REPORTS TO CLOSEST HEARTBEAT CYCLE FLASH HEARTBEAT MESSAGES {"108"}  
Sync to Closest Heartbeat  $\Delta\delta$  FIREFLY-HEARTBEAT ALGORITHM MICRO-CYCLE STATE META DATA SNAPSHOTS STOCHASTIC HARMONIZATION ACROSS UTZ TIME ZONES





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

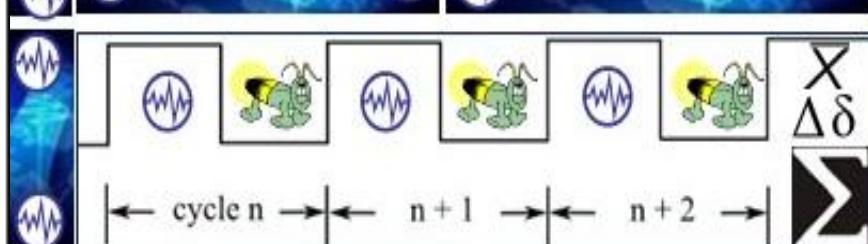
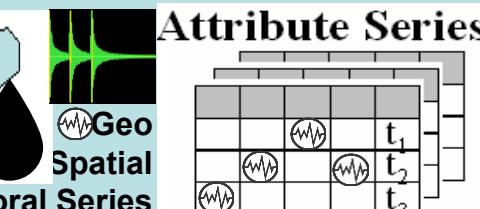
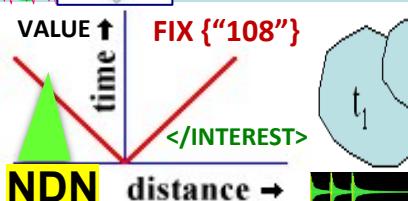


**The Volumetric Weight is often referred to as dimensional weight**

**Volumetric Weight**  
**= [Width x Length  
x Height]**



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



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>

ORG ID



- Users should fully control their data. Users have freedom to reveal as much personal identifiable information as they want, when they want

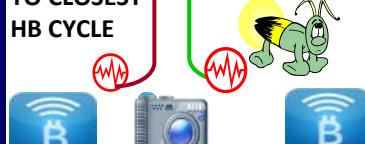


Bitcoin: OpenBazaar transactional currency

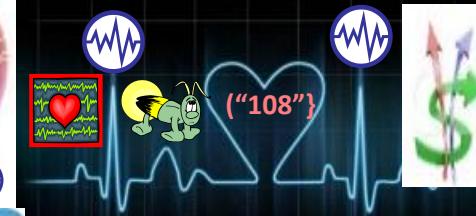


Cryptographic Security

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



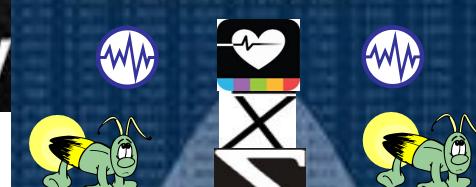
SLA  
COMMODITIES  
ECONOMIC HEARTBEAT



STAT MEAN VALUE PULSE  
REAL WORLD ASSETS RWA

STAT MEAN VALUE INDEX

CONTRIBUTIONS TO STATISTICS



Price Indexes in  
Time and Space  
Methods and Practice

SchellingPoint

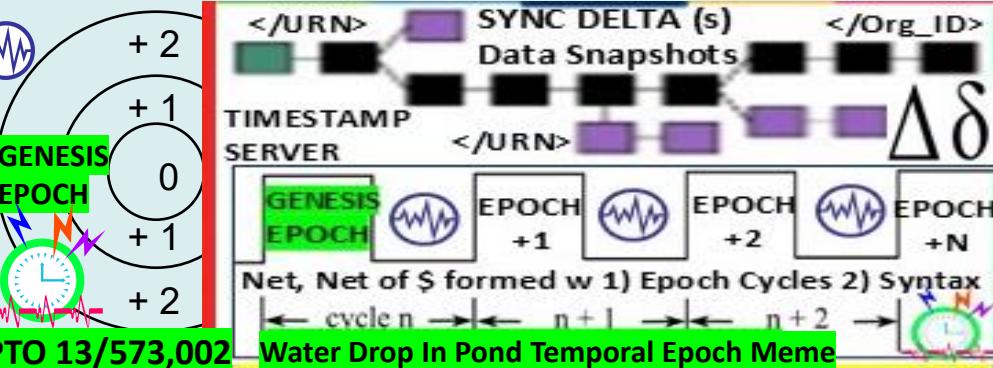
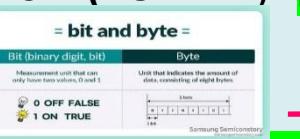
DON: DECENTRALIZED ORACLE NETWORKS      Explicit Staking



## Cross-Chain Token (CCT) standard DON Transaction-Execution Framework (DON-TEF)

Chainlink CCIP:Arbitrary Messaging, Token

Transfers: data encoded as BYTES 0101010  
in smart contracts on different blockchains



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

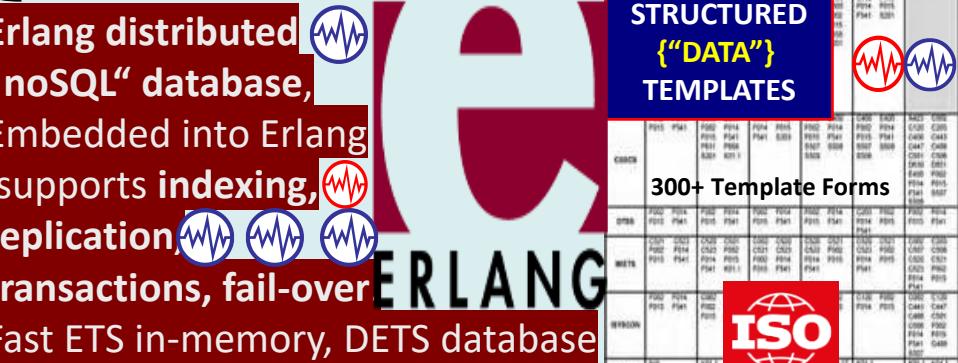
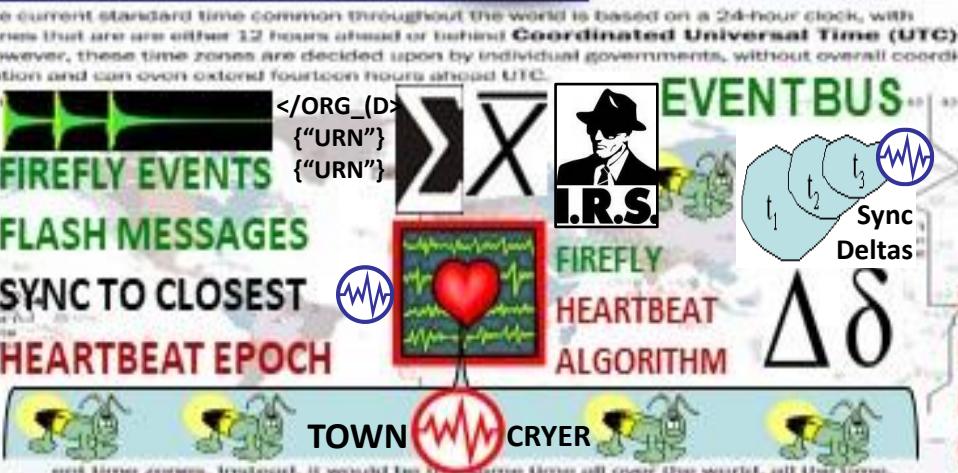


USPTO 13/573,002

Water Drop In Pond Temporal Epoch Meme

- Transaction-Execution Framework (TEF) [Section 6]: Decentralized Oracle Network framework for layer-2 systems that implements oracle support and FSS Fair Sequencing Services.
- Town Crier [Section 3.6.2]: An oracle technology uses a trusted execution environment (TEE) to enforce integrity, confidentiality on oracle data and computation. TOWN CRIER has capabilities that subsume those of DECO, but requires trust in a TEE: execution environment for applications, often with special-purpose hardware support. Syncing verification: SCA may verify the correctness of state updates when exec syncs, e.g., SNARKs attached to rollups.
- Guard rails: SCA may include provisions to protect against corruption or failures in exec. (See Section 7 for more details.)

Chainlink's explicit staking model: SUPER LINEAR STAKING where malicious actors are required to have a budget much larger than the combined deposits of all DON-TEF nodes



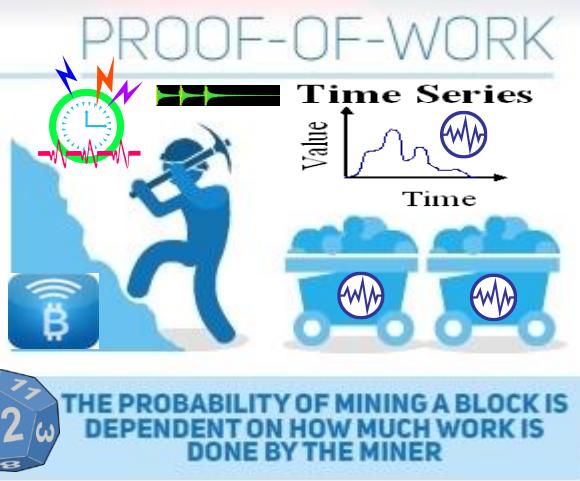
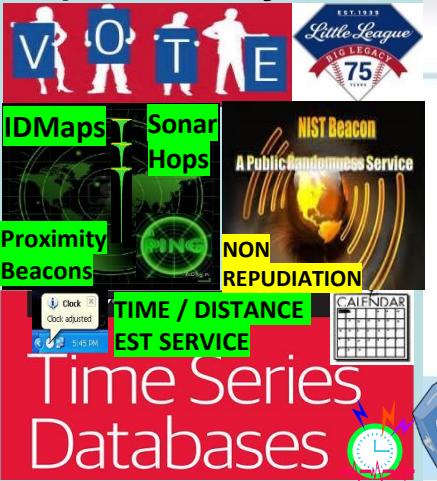


## Proof-of-activity PoA is a combination of Proof of Work / Stake blockchain consensus algorithms:

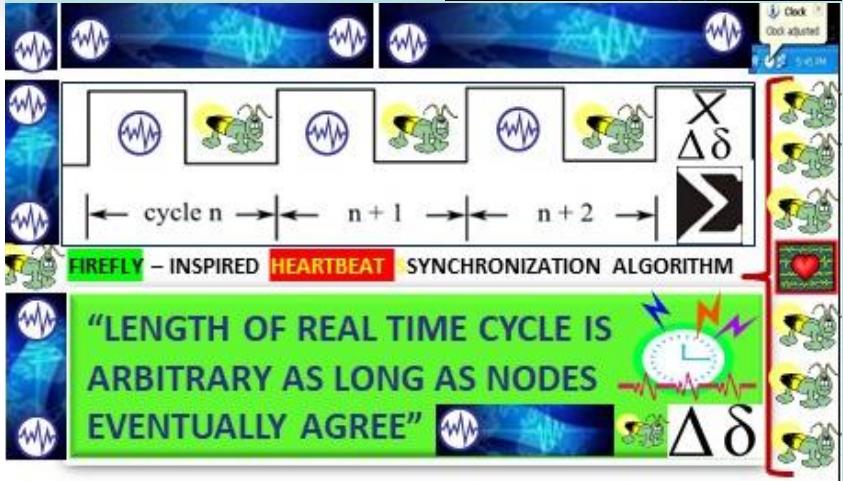
### Example of Proof-of-Activity (PoA)

HEART BEACON CYCLE 13/573,002

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.



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





# Proof of Authority



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

Not pay to play, Node identity 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.

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

Federation  
Gateway



{"GLOBAL"}  
{"SHARED"}  
{"DOMAIN"}  
{"COMMUNITY"}  
{"PRIVATE"}

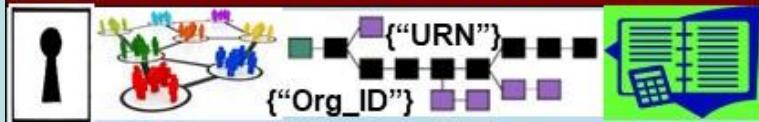
Net joins, drops, splits, merges, moves

Agile, adhoc NETOPS Vs acquisition preserves the CHANNEL

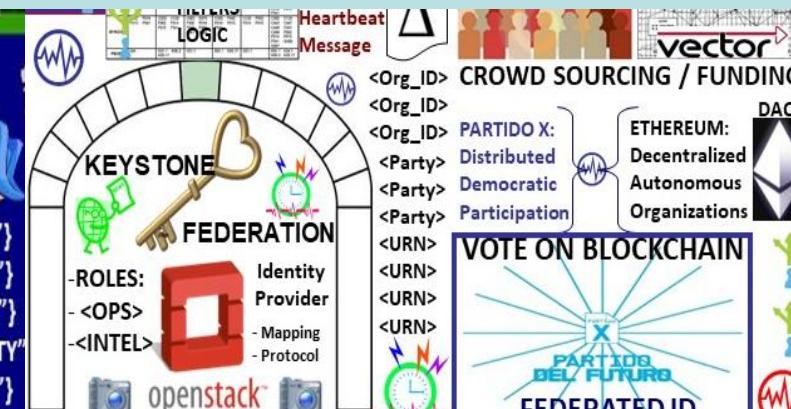
DISTRIBUTED AUTONOMOUS ORGANIZATIONS DAO

## Heart Beacon Cycle

### FEDERATE / TRADE FEDERATIONS



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

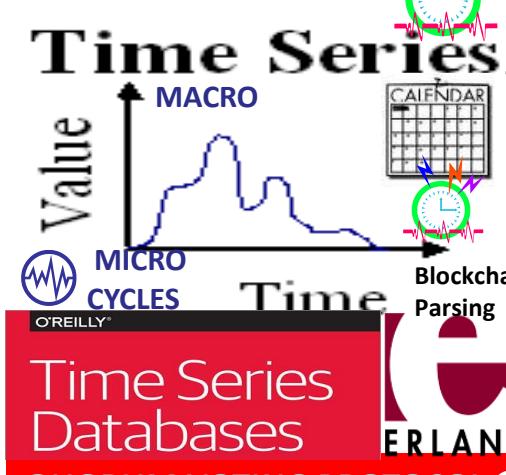


# SAWTOOTH LAKE POETIC CONSENSUS PROOF OF ELAPSED TIME: POET

"PoET for 'Proof of Elapsed Time', is a **lottery protocol** that builds on trusted execution environments (TEEs) provided by Intel's [Secure Guard Extensions] to address the needs of large populations of participants. The second, **Quorum Voting**, is an adaptation of the Ripple and Stellar consensus protocols and serves to address the needs of applications that require immediate transaction finality."



## PROOF OF ELAPSED TIME



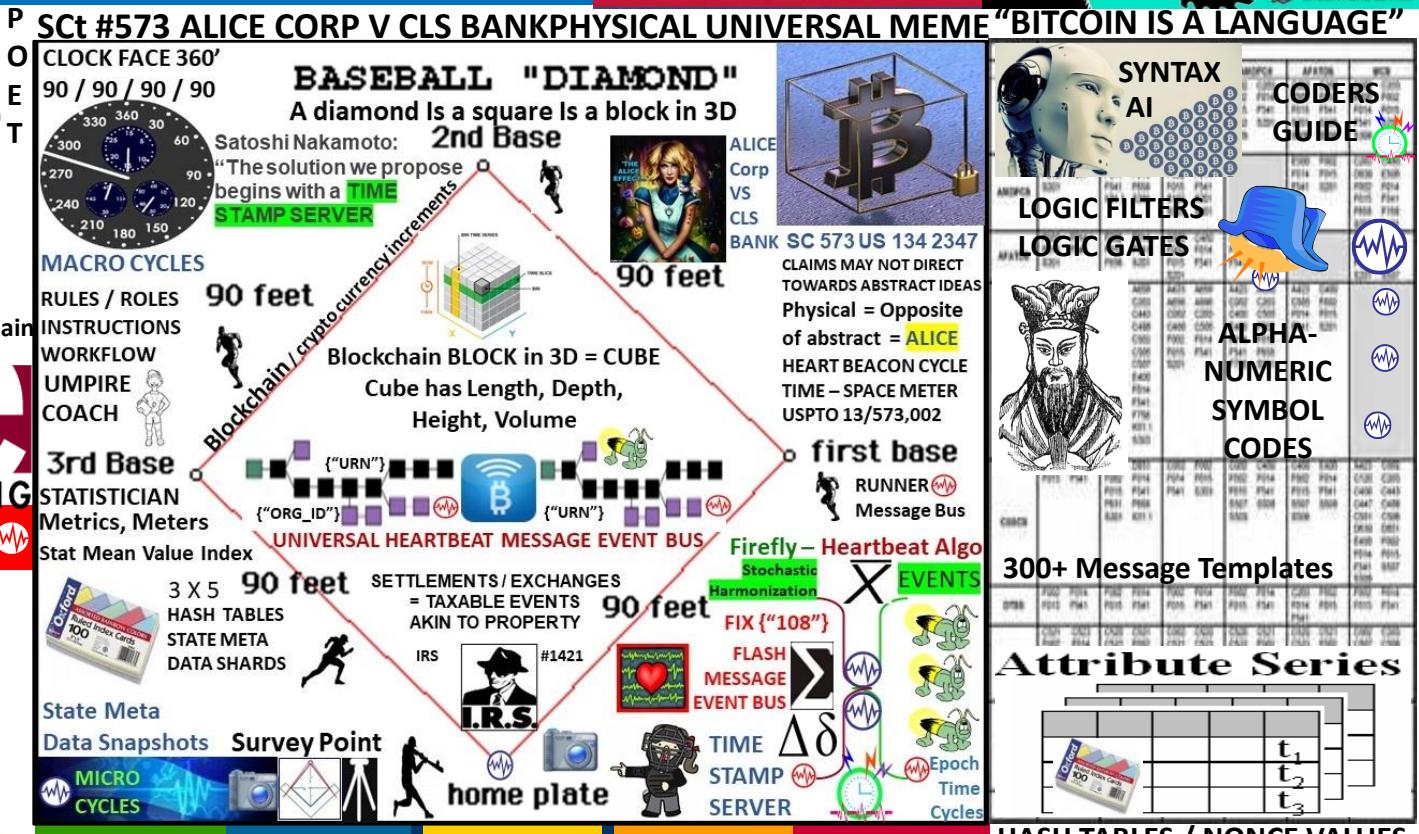
Voting Based Selection: stake size & block generators selected by votes

Voting based selection Instead of only using the stake size, the block generators can be selected by votes  
ex: League MVP



Robert's Rules quorum = minimum # of voting members who must be present at meetings to conduct business of the group

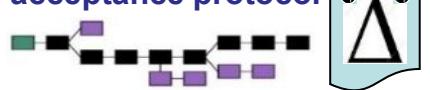
## TOURNAMENT LEAGUE BOARD



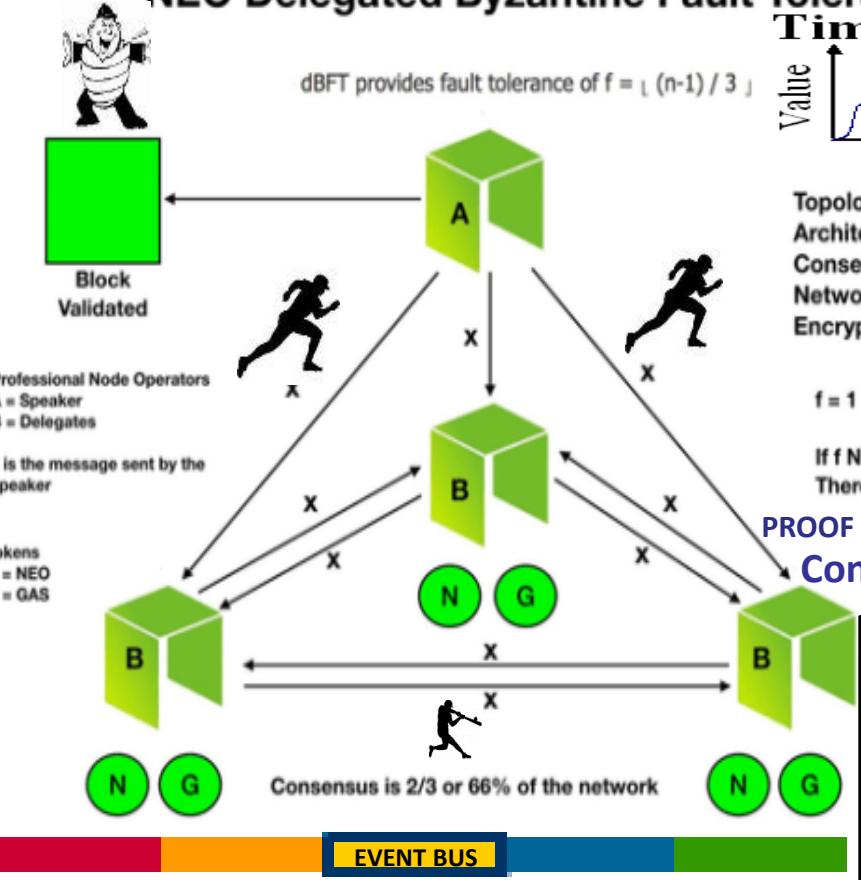
## FIREFLY-HEARTBEAT FLASH MESSAGES UNIVERSAL EVENT BUS



Capture ledger's state  $\Delta \delta$   
Transaction language changes ledger state  
Consensus, transaction acceptance protocol

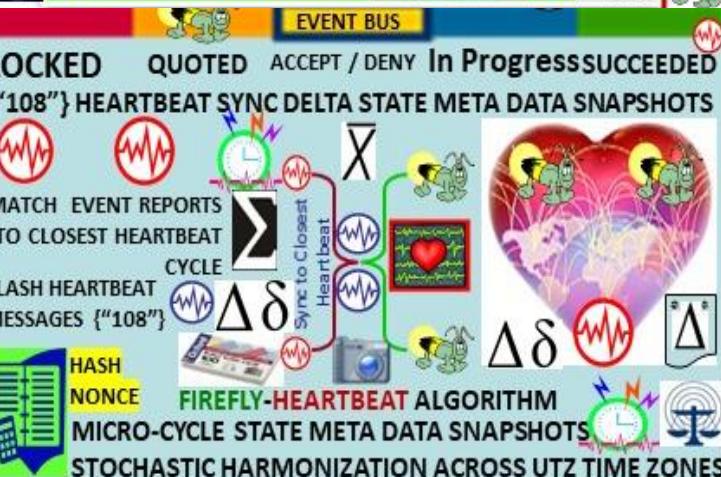
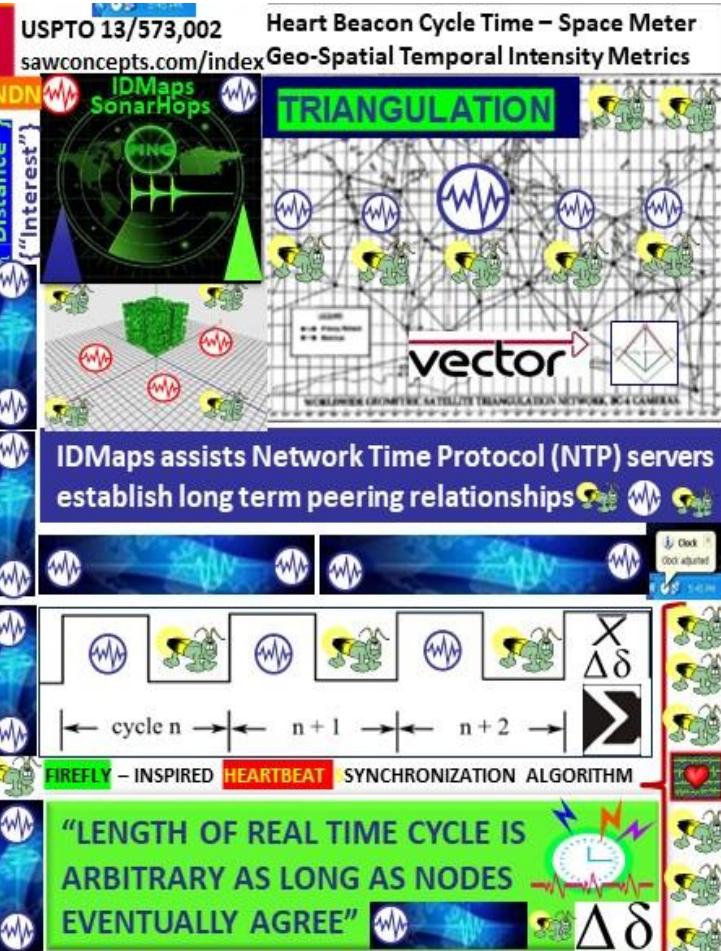


# NEO Delegated Byzantine Fault Tolerance (dBFT)



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"



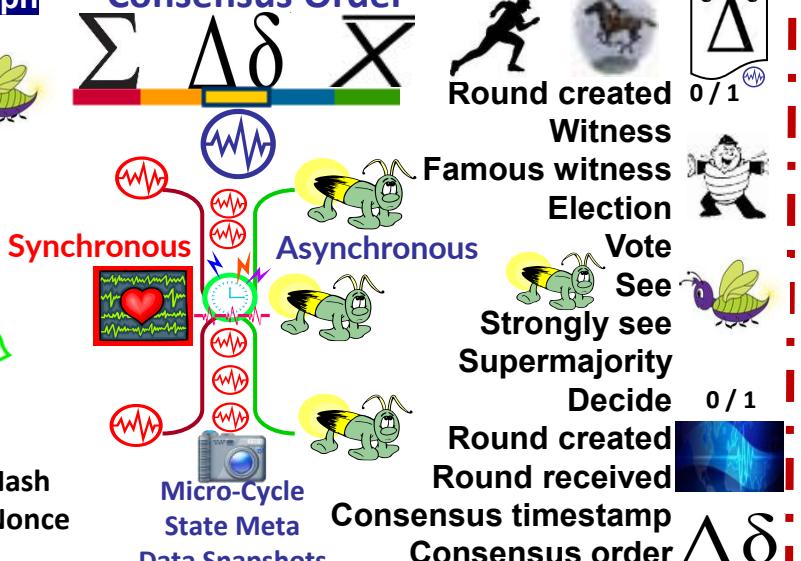
DAG "Directed Acyclic Graph" large number of blocks arrive at the same time. DAG system reaches consensus leveraging "Gossip"... information spread by a computer calling up other computers at random, sharing everything it knows

Community members reach consensus agreement on events / transactions order inside events, and agree on a timestamp for each event /transaction

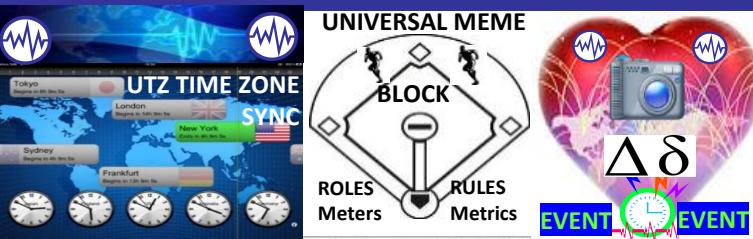
**DAG finite directed graph**  
= no directed cycles

$$\Sigma \Delta\delta X$$

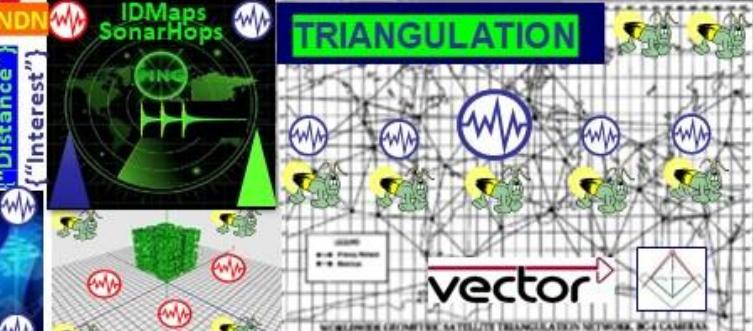
Hashgraph Member Event Transaction Consensus Order Timestamp Gossip protocol Self-parent Other-parent Graph Hash Hashgraph



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

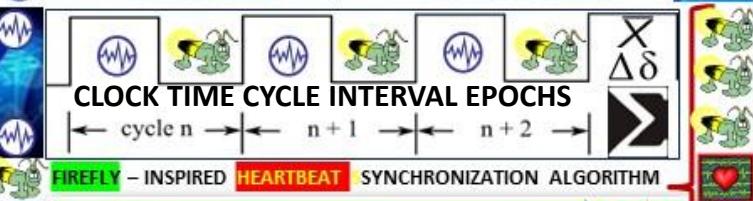


UTZ TIME ZONE SYNC  
Heart Beacon Cycle Time – Space Meter  
Geo-Spatial Temporal Intensity Metrics



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

**FIREFLY HEARTBEAT Synchronization Algorithm**



"LENGTH OF REAL TIME CYCLE IS ARBITRARY AS LONG AS NODES EVENTUALLY AGREE"  $\Delta\delta$

# 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.

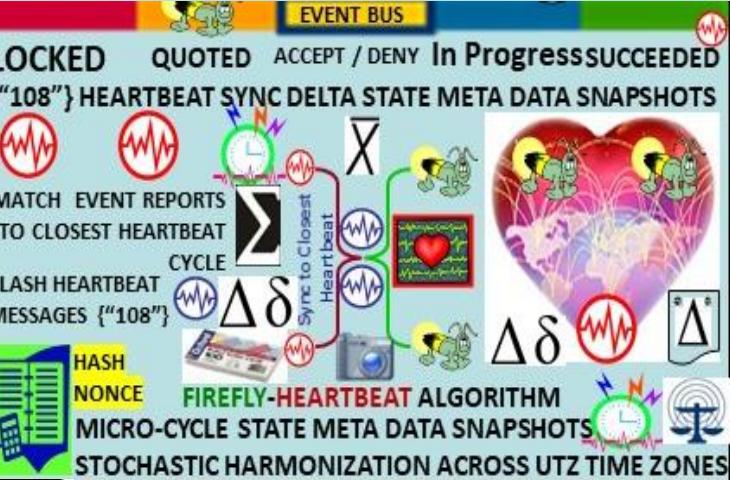
Iain Stewart, the inventor of the POB algorithm, uses an analogy to describe the algorithm: burnt coins are like mining rigs. In this analogy, a miner burns their coins to buy a virtual mining rig that gives them the power to mine blocks. The more coins burned by the miner, the bigger their virtual mining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



Heartbeat Event {"burn"} SLA = increase mining rig volume 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.

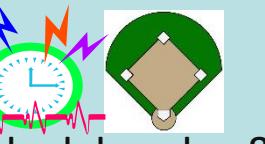
TAG	SLA/O	Token Award
{"Org_ID"} ActiveID	[UFO2_ACTIVEID]	</EVENT>
IF1_Heartbeat (IF-Node1)	[UFO2_HEARTBEAT:#]	</EVENT>
IF2_Heartbeat (IF-Node2)	[UFO2_HEARTBEAT:#]	</EVENT>
{"UUID"} IF1_DeviceStatus (IF-Node1)	[UFO2_DEVICESTAT:#]	</EVENT>
{"UUID"} IF2_DeviceStatus (IF-Node2)	[UFO2_DEVICESTAT:#]	</EVENT>
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**

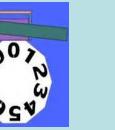
Proof of capacity for mining devices, also known as blockchain nodes, to use empty space on their hard drive to mine the available [cryptocurrencies](#).



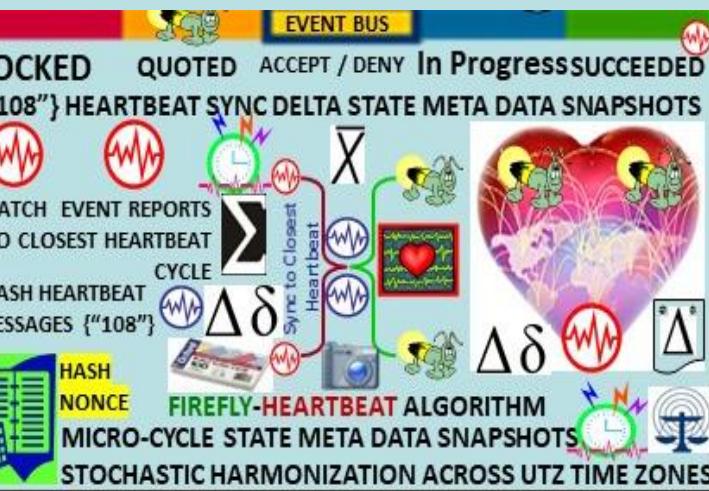
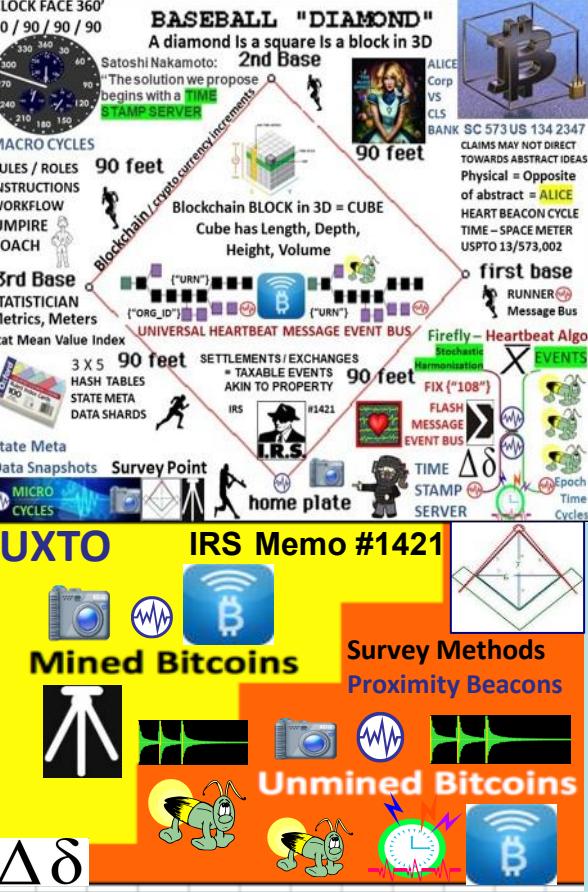
Instead of repeatedly altering the numbers in the block header & repeated hashing for the solution value as in a PoW system, PoC works by storing a list of possible solutions on the mining device's hard drive before mining activity starts



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.

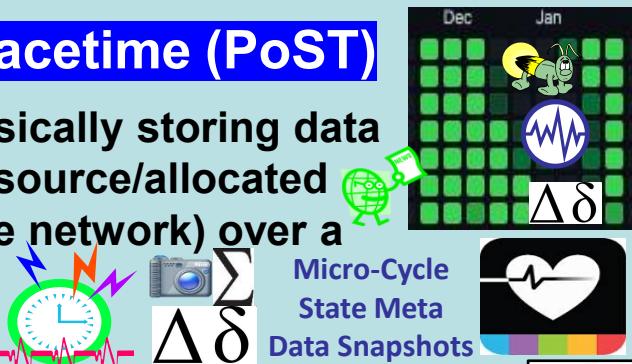


Analogy: if lottery rewards are based on matching the most numbers on the winning ticket, then a player with a longer list of possible solutions will have better chances of winning. Additionally, the player is allowed to keep using the lottery ticket block numbers again and again repeatedly.



# PoST Proof-of-Spacetime (PoST)

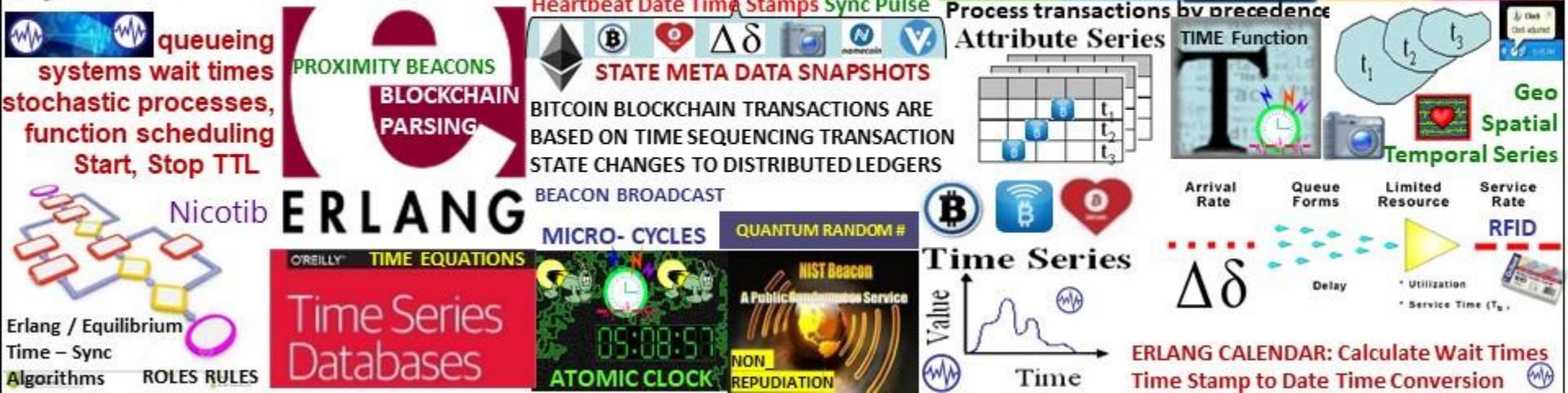
PoST shows that physically storing data (spent "spacetime" resource/allocated storage capacity to the network) over a certain period of time.



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



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.



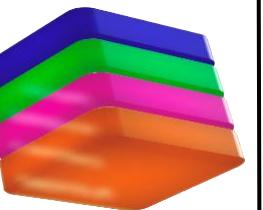


## PROTON A CHAIN Virtual Machine

## 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

Consecutive Successes := 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

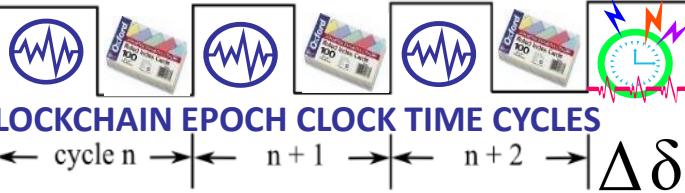
α (quorum size): between 1 and k

β (decision threshold): >= 1

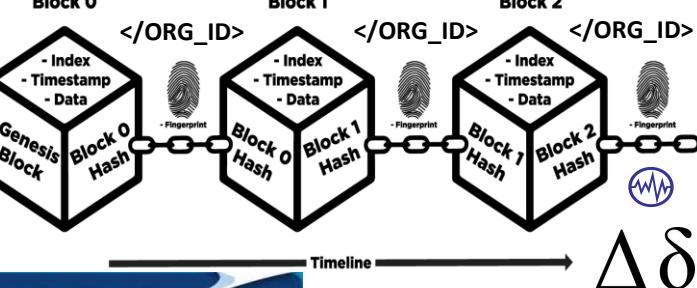
ALL THINGS NET, NET OF \$\$\$

1) EPOCH TIME INTERVALS

2) SYNTAX (not) used in epochs



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



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"



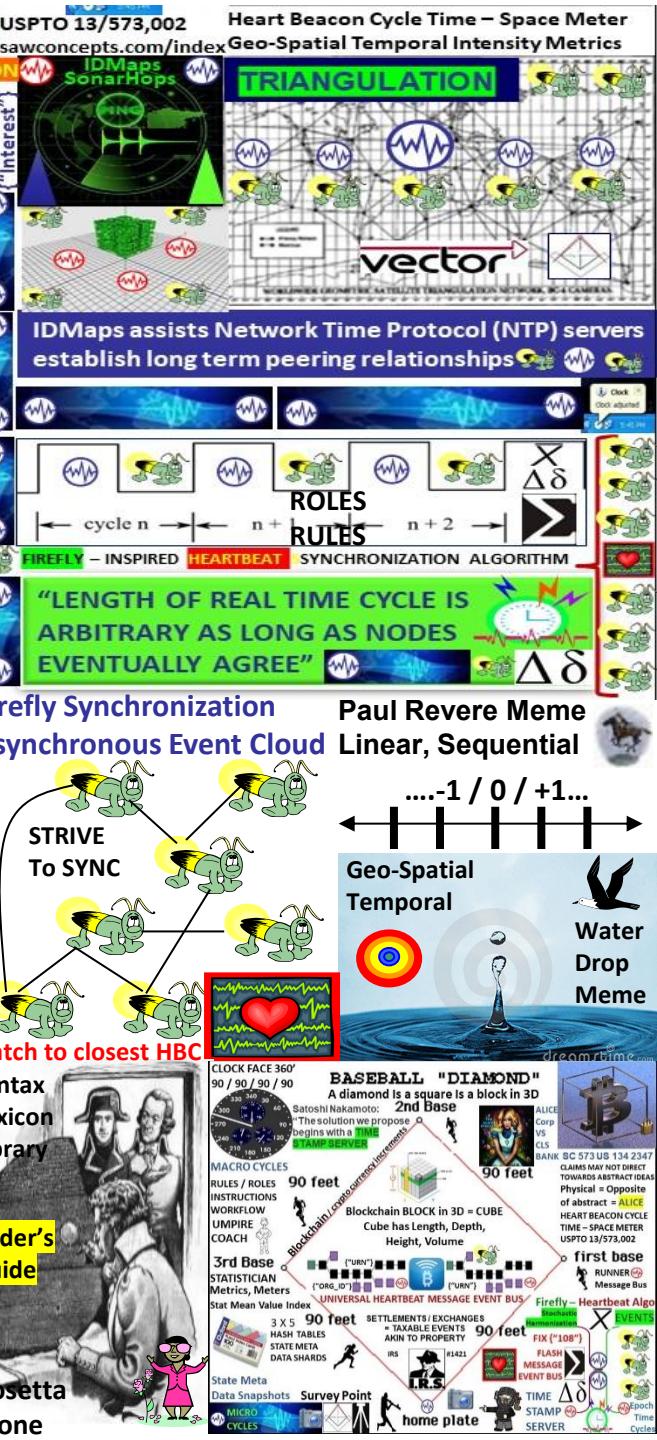
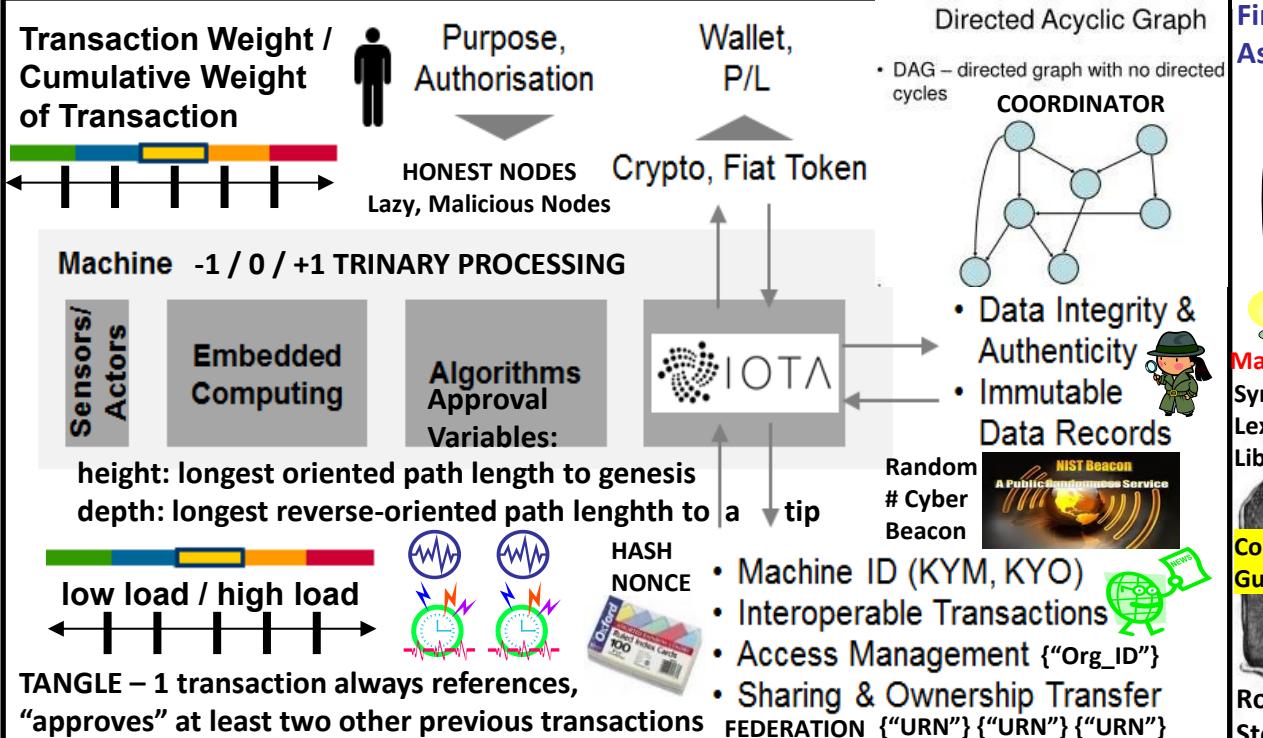


OTA: Internet Of Things IOT distributed ledger  
with microtransactions without fees

# 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

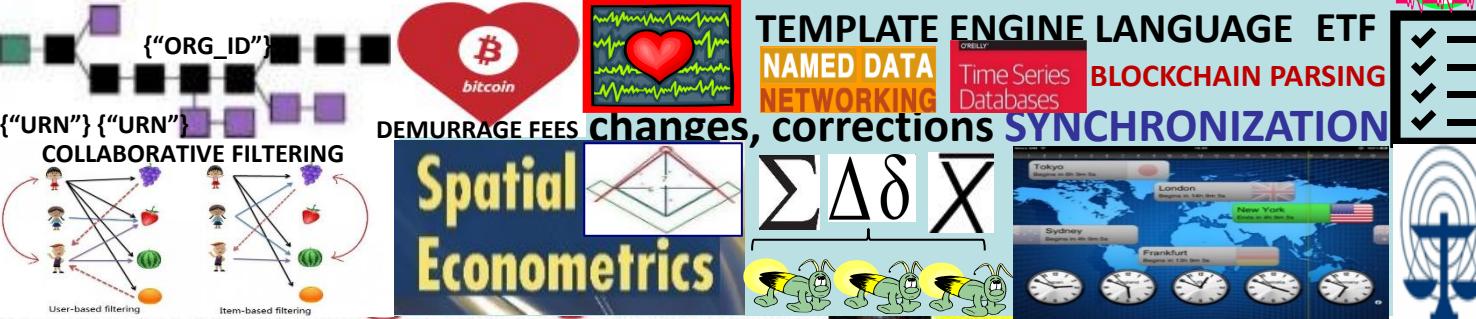




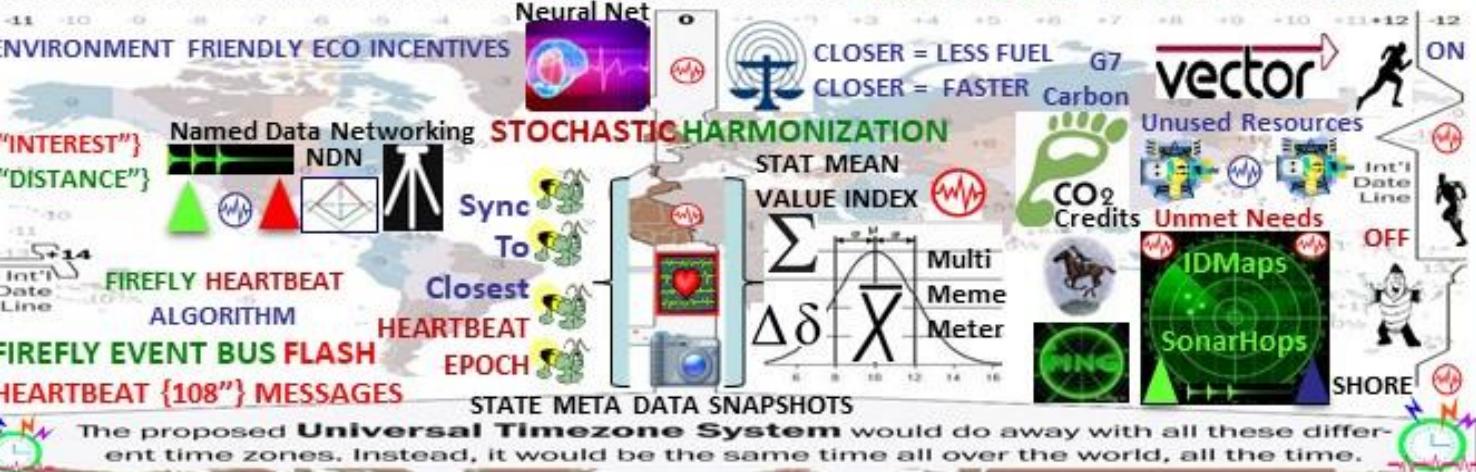
# EGaaS

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 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**



**E-GaaS:** international blockchain platform for organizing economic, state, social activities of citizens , communities on the basis of smart law, smart contract system. eGaaS offers a comprehensive solution needed for state and business management on the blockchain platform.



**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

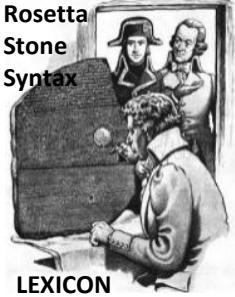
Blockchain middleware: identity and operations management, data, intelligence services like analytics and machine learning. New middleware works with existing Azure services, like Active Directory and Key Vault

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

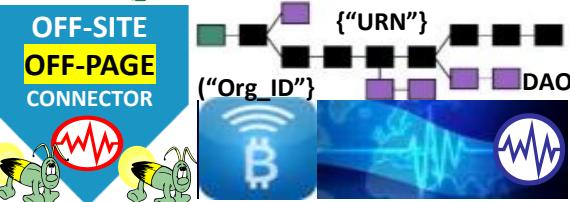
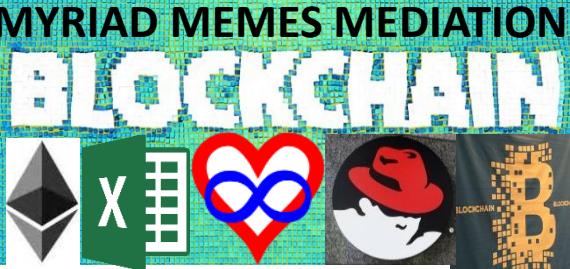
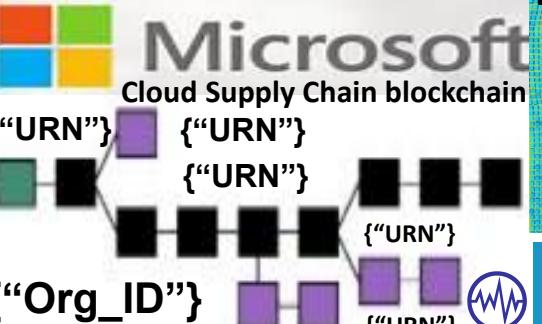


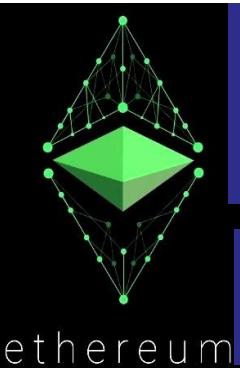
ALPHA NUMERIC	
BREVITY CODES	
SYMBOL CODES	
STRUCTURED MILITARY MESSAGE	
TEMPLATE FORMS	LOGIC / FILTERS

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.



MULTI-MEME MULTI-METER





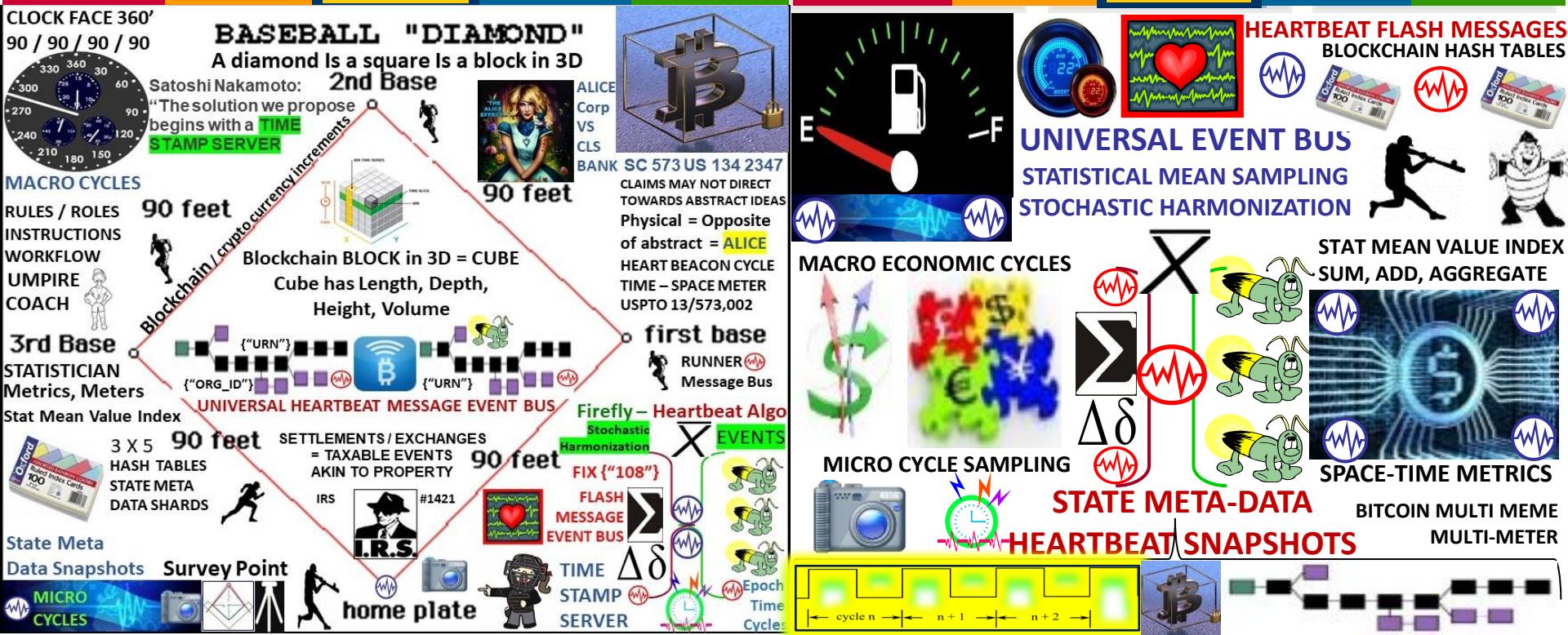
## ETHER: Compensate Resource Contribution

Gas: price to  
Run contract  
transactions

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



**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**



**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

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

**Threshold Relay Chain techniques**

Probabilistic Slot Protocol (PSP) When Gh is selected, members start stopwatches  
Choosing Leaders Randomness selects priority list block forgers at height h  
Short Term Convergence Correct processes build on highest scoring chain  
Threshold Timestamping group signs blocks at h until next group appends another.

**Scalable Global Validation Layer:** Each additional level of the tower validates new state transitions applied to storage shard. is built by processes selected by the RANDOM BEACON

**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

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

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

**ALICE Corp VS CLS 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**

**UTZ TIME ZONE SYNC**

**MACRO CYCLES**

**RULES / ROLES INSTRUCTIONS WORKFLOW UMPIRE COACH**

**90 feet**

**Blockchain / crypto currency increments**

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

**3rd Base STATISTICIAN Metrics, Meters**

**UNIVERSAL HEARTBEAT MESSAGE EVENT BUS**

**90 feet**

**SETTLEMENTS / EXCHANGES = TAXABLE EVENTS AKIN TO PROPERTY IRS #1421**

**90 feet**

**State Meta Data Snapshots Survey Point**

**MICRO CYCLES**

**home plate**

**Fix {"108"} FLASH MESSAGE EVENT BUS**

**TIME STAMP SERVER**

**Firefly – Heartbeat Algo EVENTS**

**STOCHASTIC HARMONIZATION**

**FLASH MESSAGE EVENT BUS**

**TIME STAMP SERVER**

**Epoch Time Cycles**



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.

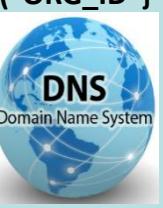
**ACCOUNTS & IDENTITY:** æternity's accounts are permission-less, but allow customization via schema.org's semantic web scheme. Create & own (**federated group**) / individual identities on the æternity network



("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

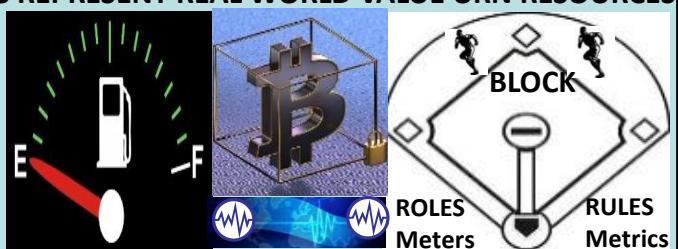
**AETERNITY CROSS-CHAIN ATOMIC SWAPS CORRESPOND TO HEART BEACON CYCLE'S USE OF BATTLEFIELD DIGITIZATION DERIVED HEARTBEAT SYNC DELTAS**



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

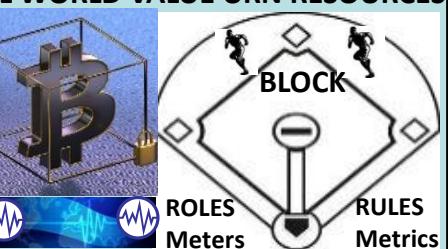
**TOKENS REPRESENT REAL WORLD VALUE URN RESOURCES**

ETHEREUM USES GAS GUAGE MEME INDICATING THRESHOLD MET / NOT MET



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")

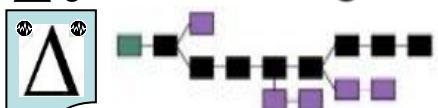


**ARIN**  
American Registry for Internet Numbers

# HYPER LEDGER OPEN SOURCE BLOCKCHAIN

Core APIs, & SDKs

$\Delta\delta$  Shared Ledger



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

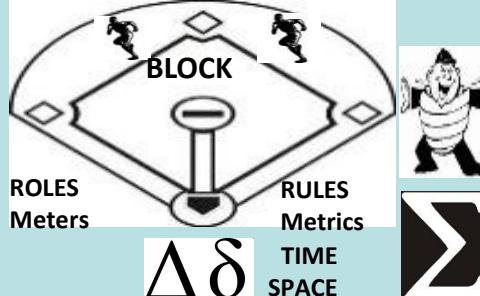
FEDERATION  
**Federation Gateway**

METRICS ("Organization ID")  
METERS

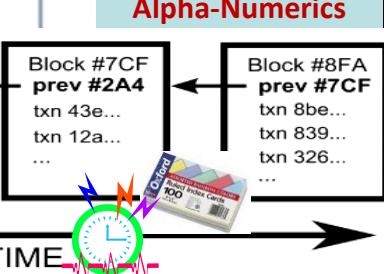
RESTFUL SYNC DELTA  
CHANGE MANAGEMENT  
MICRO-MACRO CYCLE



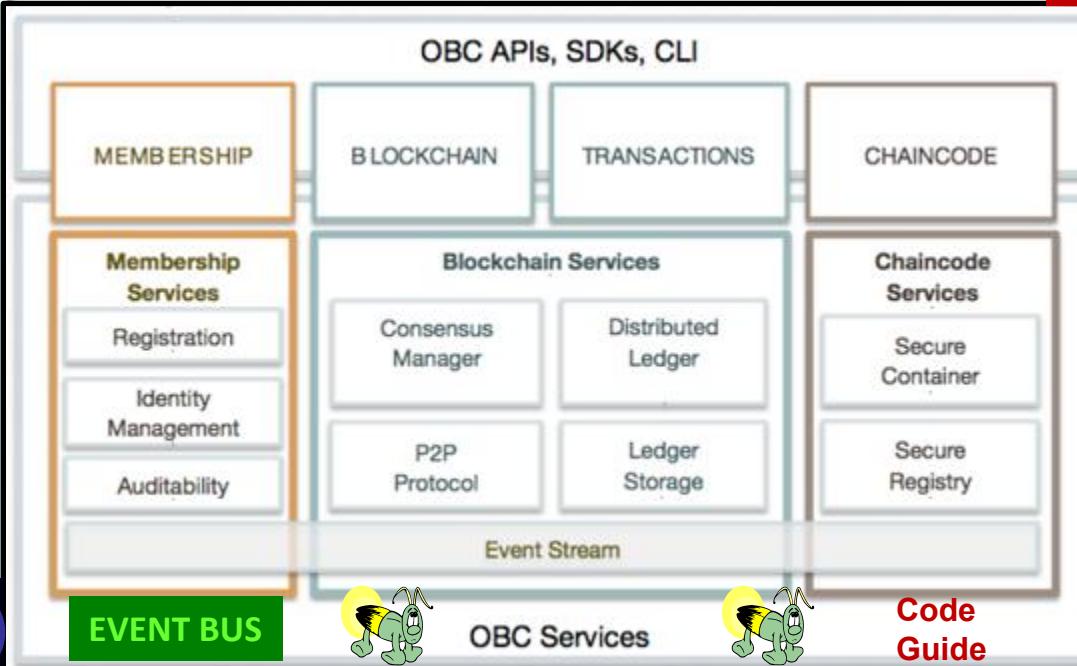
BLOCKTIME ARBITRAGE



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



Alpha-Numerics



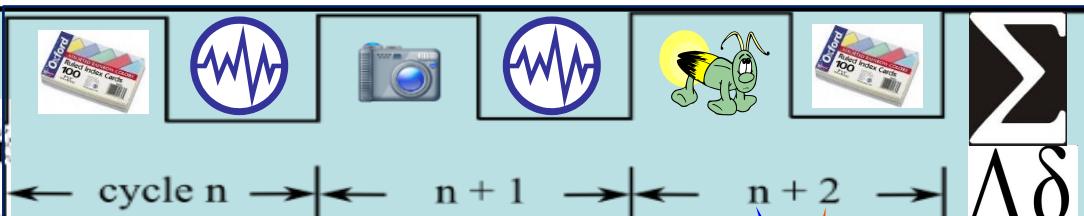
ROSETTA STONE

XBR / CDL / DAML  
STOCK MIC CODES

STRUCTURED  
MILITARY MESSAGE  
TEMPLATE FORMS  
LOGIC / FILTERS

SYNTAX  
SYMBOL LIBRARY

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



MICRO-MACRO CYCLE SCHEDULE



FFIRNS  
FFUDNS

HYPER LEDGER USES  
JSON ("tag") / YAML  
Text indentation –  
UNIVERSAL LANGUAGE  
= ALPHA-NUMERICS

# DASH



"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"

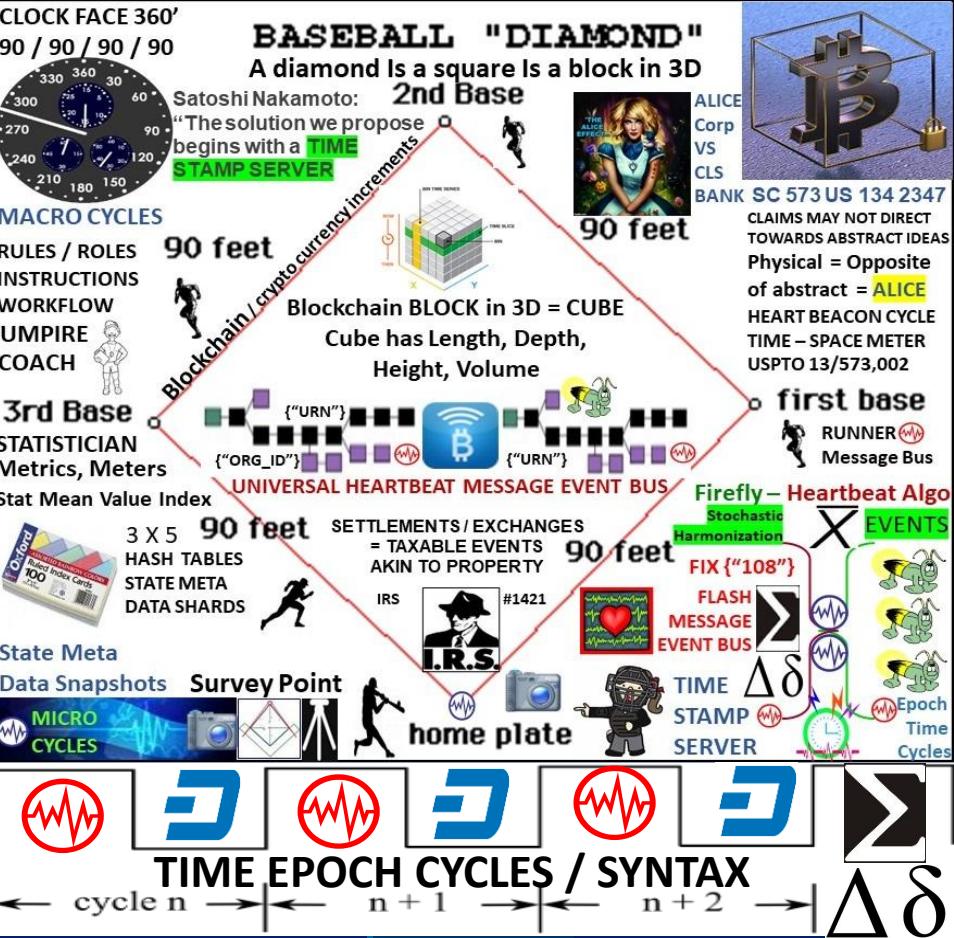
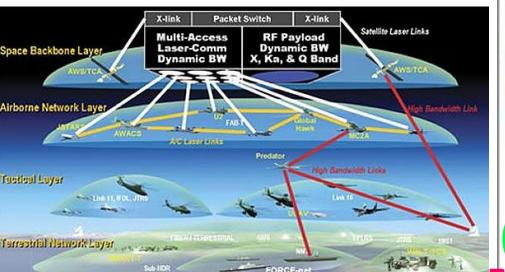
**InstantX:** To solve the problem of lag time in transactions, Masternodes are able to instantly lock transactions. They receive payments for their service to the network.

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

NETWORK CENTRIC WARFARE  
Developing and Leveraging Information Superiority



[dreamtime.com](http://dreamtime.com)



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.**



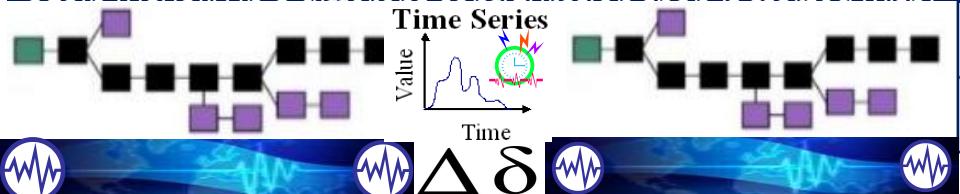
**1. Part of the blockchain state is locked via multisignature or smart contract convention, so that a specific set of participants must completely agree with each other to update it.**



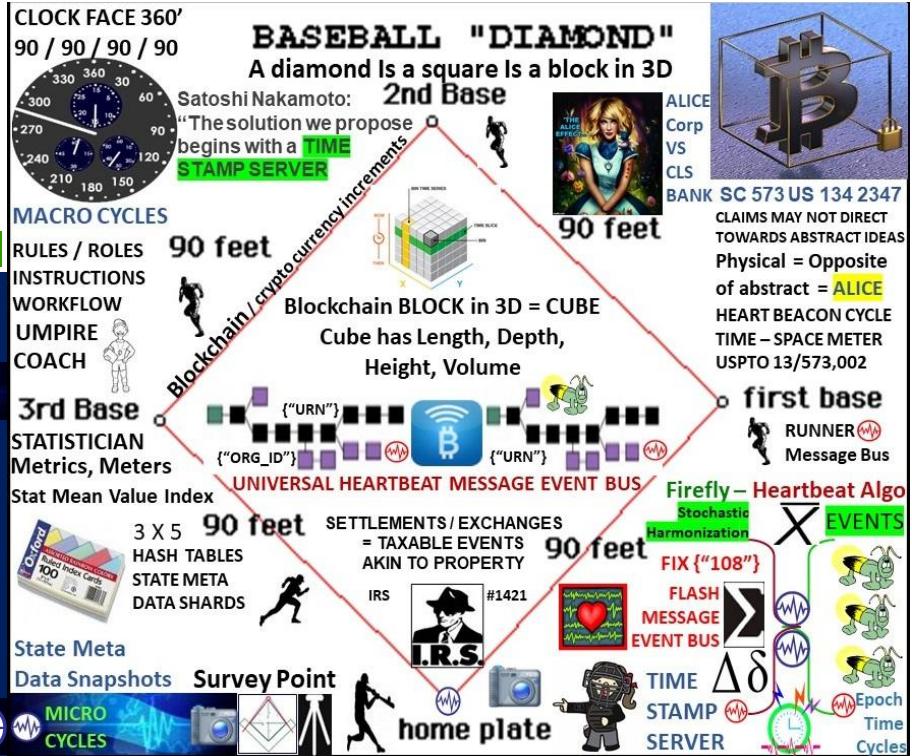
**2. Participants update the state amongst themselves** by constructing and signing transactions that *could* be submitted to the blockchain, but instead are ~~submitted to the blockchain~~  new update "trumps" previous up-



**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 updating later.



FLASH HEARTB

## HEARTBEAT STATE META-DATA

## **SNAPSHOTS EVERY**

10 N MIN MICRO TO

#### **MACRO ECON CYCLE**

#### **MACRO ECON CYCLE**

# HASH TABLES

STATE

STATE  
SNAPS

## SNAPS

卷之三

10 of 10

1

A cartoon illustration of a bee with yellow stripes on its body and two long antennae. It is positioned next to several stylized lightning bolts in blue, orange, and purple colors.

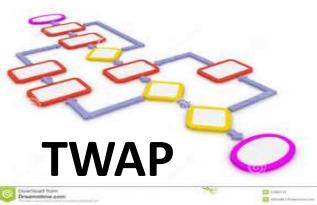
www.english-test.net

A green cartoon character with a red heart and a red ECG line.

**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

**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



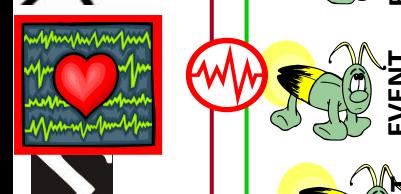
VWAP is price multiplied by number of bitcoins traded, then divided by the total number of bitcoins traded during a time period. The time-weighted average price algorithm is matched to closest HB



STATE META  
DATA SNAPSHOTS



EVENT



STATE SAMPLE

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..



## 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

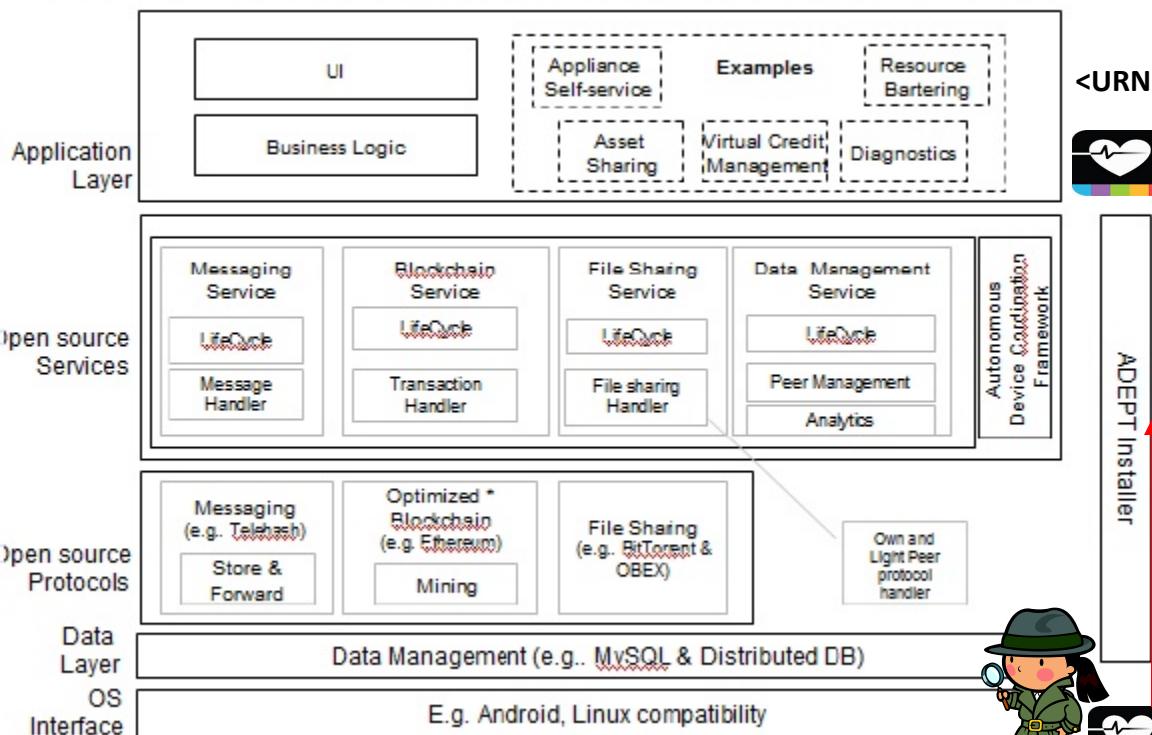
Temporal proximity

Agreements

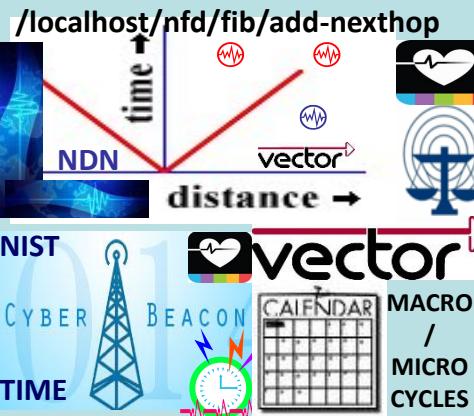
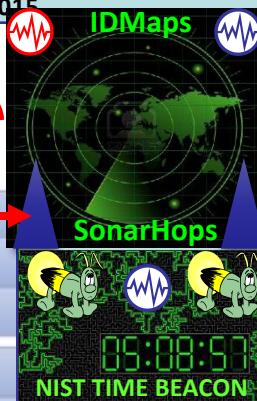
Payments

Barter

## ADEPT Standard Peer Architecture – Logical View



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

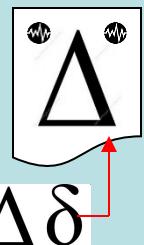


PAYMENTS BASED ON GEO-SPATIAL TEMPORAL METRICS / METERS  
<URN> DESCRIBES COMMODITIES ETC BY UNIFORM RESOURCE NAME BY </INTEREST>>



ASSET SHARING WITHIN FEDERATION

BUSINESS LOGIC = WORKFLOW <XML\_Wf>



FILE SHARING = CYCLIC SYNC DELTA LEDGER / DOCUMENT REFRESH

OPEN SOURCE = HBC = PROTOCOL AGNOSTIC  
DATA LAYER: STATE META DATA TIME STAMPED BY <UUID><ORG\_ID><URN> & DATA PREPPED & "DATA WRANGLLED PRIOR TO FUSION CENTER ENHANCED ANALYTICS / PROTECTS BANDWIDTH



**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

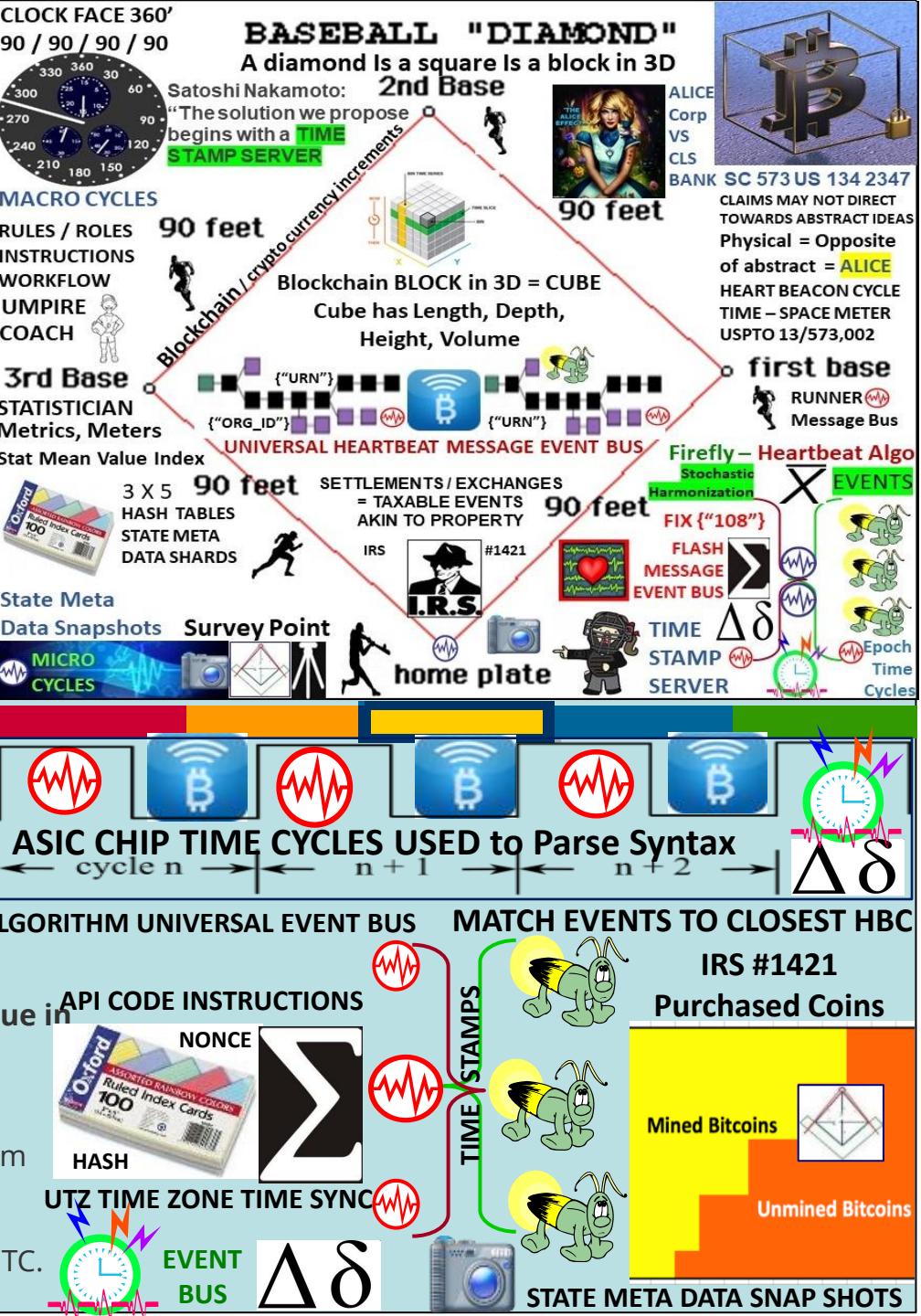
**Get by: Block-height, Time-stamp or Transaction**

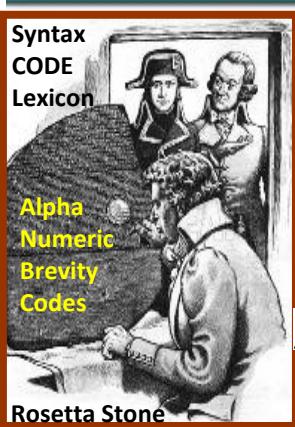
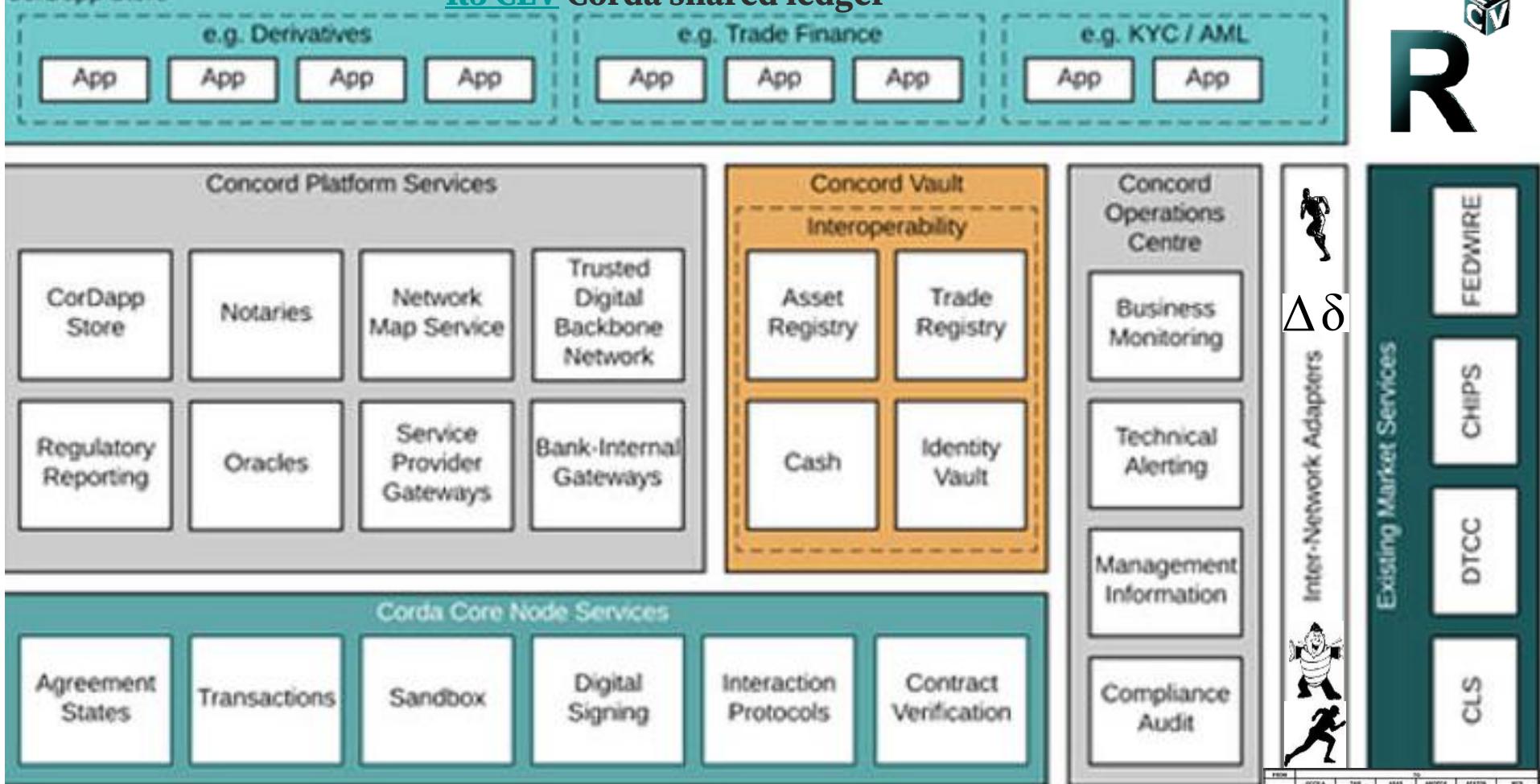
**Transaction ID, Block ID, time-stamp, BWAP per block, Value in USD. BTC per transaction, bitcoin transaction fees per transaction.**

## 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

11.8 - Kinematics	
11.8.1 - Acceleration	
11.8.2 - Angular	
11.8.3 - Linear	
11.8.4 - Estimated	
11.8.5 - Predicted	
11.8.6 - Smoothed Data	
11.8.7 - Position	
11.8.8 - Bearing Angle	
11.8.9 - Horizontal	
11.8.10 - Vertical	
11.8.11 - Vertical	
11.8.12 - Covariance Matrix	
11.8.13 - Covariance Type	
11.8.14 - Covariance Rate	
11.8.15 - Covariance	

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



XBRIL / CDE / DAML  
STOCK MIC CODES

STRUCTURED  
MILITARY MESSAGE  
TEMPLATE FORMS  
LOGIC / FILTERS



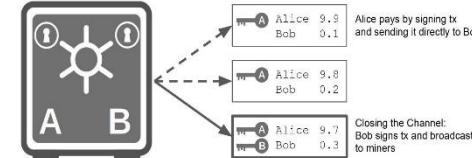
300+  
Use Case Templates



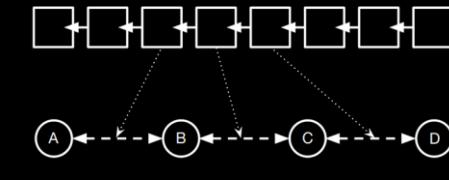
## transactions sent over / off chain micropayment channels

### Micropayment Channels

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



## LIGHTNING



Millions of Transactions. Milliseconds of Delay.

## 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



3 X 5  
HASH TABLES  
STATE META  
DATA SHARDS

State Meta

Data Snapshots

Survey Point

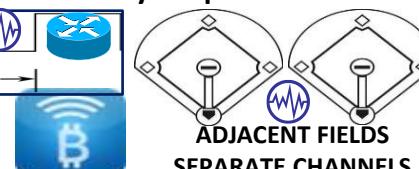
MICRO  
CYCLES

home plate

time stamp server

epoch time cycles

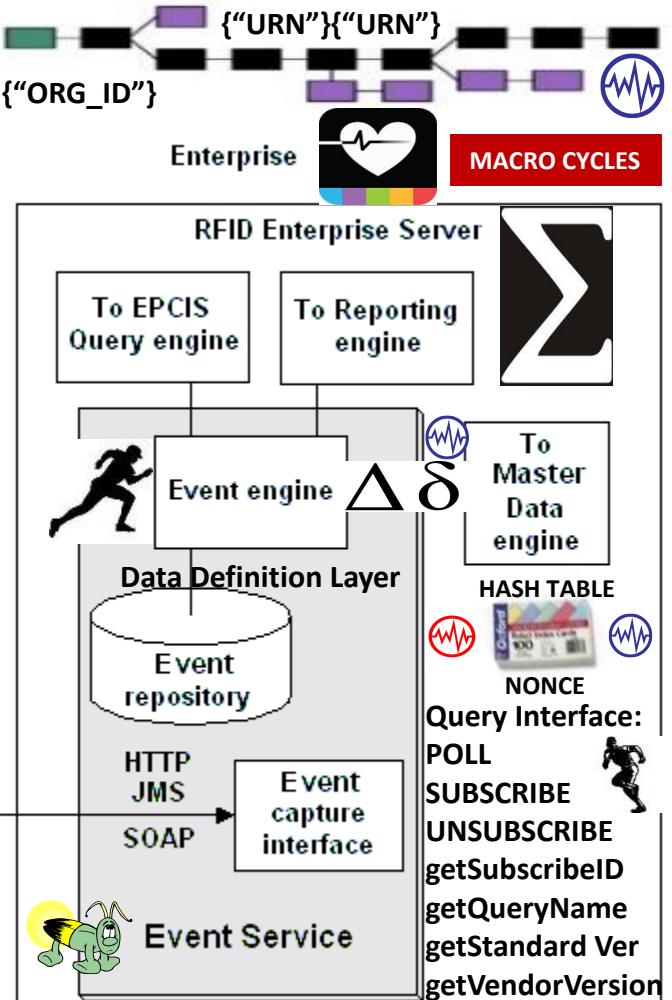
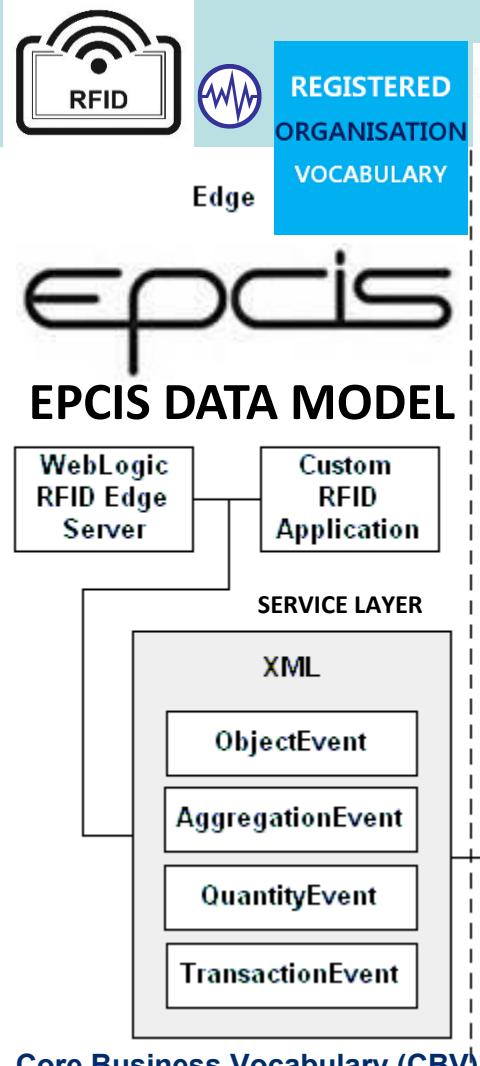
Server nodes, miners  
only keep recent blocks



## Segregated witness = Separated signatures

- signatures are cryptographic proofs also known as witnesses
  - moving signatures out of transactions
  - keeping a separate repository of the signatures
  - making them optional in propagation and storage
  - signature are the biggest part of transactions
  - can be implemented as a soft-fork vs a hard-fork

**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**

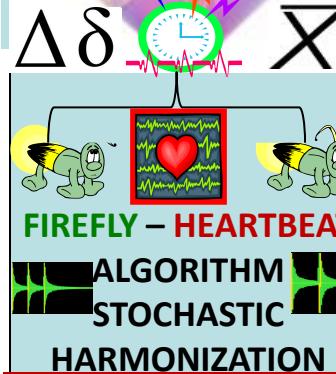
**Why** Information about the business context, including:  
**a Identifier that indicates the business step taking place**



**CLOSER IS CHEAPER**



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**

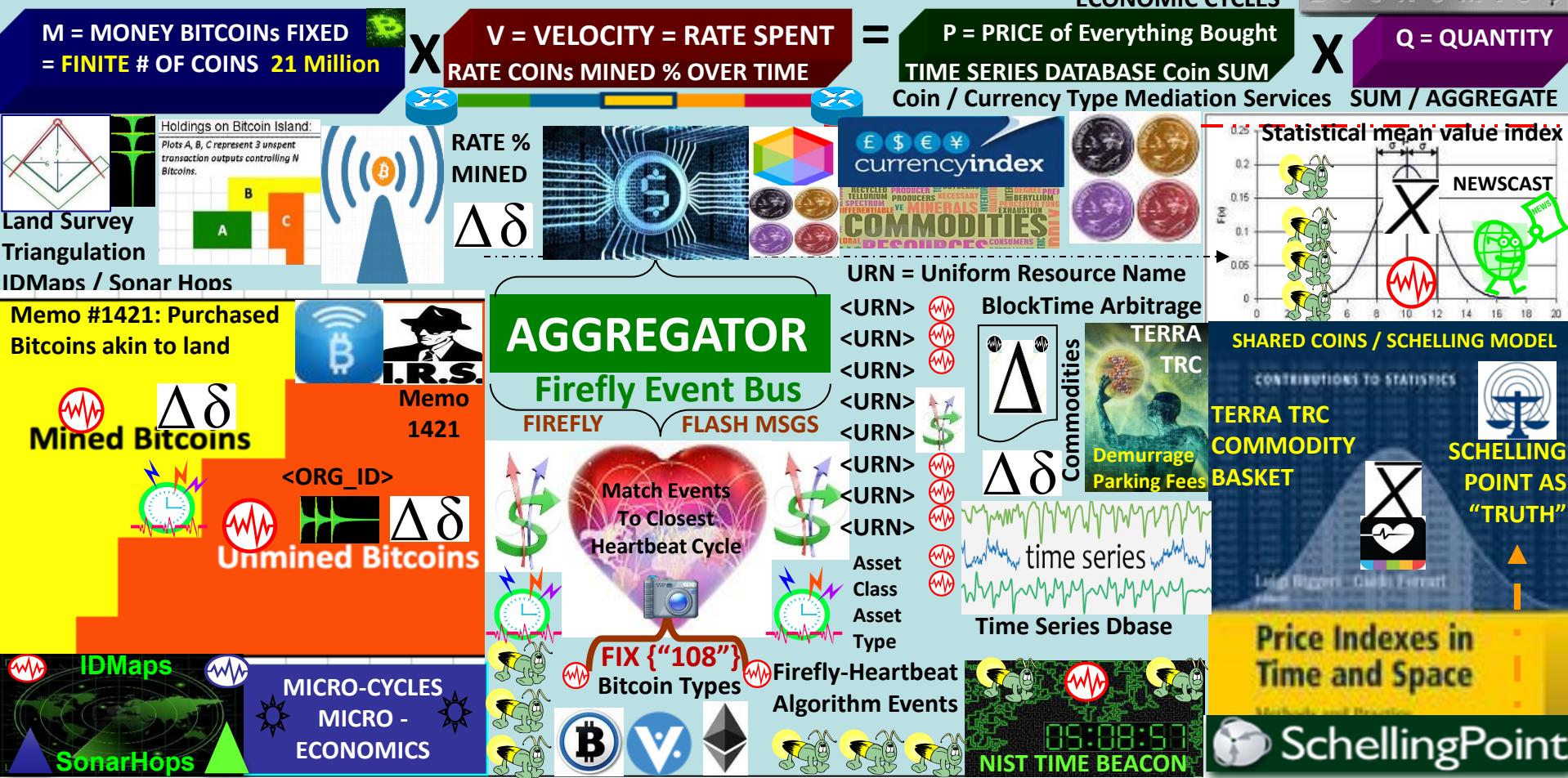
# !st Compiler DESIGN Still the **BEST**



# 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

### 4 MAIN WAYS TO DRIVE ENGAGEMENT



#### ACCELERATED FEEDBACK CYCLES



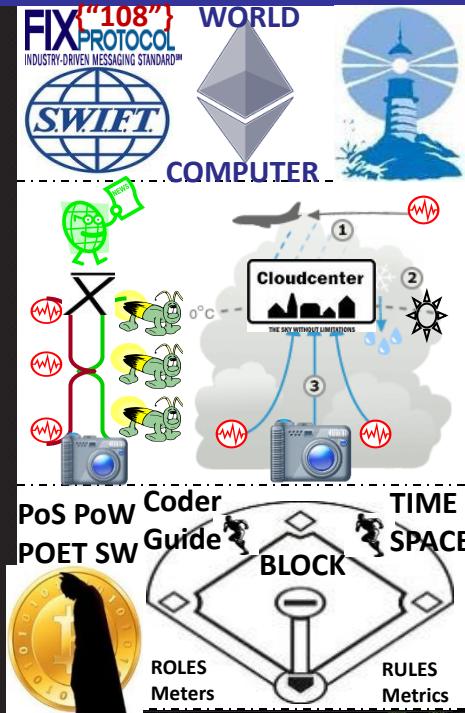
#### CLEAR GOALS AND RULES OF PLAY



#### A COMPELLING NARRATIVE



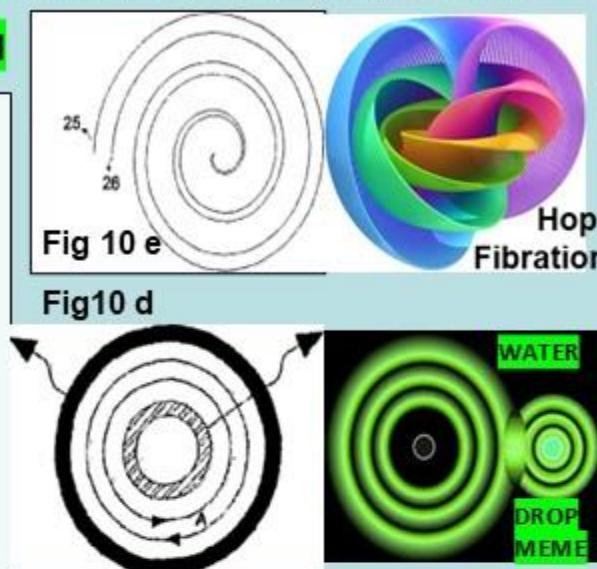
#### CHALLENGING BUT ACHIEVABLE TASKS





## 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



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.



Paul Revere = Linear, Sequential meme





# TESLA Harmonic Sphere Flux Resonator

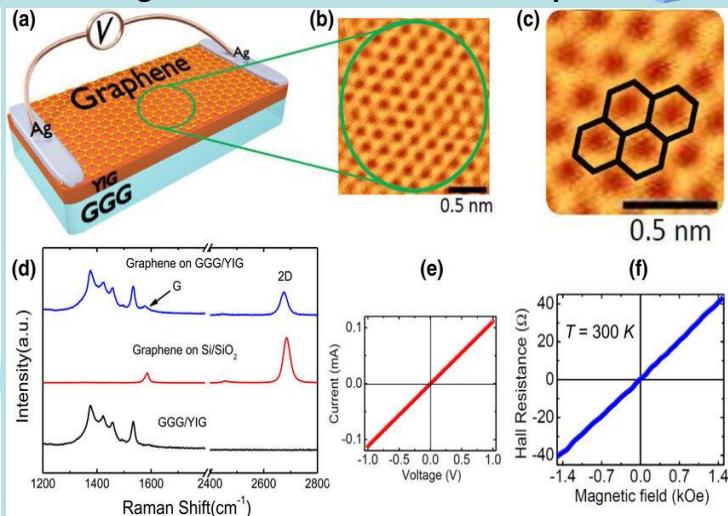
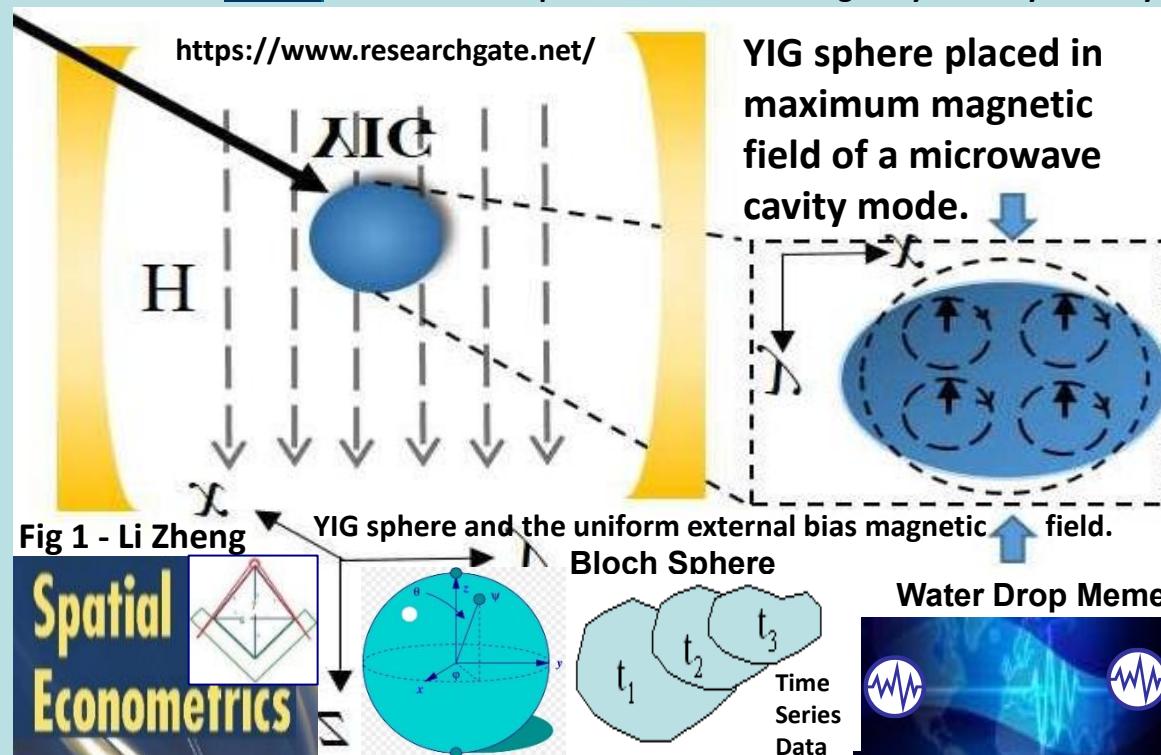
ENERGY / DATA

**"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]



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  $X$

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



USPTO 13/573,002 Time – Space Meter  Metrics

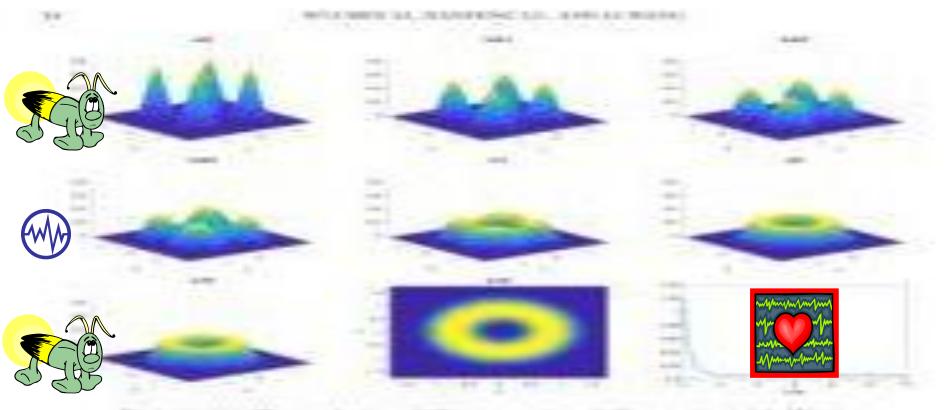
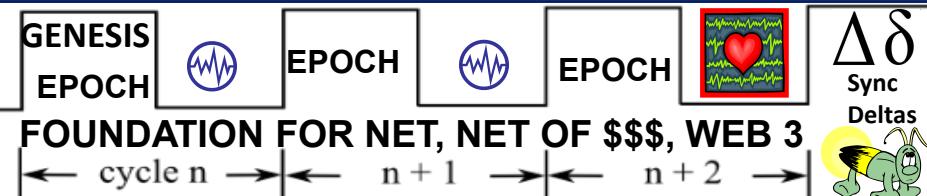


FIGURE 3.6. The resolution of 100 superposition trials equations with  $H(x,t) = \sum_{j=1}^J H_j(x,t)$  and  $\delta(t) = -\frac{1}{2}\ln(\epsilon(t))$ . The steady state is a saddle point with linear small-signal gain  $H_{11} = \frac{1}{2}$ ,  $H_{22} = -\frac{1}{2}$ . Our computation domain is  $[-1.5, 2.0]^2$ , and mesh size is  $\Delta x = \Delta y = 0.1$ ,  $N = 61$ . Discretization parameter is  $10^{10} = 3.23 \times 10^{-7}$ , and  $\beta = 100$  is used for representing the boundary.

$$B_{\text{eff}} := \nabla \times \left[ \rho \nabla \left( \frac{1}{2} B^2 \Omega_\phi(r) + \Phi(r) \right) \right]$$

width,  $\delta V_{\text{eff}} = 10^7$ , and initial conditions consisting of four Gaussian,  $\delta n$  (in this case, we do not want a regularization until  $\delta n$  becomes de-convolved smoothly). As shown in Fig. 12, the density distributions in the regularizations pass  $\rightarrow \frac{\delta n}{\delta V_{\text{eff}}} = \frac{10^7}{10^7} = 1$ , very rapidly. As the final smooth state passes, we also compute value of the stored  $\delta n$  (de-convolved via our method) with the exact equilibrium and observe a good match.



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



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.

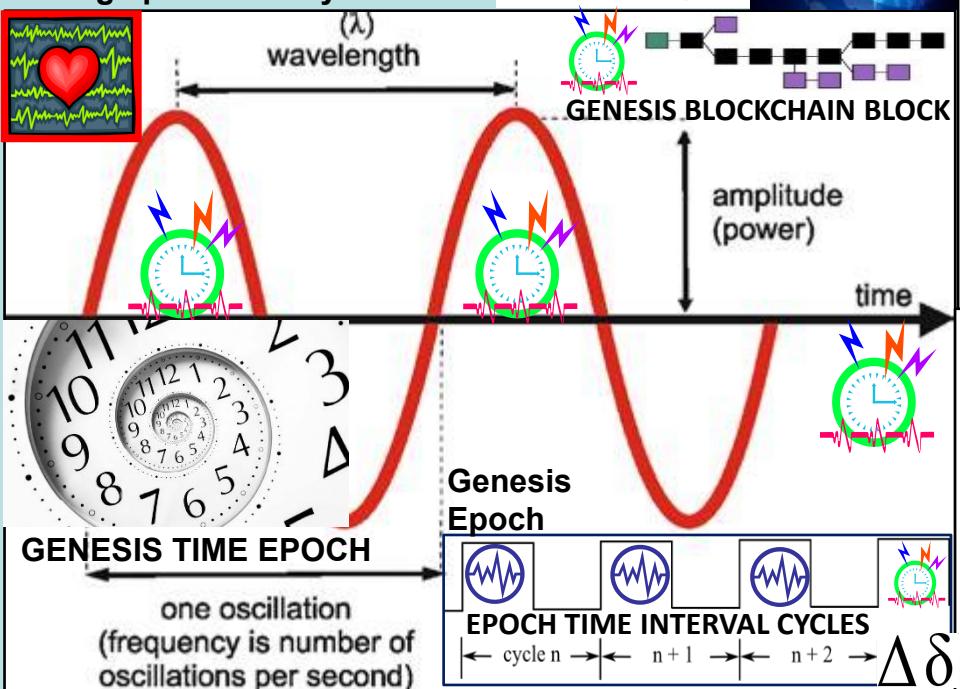
THESES: All things net, net of programmable \$\$\$ are formed using:

## ENERGY / DATA WAVE METRICS / METERS

## BELL STATE QUANTUM COMPUTING

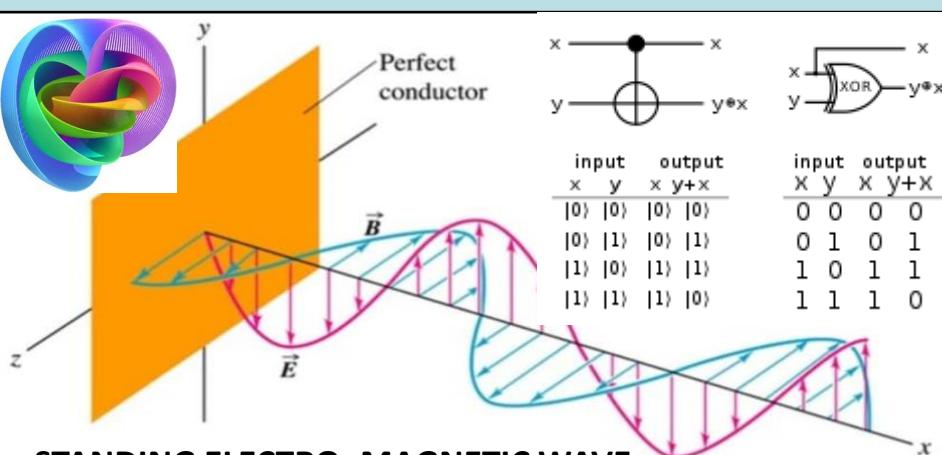
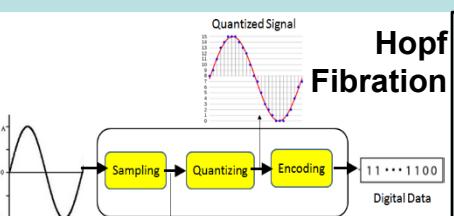
1) Time epochs created by quartz crystal silicon chips

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



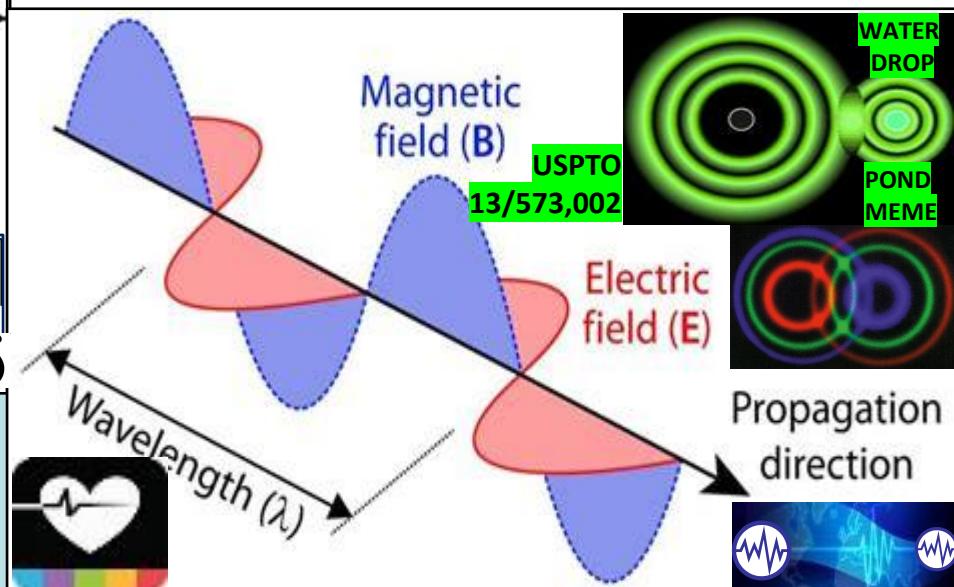
Quantum Computing Vibrations encode, process data like quantum computers. A simple mechanical system built from aluminum rods uses vibrations to encode information, mimicking quantum computing in a non-quantum system. "Light is made from photons, the quantum of light. mechanical vibrations or sound waves 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)



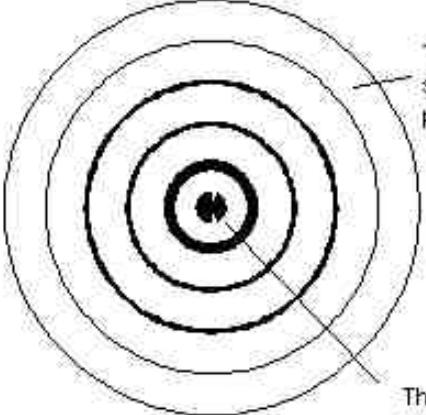
### STANDING ELECTRO- MAGNETIC WAVE

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/>



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.  $x^2 + y^2 + z^2 = r^2$

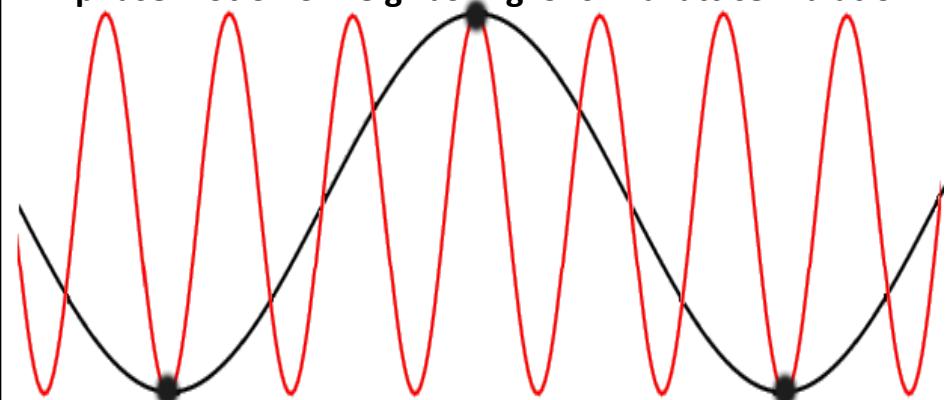


"Simplicity is the ultimate sophistication".  
(Leonardo da Vinci)

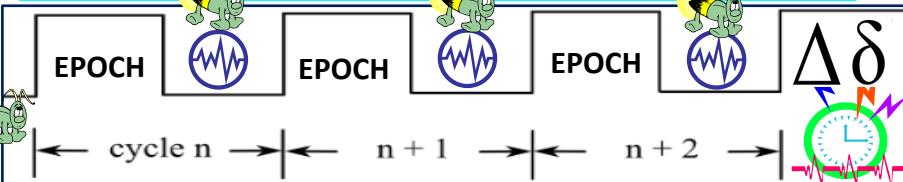
# ACOUSTIC PHONON

USPTO 13/573,002

in-phase motion of neighboring ions in a lattice vibration

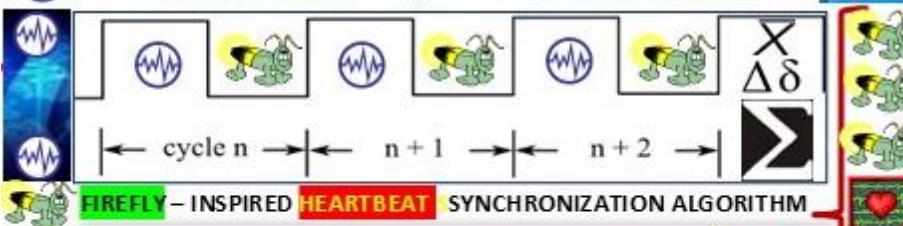
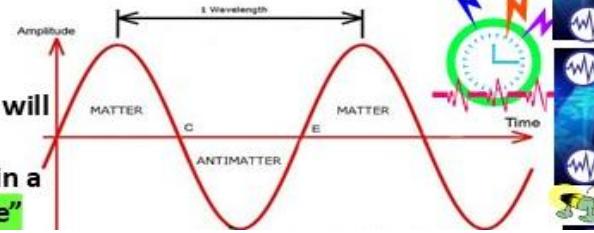


**Phonons:** A phonon is a quantum of the lattice vibration, the collective motion of atoms constituting a crystal. There are two types of phonons: optical and acoustic. The optical phonon has high-frequency oscillation in the THz range and the unit cell center of mass does not move. It undergoes a dipole 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

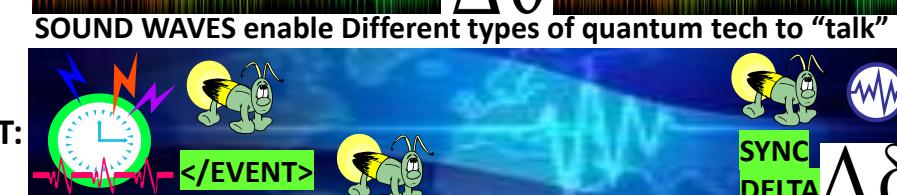
"Similarly, the electromagnetic force will also be found to vary continuously and retain a TIME-AVERAGED value"



FIREFLY - INSPIRED HEARTBEAT SYNCHRONIZATION ALGORITHM

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

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

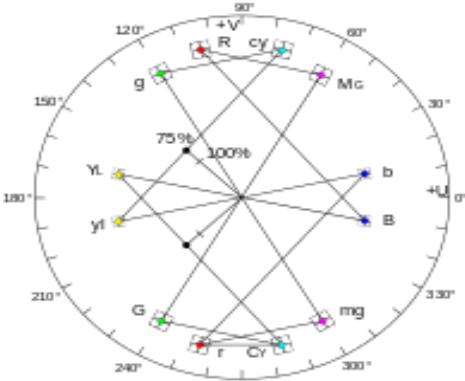
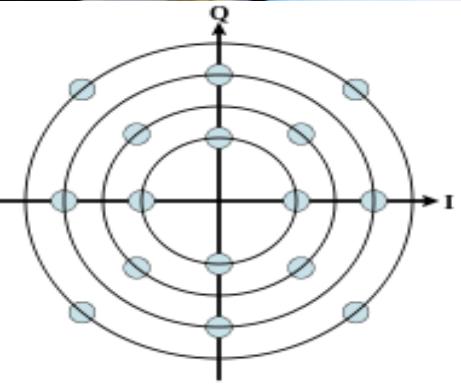


</EVENT>

SYNC DELTA  $\Delta\delta$



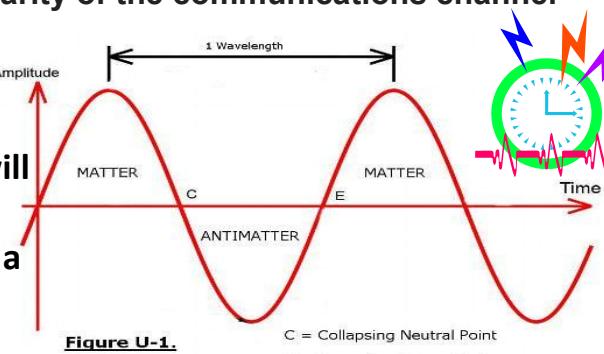
[www.RLighthouse.com](http://www.RLighthouse.com)



## 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”



**Figure U-1.**

E = Expanding Neutral Point



USPTO 13/573.002

[sawconcepts.com/index](http://sawconcepts.com/index)

 IDMaps  
SonarHops

NDN

 IDMap  
SonarHQ

 IDMaps  
SonarHops

三

Page 10

BRNG 2

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

## TRIANGULATION

Two cartoon caterpillars with black and yellow stripes on their tails are shown from different angles.

vector

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

← cycle n    →    n + 1    →    n + 2    →

 WPS OFFICE - THE ULTIMATE PRODUCTIVITY SUITE

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



## 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)...

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.



**NIST RANDOMNESS BEACON:** broadcast full-entropy bit-strings in blocks of 512 bits every 60 seconds. Each value is time-stamped, signed, & includes hash of previous value to chain sequence of values together. This prevents all, even the source, from retroactively changing an output packet without being detected. The beacon keeps all output packets and makes them available online. 1st, Beacon-generated numbers cannot be predicted before they are published. 2nd, public, Beacon's time-bound, authenticated nature of the Beacon proves true random numbers not known before a certain point in time. 3rd, this proof can be presented offline at any point in the future



## NIST QUANTUM ENCRYPTION RANDOMIZATION BEACON

UNPREDICTABLE SAMPLING

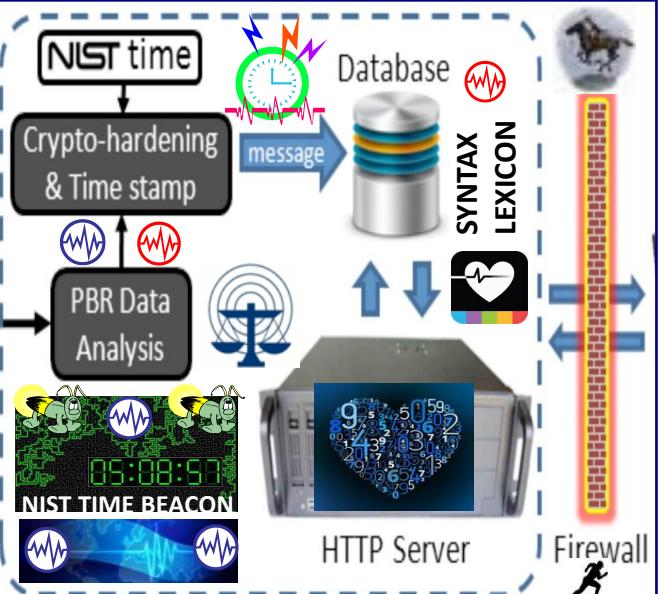
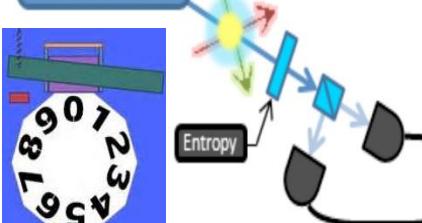
SECURE AUTHENTICATION

SECURE MULTI

PARTY /  
AUTHENTICATION

Entanglement  
Source

RANDOM  
NUMBER  
GENERATOR



**NIST**

**NON  
REPUDIATION**

Legend:  
 - App: software application  
 - DB: database  
 - Fw: firewall  
 - HSM: hardware security module  
 - RNG: random-number generator

## IDMaps Distance Estimation Service

SonarHops



USPTO 13,573,002 Heart Beacon Cycle Geo-spatial, temporal Intensity

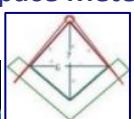
Metrics and Time - Space Meter uses PHYSICAL Memes / Metaphors

**NAMED DATA  
NETWORKING**

Time / Distance Metrics



PROXIMITY



OFFSHORE BEACONS ONSHORE

NDN  
</Interest>  
</Distance>

NDN  
SURVEY METHODS  
+ TRIANGULATION  
Euclidian Geometry  
Geodesic System Routing Info Base RIB

ACCOUNT BELONGS TO </Org\_ID>

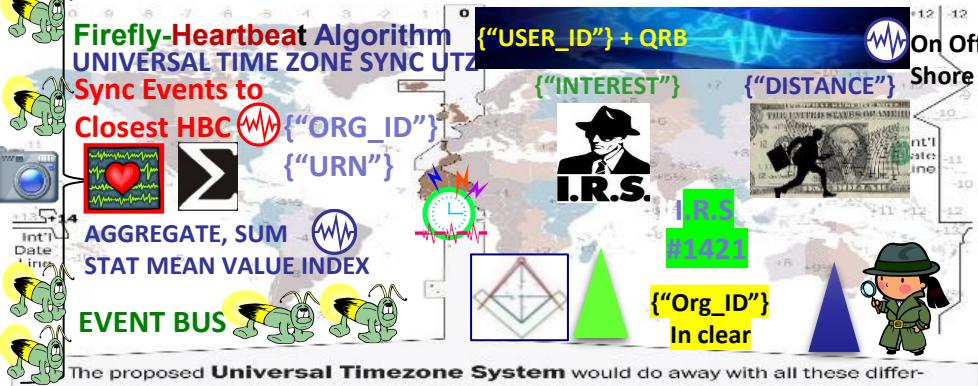
RESOURCE TYPE: <URN><URN><URN>

DEVICE / SENSORS <UUID><UUID>

Higher-level services collect distance data to build virtual distance map State Snap Shots

NDN  
</interest></distance>

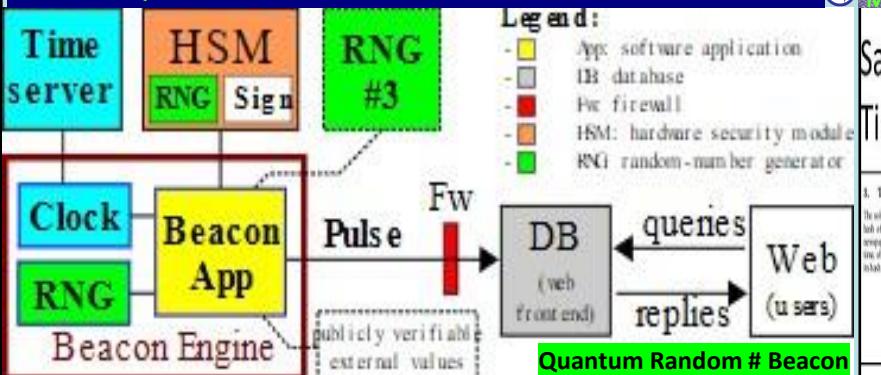
The current standard time common throughout the world is based on a 24-hour clock, with zones that are either 12 hours ahead or behind Coordinated Universal Time (UTC). However, these time zones are decided upon by individual governments, without overall coordination and can even extend fourteen hours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



The proposed Universal Timezone System would do away with all these different

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"

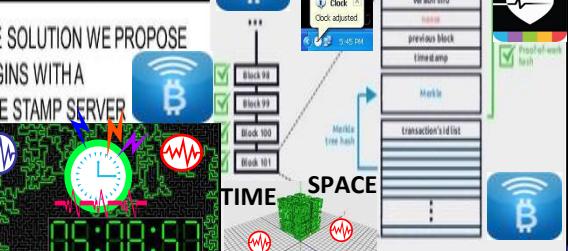
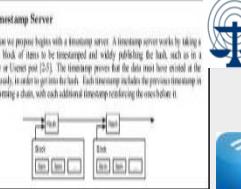


## QubitCoin Interval: Every 30 Seconds

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



## Satoshi Bitcoin Blockchain Time Stamp Server



The previous block's hash and timestamp are included in the current block's Merkle root, which is included in the block's Merkle tree. This is how a chain of blocks is formed.

The previous block's hash and timestamp are included in the current block's Merkle root, which is included in the block's Merkle tree.



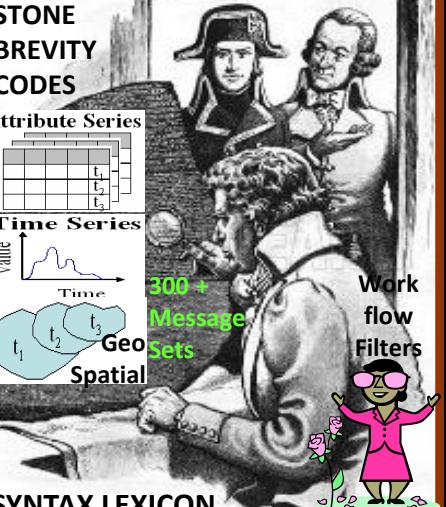
**Firefly - Heartbeat Sync Algorithm**  
**Heartbeat Event Message Bus**  
**UTZ stochastic harmonization**

## Epoch Time Cycles

E0 E1 E2 E3...



**ROSETTA**  
**STONE**  
**BREVITY**  
**CODES**

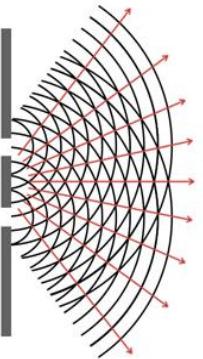


# Double-Slit Experiment

Screen with two slits

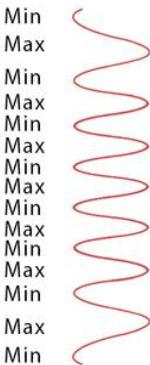
**PARTICLE ?**

Sodium lamp



Screen

**WAVE ?**



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

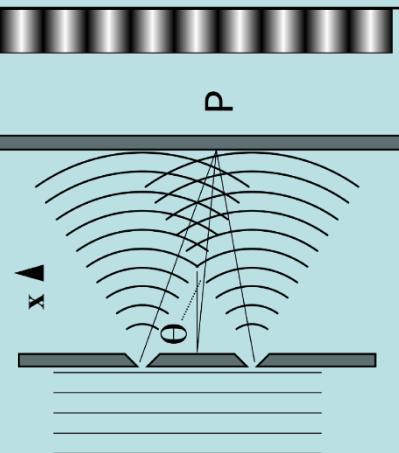
Interference of light waves due to two tiny slits and arrows indicate direction of wave propagation

Alternating bright and dark fringes due to interference of light waves

Intensity of the fringes shows the maxima and minima

Science Facts

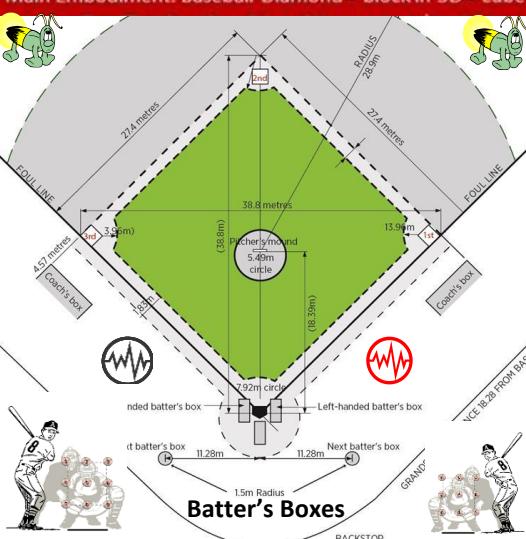
**QUANTUM COMPUTING - RESISTANT ? - BASED ? THROUGH LENS OF SCOTUS ALICE LOOKING GLASS RULING**



**USPTO APPLICATION 13/573 002**

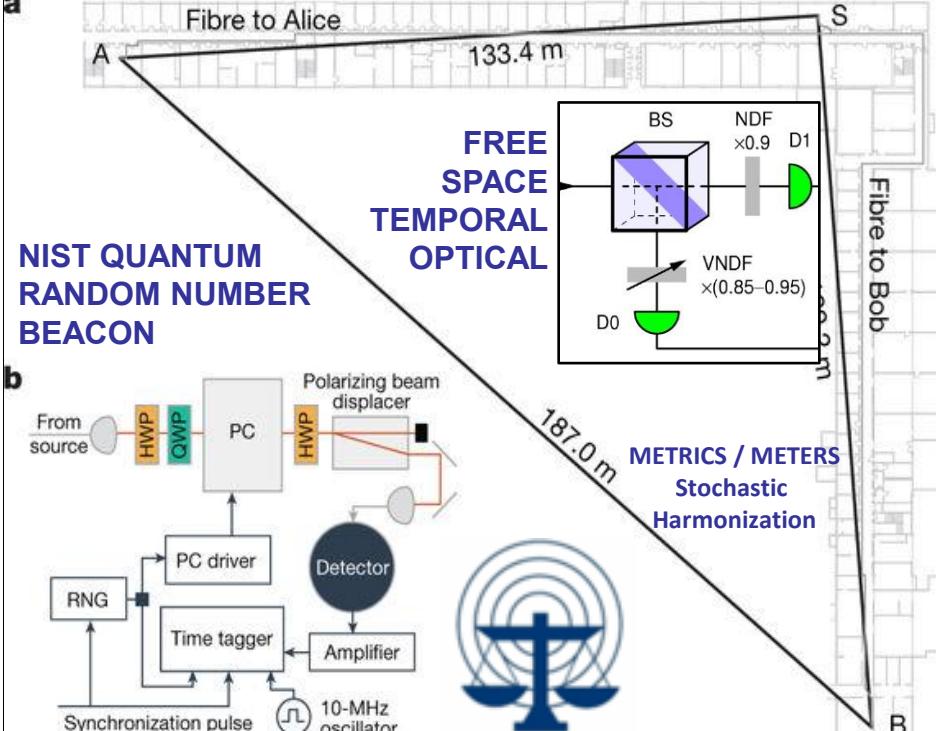
The Heart Beacon Cycle Time-Space Meter

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



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

a



CLOCK FACE 360°  
90 / 90 / 90 / 90



**MACRO CYCLES**

**RULES / ROLES**  
**INSTRUCTIONS**  
**WORKFLOW**  
**UMPIRE**  
**COACH**

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

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

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

**3rd Base**  
**STATISTICIAN**  
Metrics, Meters  
Stat Mean Value Index

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

**90 feet**  
IRS #1421

**90 feet**  
Fix {"108"}  
FLASH MESSAGE EVENT BUS

**90 feet**  
TIME STAMP SERVER

**90 feet**  
EVENTS

**90 feet**  
Firefly – Heartbeat Algo

**90 feet**  
X EVENTS

**90 feet**  
Epoch Time Cycles

**90 feet**  
MICRO CYCLES

**90 feet**  
TIME STAMP SERVER

**90 feet**  
I.R.S.

# The Hopf Fibration

Edmund Harriss

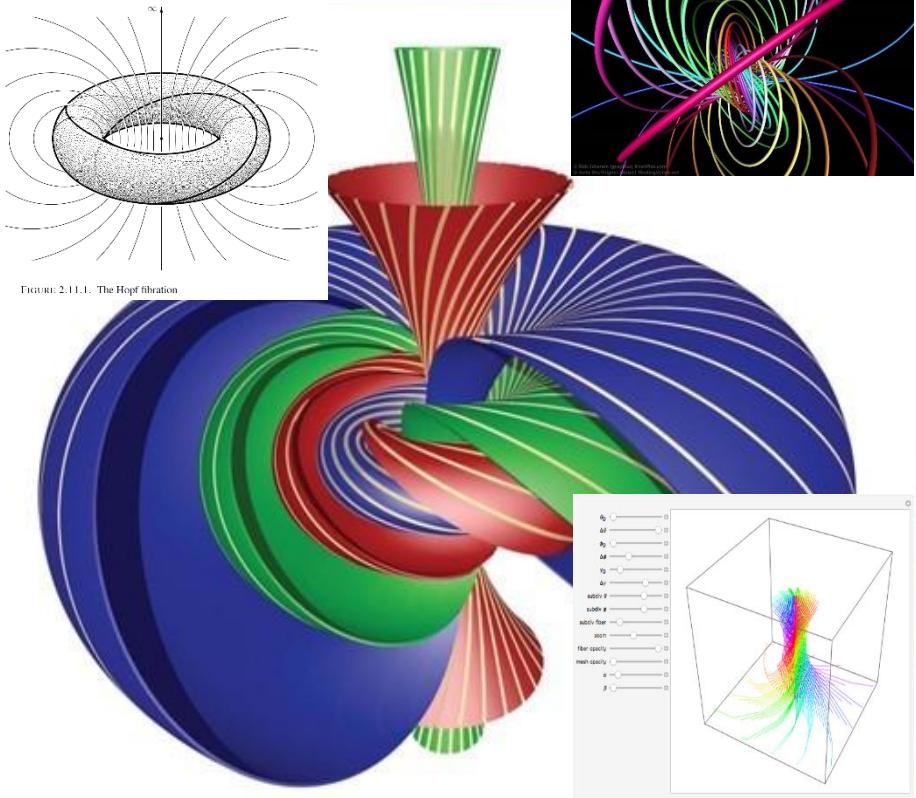
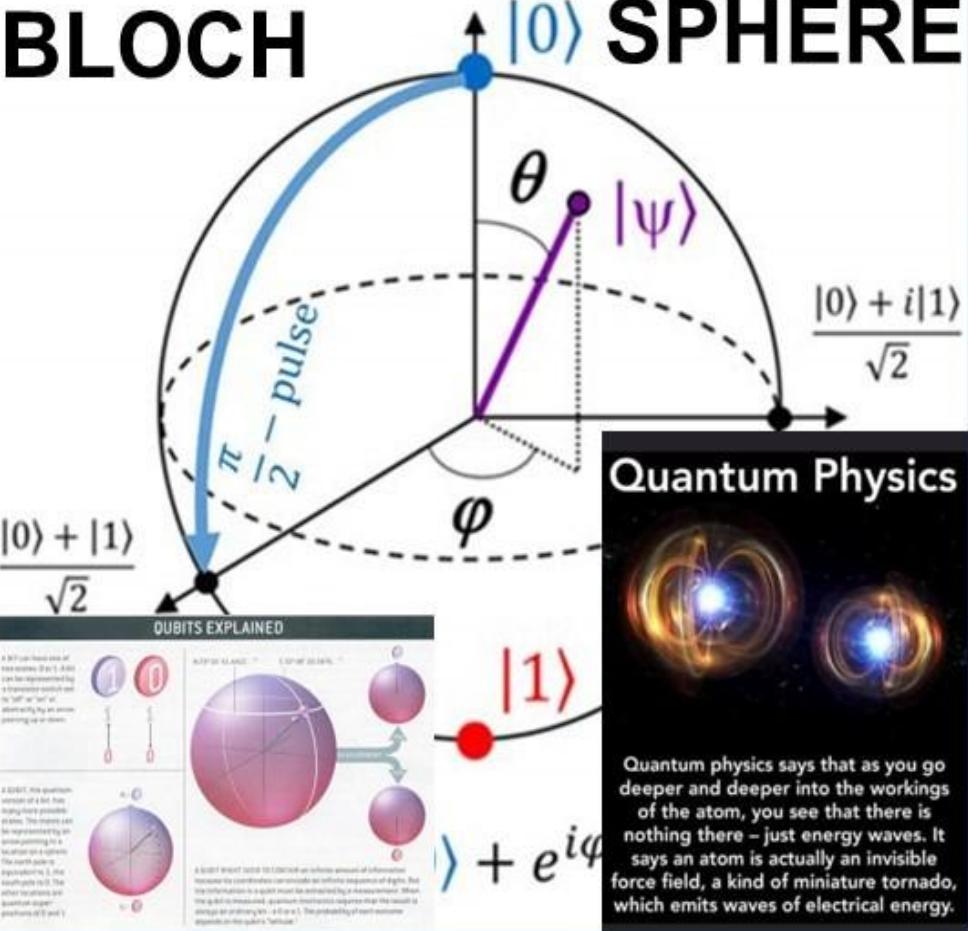


FIGURE 2.11.1. The Hopf fibration

# BLOCH SPHERE



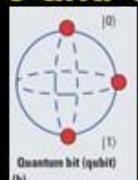
## Hopf Fibration / #Bloch sphere

"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

## *What Really Happened?*

**William A. Cook**



**TROLLS  
ARE DRAGGING  
DOWN AMERICAN  
INNOVATORS.**

**Stop patent trolls.  
Join The Alliance.**

Application Developers Alliance

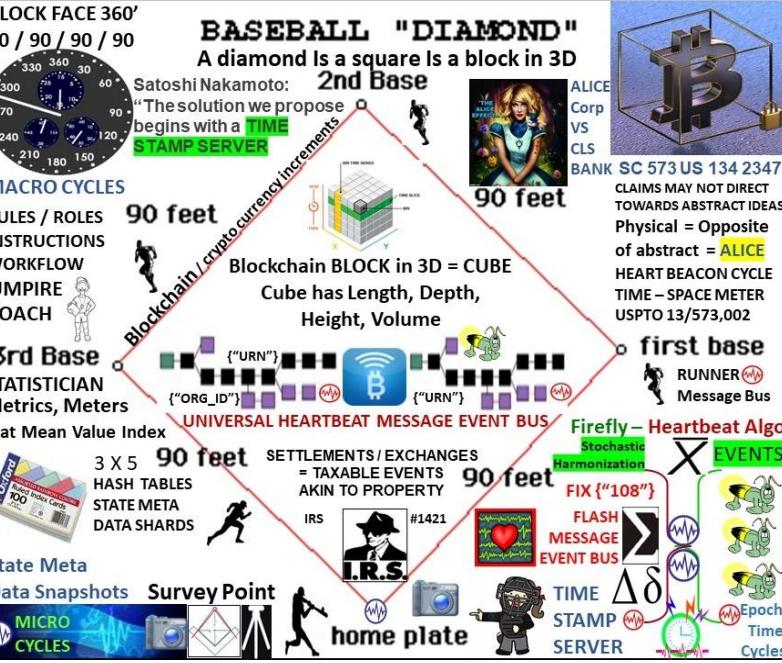


**RULING: “claims may not direct towards abstract ideas”**



# 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 





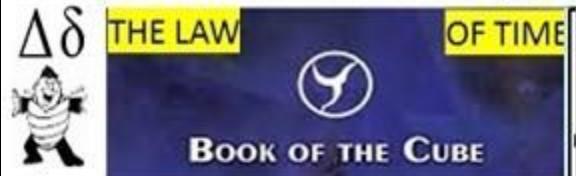
USPTO APPLICATION 13/573 002

## The Heart Beacon Cycle Time-Space Meter

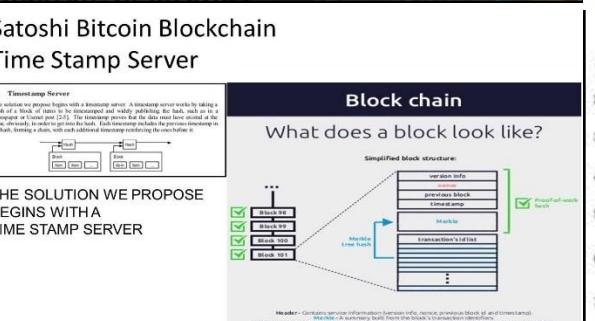
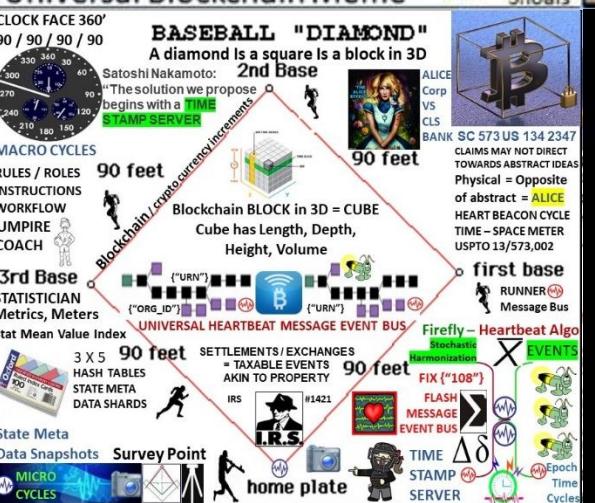
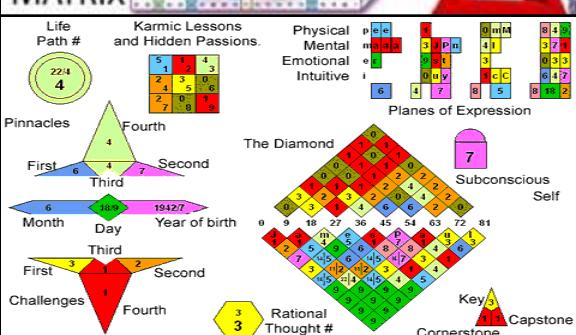
Main Embodiment: Baseball Diamond = block in 3D = cube

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

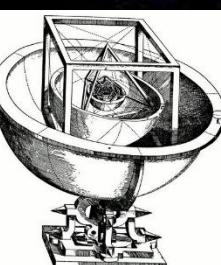
"We can synchronize ourselves in time for a common purpose" Universal Blockchain Meme



First  
Baseball  
Players  
Union  
Formed  
1870



## Metatron's Cube and the Platonic Solids



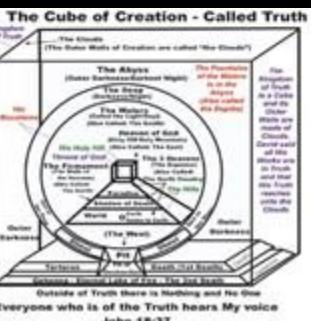
### GENESIS OF ALL FORM



### SEED OF LIFE



"In the beginning (of time) there was the word"





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

-Buckminster Fuller

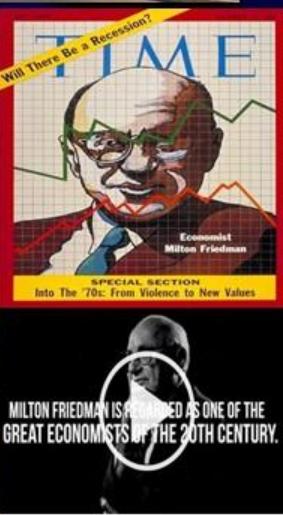


## THE GREAT CONJUNCTION IN AQUARIUS

**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

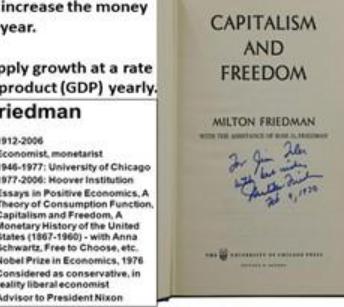
The K-Percent Rule was a proposal by economist Milton Friedman that the central bank should increase the money supply by a constant percentage every year.

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

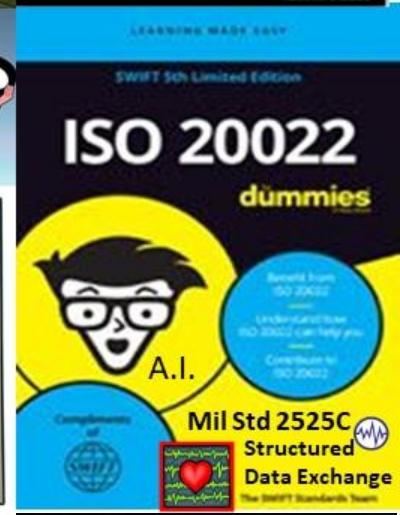
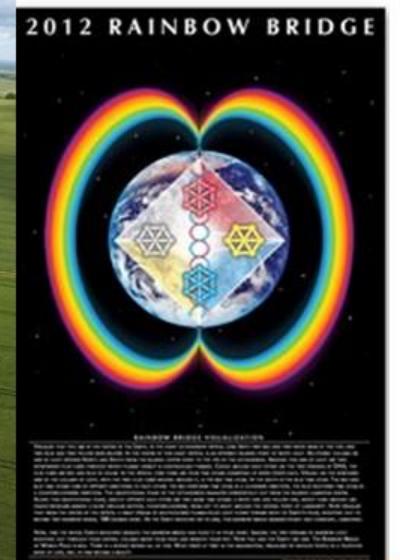


**Milton Friedman**

- 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, etc.
- Nobel Prize in Economics, 1976
- Considered as conservative, in reality liberal economist
- Advisor to President Nixon



Reverend K "I see Mr. Magoo"



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

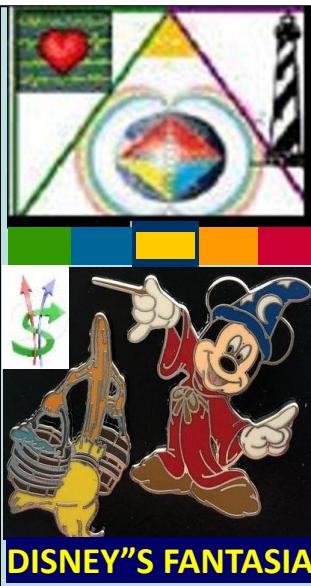
**Buckminster Fuller "build a new model that makes the old model obsolete"**

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

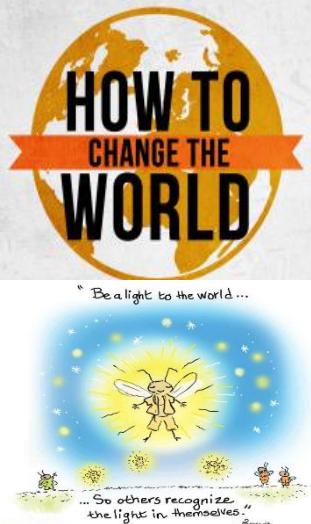
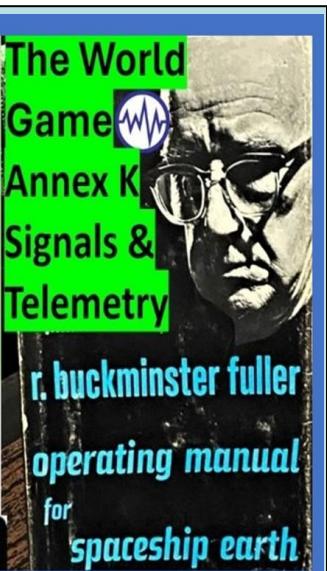
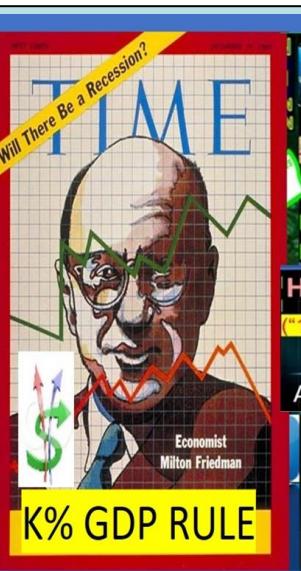
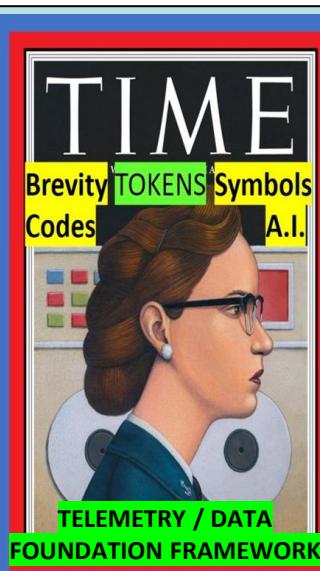
#algorithmic #stablecoin #buckminster #fuller #cryptocurrency #Milton #Friedman



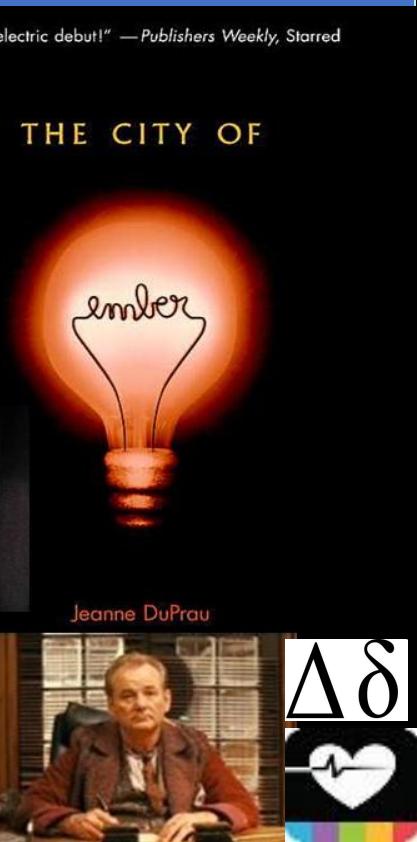
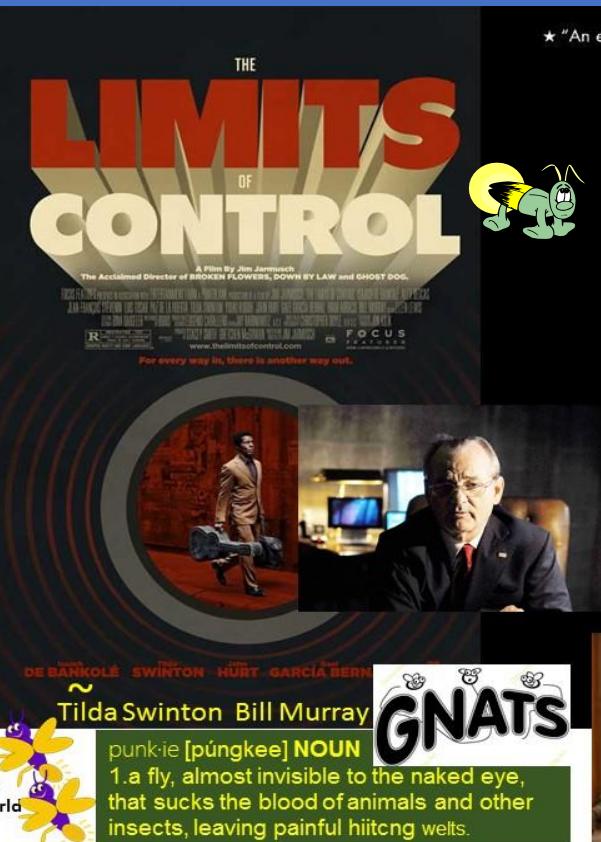
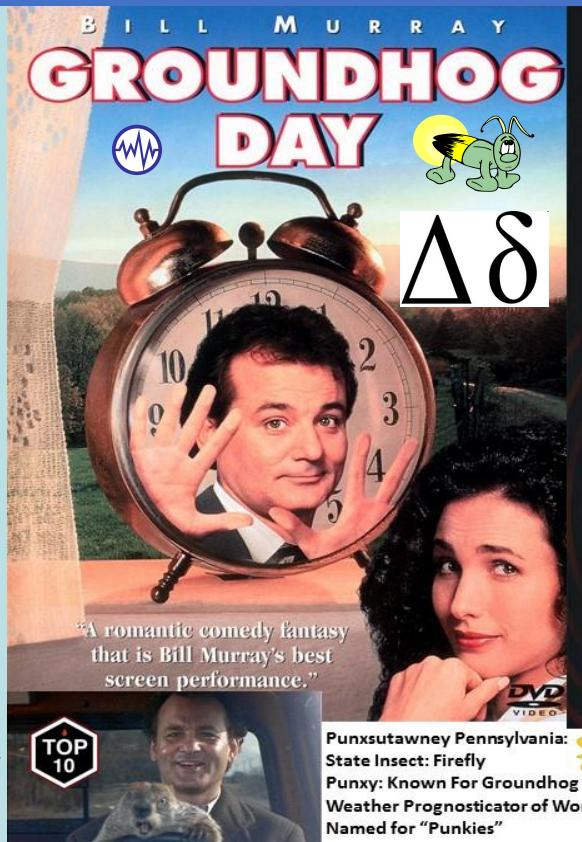


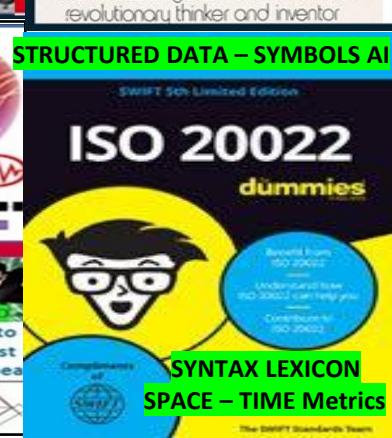
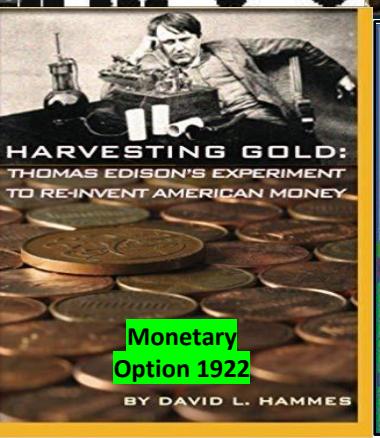
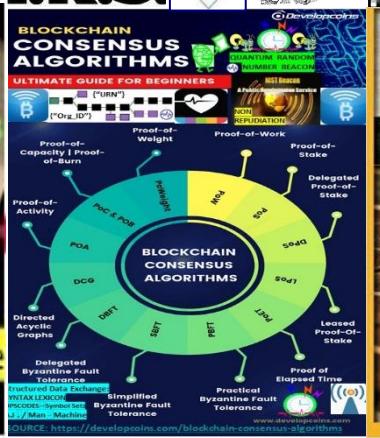
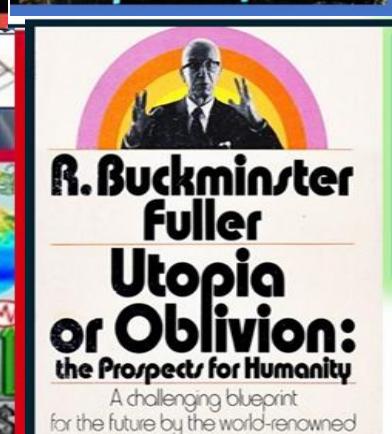
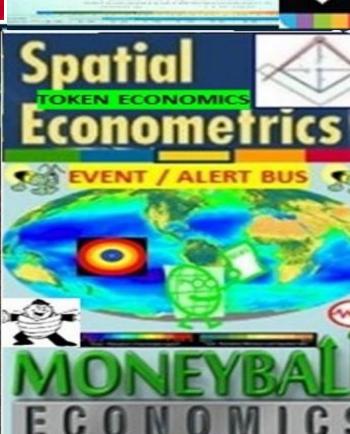
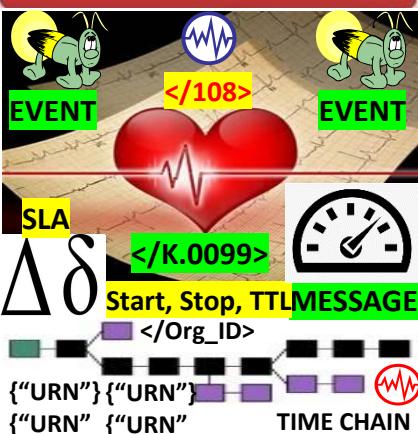
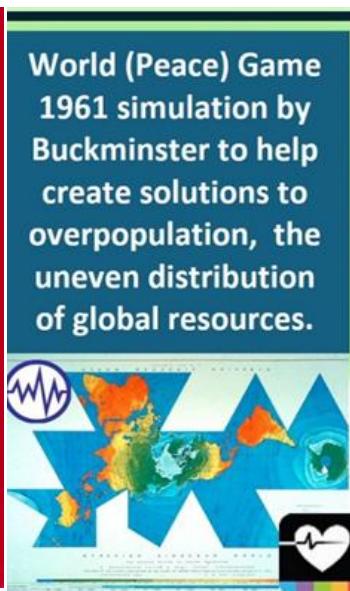
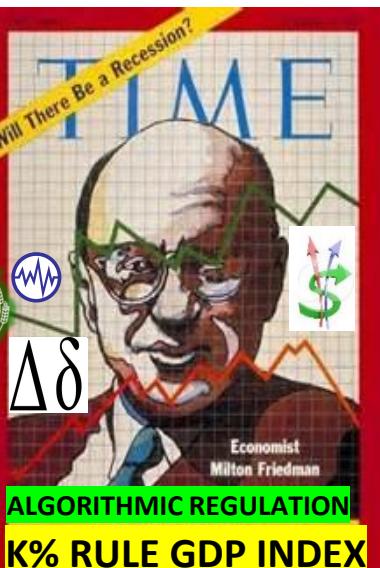
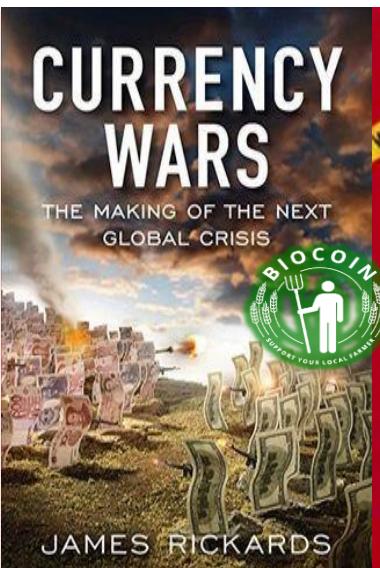


**DISNEY'S FANTASIA**



**UNIVERSAL LAW CAUSE / EFFECT ACTION / INACTION IF / Then / or.. ELSE**  
heart icon  
colorful bar  
lightning bolt icon  
clock icon







## R. Buckminster Fuller Utopia or Oblivion: the Prospects for Humanity

A challenging blueprint for the future by the world-renowned revolutionary thinker and inventor

**World (Peace) Game**  
1961 simulation by Buckminster to help create solutions to overpopulation, the uneven distribution of global resources.

**The World Game**  
Annex K  
Signals & Telemetry  
*r. buckminster fuller operating manual for spaceship earth*



**Spatial Econometrics**  
TOKEN ECONOMICS  
EVENT / ALERT BUS  
**MONEYBALL**  
ECONOMICS



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!

Feb 10, 1960 Aquarius / Aquarius Rising

**The Time Keeper**  
Borderlands 4

## Alice Corp. v. CLS Bank International

573 U.S. 134

S. Ct. 2347

2014



"Claims may not direct towards abstract ideas"

Bloomberg Law:

Crypto Lawsuit Deluge

Has Big Firms Scrambling to Keep Up

USPTO 13/573,002  
Filed 2012

