



UTOPIA ?  $\Delta\delta$  OBLIVION ?

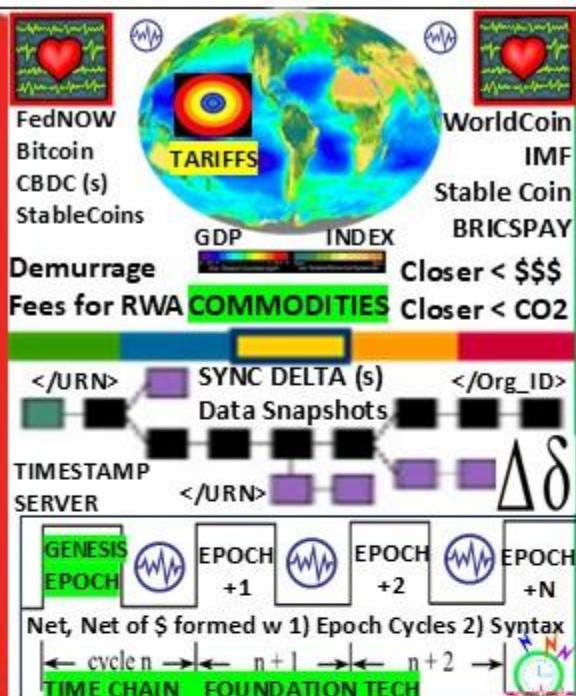
TradeFi TRC Trade Reference Currency

E \$ € ¥ currency index #20022

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

BLOCKCHAIN CONSENSUS ALGORITHMS

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



STAT MEAN VALUE INDEX

CONTRIBUTIONS TO STATISTICS

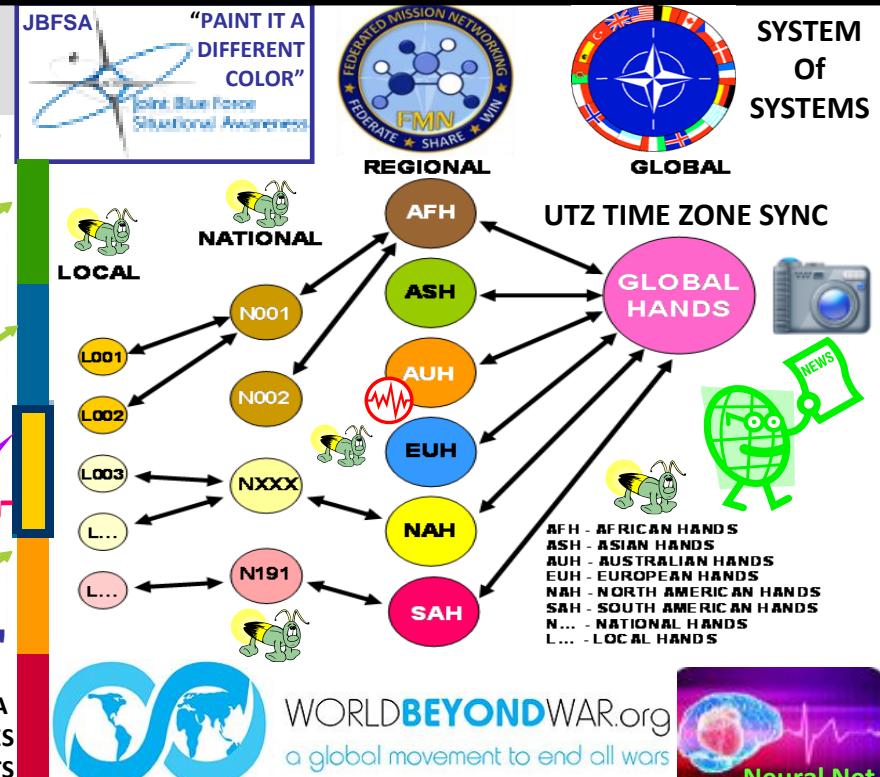
Price Indexes in Time and Space Methods and Practice SchellingPoint



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

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”**



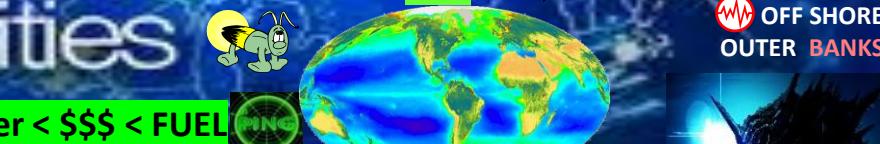
**Reuse adaptive procedural template guides from Battlefield Digitization among a federated systems of systems improving synergy, synchronicity to achieve shared sustainable goals**



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



 Beacon Communities



## Vernetzte Operationsführung



A horizontal bar featuring a green waveform graphic on the left side.



**Closer < \$\$\$ < FUEL**



100% P.



IAEGLERS



# HEARTBEAT ALGORITHM



KAIJU

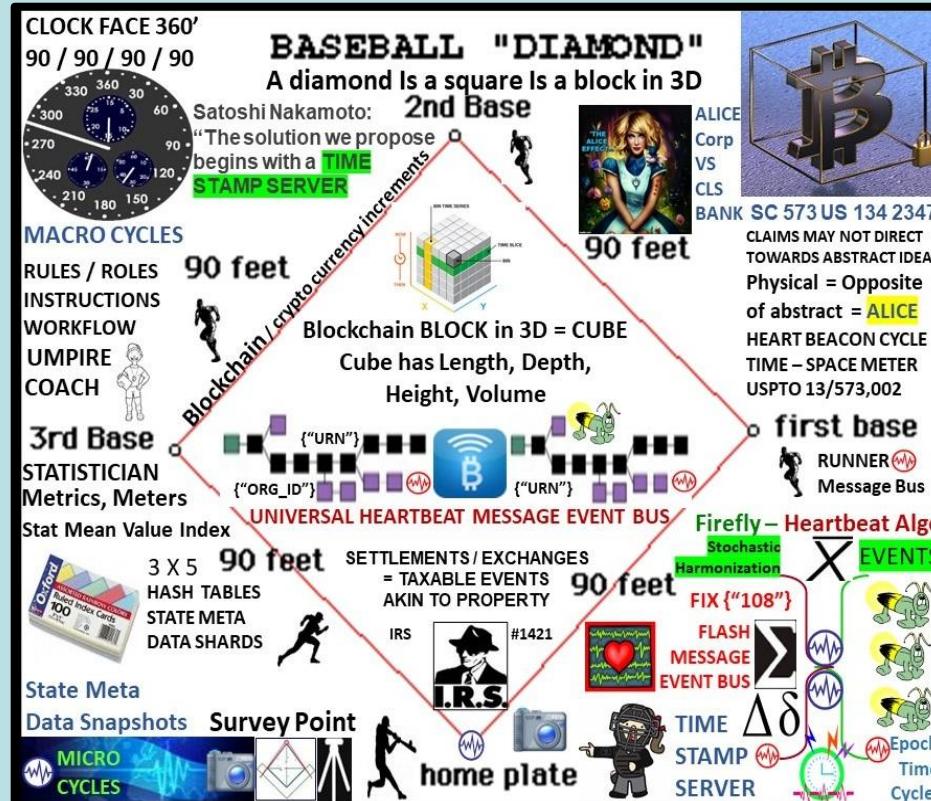
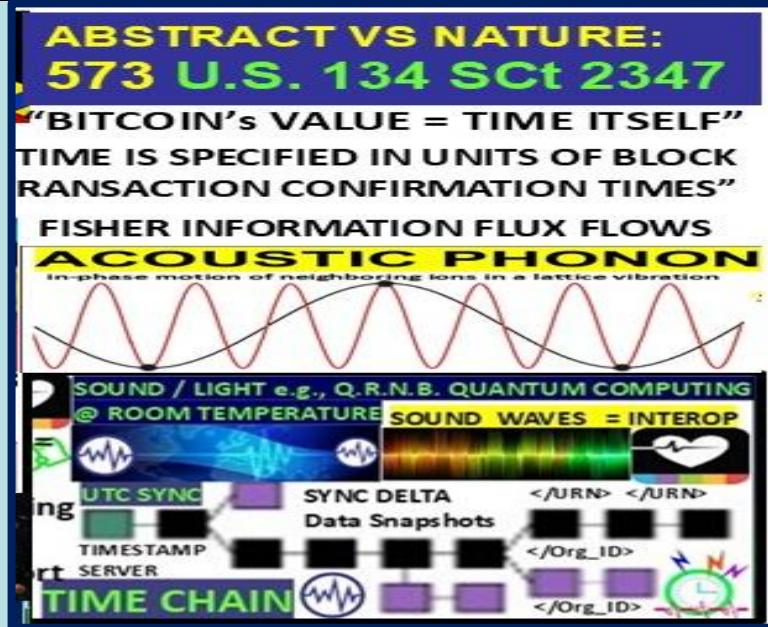
# Circle USDC

Investopedia

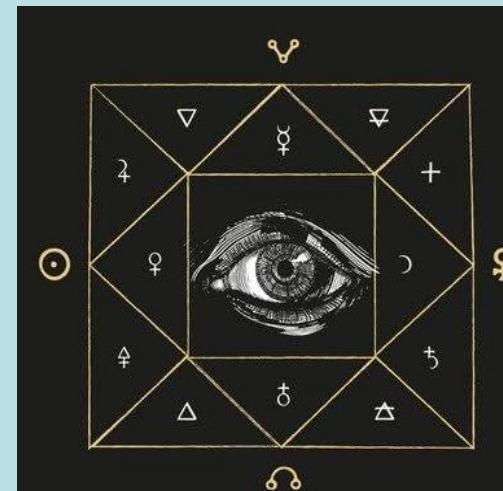
Stablecoins are cryptocurrencies whose value is pegged, or tied, to that of another currency, commodity, or financial instrument. Stablecoins aims to provide an alternative to the high volatility of the most popular cryptocurrencies, Source JDSUPRA



**Circle Internet 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



NOSTRADAMUS of FRANCE  
CENTURY 8: QUATRAIN 28



**"THE FINANCIAL NOSTRADAMUS"**  
REGGIE MIDDLETON

**Reggie Middleton**  
**"Father of DeFi"**  
US11196566  
US11895246  
JP6813477

**Veritaseum**  
www

Net of \$\$\$ formed with:

1 EPOCH TIME CYCLES

2 {"Syntax"} "The Word"

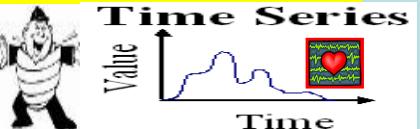
"In the Beginning" Genesis Block

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

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

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

## NAMED DATA NETWORKING



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



SYNTAX LEXICON Library

1<sup>st</sup> Compiler



STRUCTURED DATA EXCHANGE TEMPLATE FORMS

300+ USE CASES

LOGIC / FILTERS



Alpha Numeric Brevity Codes



SYNTAX / SYMBOL LEXICON LIBRARY



"BITCOIN MAKES MONEY PROGRAMMABLE. MONEY IS SIMPLY DATA"

"BITCOIN'S VALUE = TIME ITSELF"

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



ALICE CORP VS CLS BANK

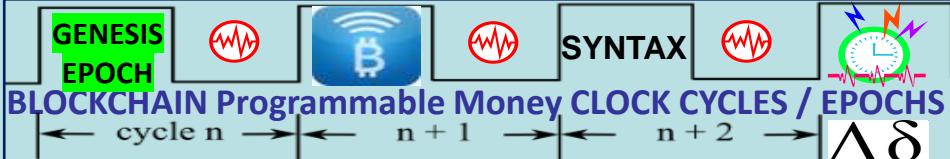
"claims may not be directed towards an abstract idea"

US SC 573 US 134 2347



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

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



CLOCK FACE 360°  
90 / 90 / 90 / 90



MACRO CYCLES

RULES / ROLES

INSTRUCTIONS

WORKFLOW

UMPIRE

COACH

3rd Base

STATISTICIAN

Metrics, Meters

Stat Mean Value Index

3 X 5 HASH TABLES

STATE META DATA SHARDS

State Meta Data Snapshots

Survey Point

MICRO CYCLES

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

SETTLEMENTS / EXCHANGES

= TAXABLE EVENTS AKA TO PROPERTY

IRS #1421

FLASH MESSAGE EVENT BUS

FIX {"108"}

TIME STAMP SERVER

EPOCH Time Cycles

home plate

Delta delta

Time Stamp Server

Time Stamp Clock

Time Stamp Server



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

GDevelops

Proof-of-Capacity Proof-of-Work

Proof-of-Stake

Delegated Proof-of-Work

Proof-of-Elapsed Time

Proof-of-Randomness

Proof-of-Biometric Fingerprint

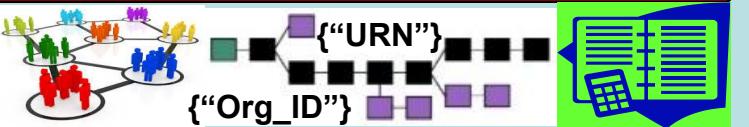
Proof-of-Location

Proof-of-Identity

Proof-of-Blockchain

# Heart Beacon Cycle

## FEDERATE / TRADE FEDERATIONS



- 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 CONSENSUS ALGORITHM / PROTOCOL LIQUIDITY ON DEMAND



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

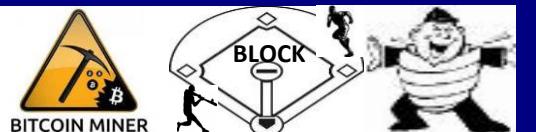
Federation  
Gateway



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



Bitcoin Mining Pools  
MEME / METAPHOR MEDIATION



DISTRIBUTED AUTONOMOUS ORGANIZATION = DAO RAND Corp

term coined circa 1991 now in use by Blockchain tech corporations

Uniform\_Resource\_Name



FIREFLY FLASH HEARTBEAT MESSAGES

</RESOURCE> {"URN"}</Asset\_Class"></URN>

IeT DEVICE / PLATFORM  
IoT SENSOR DEVICE



{"Asset\_Type"}

STOCK EXCHANGE  
MIC MARKET IDENTIFIER  
CODES / BREVITY CODES



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



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



## FEDERATE: COMMON GOALS SYNCHRONIZED IN SPACE - TIME



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

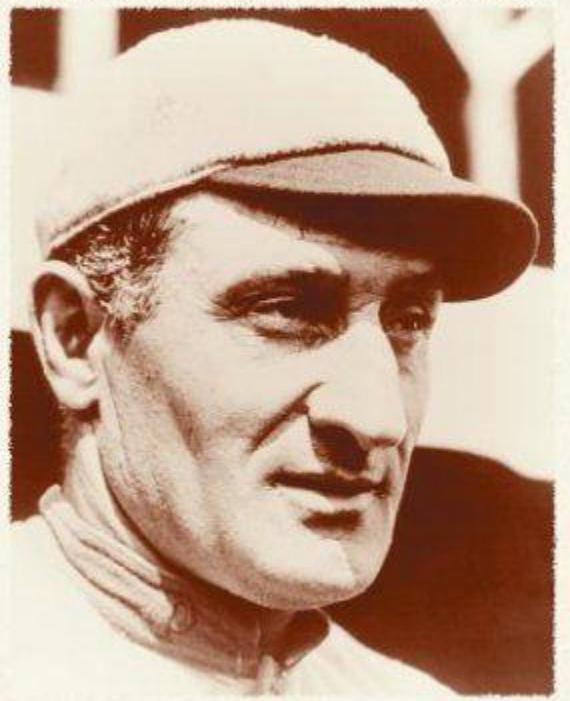
USPTO 13/573,002 PRIOR ART

Physical = Opposite of Abstract

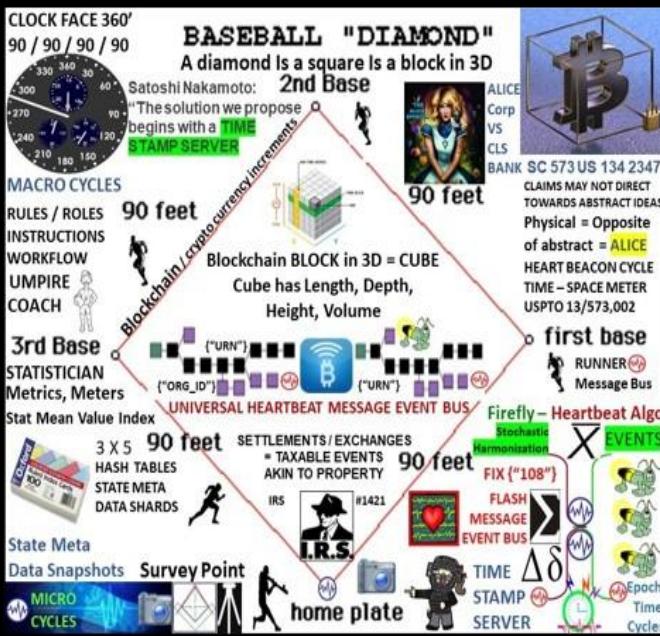
Q: WHO IS "SATOSHI NAKAMOTO" ?

## 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



# Economics of Microtransactions in Video Games: The Intelligent Economist



**Microtransactions:** in-game purchases that unlock specific features or give user special abilities, characters or content.

Q: is the main purpose of the (technically non-existent) #blockchain derived from the video game industry adapted to #cryptocurrency industry is about adding/ overlaying #micropayments / #microtransactions converting the world into a massive, virtual open world video game ?

<https://intelligenteconomist.com/microtransactions/>



REPLACEMENT SHEET

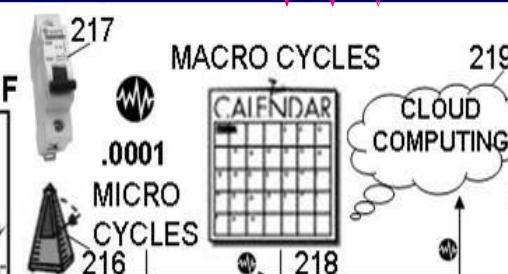
## BUILDING BLOCKS

201



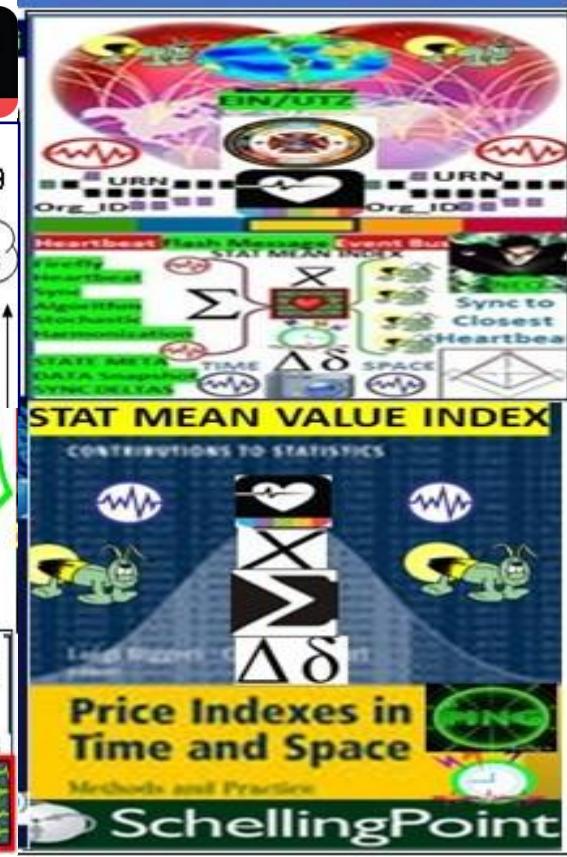
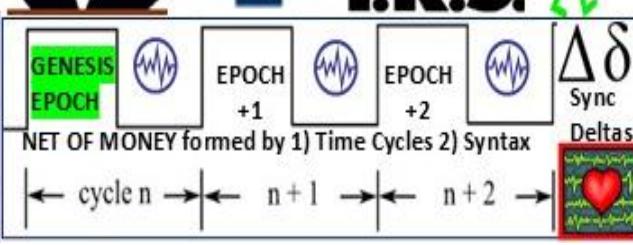
TASK ON / OFF

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



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

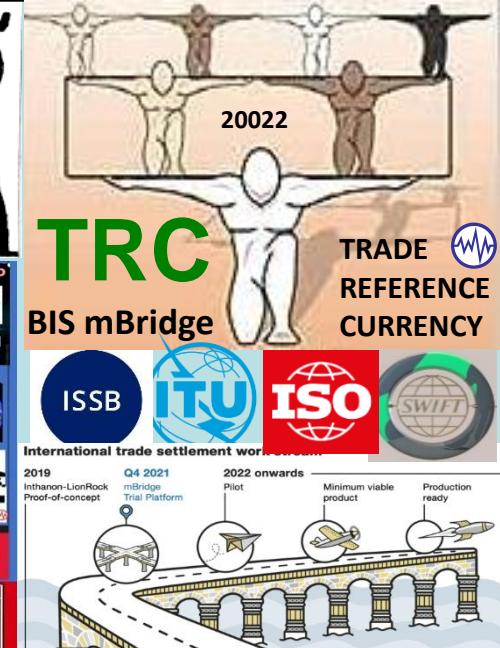
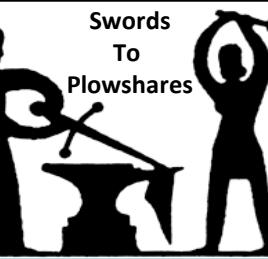


# World Game Annex K

## Signals & Telemetry



{“URN”} {“URN”} {“URN”} 300 + Use Case message sets  
 OPSCODE BREVITY CODES - Symbols, symbol sets



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



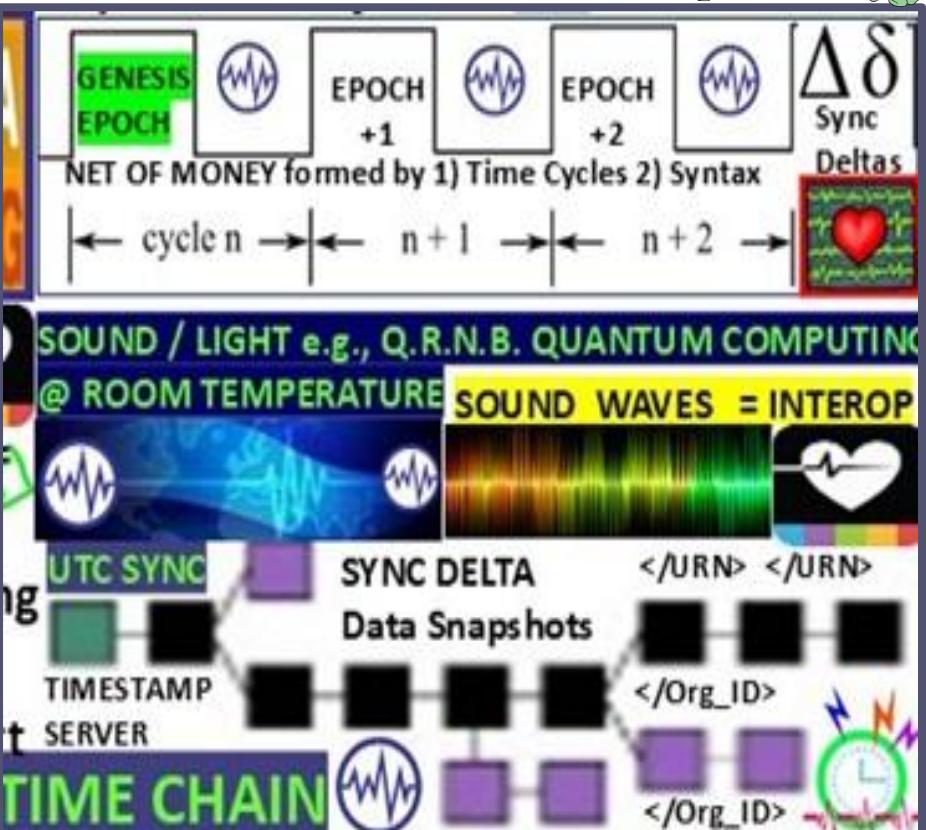
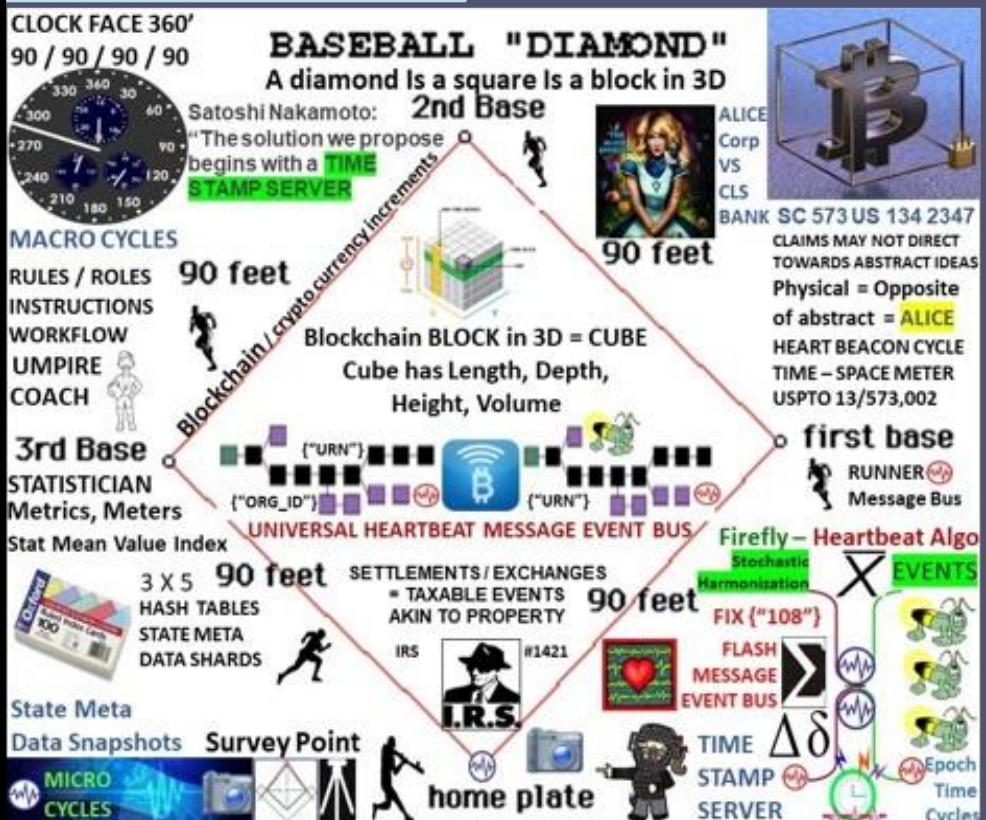
**Eco Economic Epochs**  
**For Programmable \$\$\$**  
**Programmable Economy**  
**Re Monetize (Crypto) Currency**  
**Symbol / Message Sets A.I.**  
**FIREFLY Inspired**  
**Heartbeat Algorithm**  
**Message Event Bus**





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

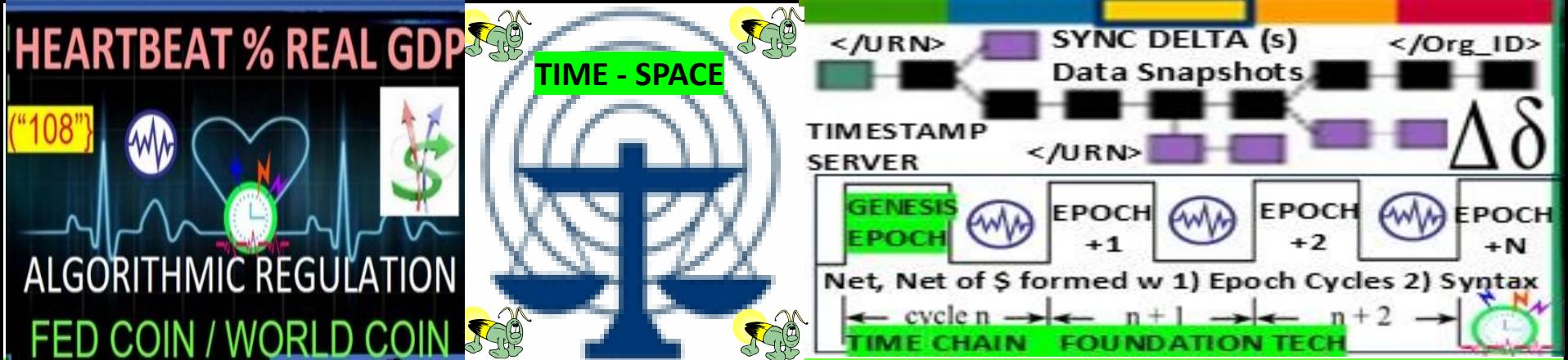
1919 BLACKSOX WORLD SERIES GAME FIXING RULING



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”





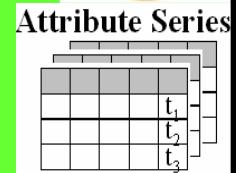
Banks, Tech firms' form teams to assert foundation tech as a legal basis for IP intellectual property claims for programmable \$\$\$ DeFI / TRADEFI

**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)

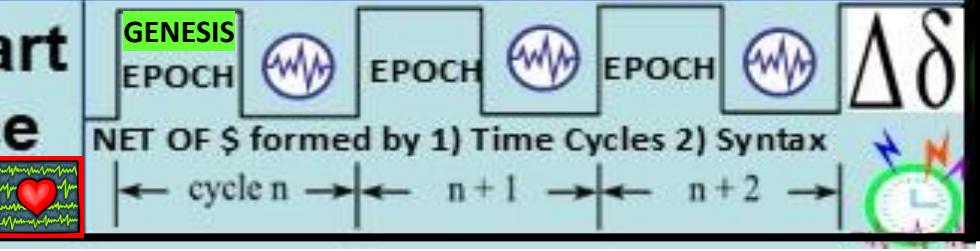


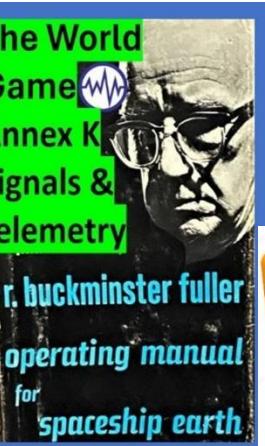
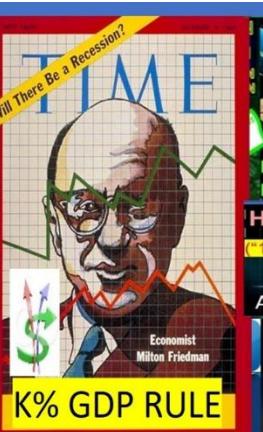
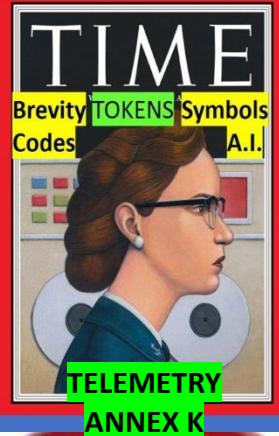
**SOUND WAVES enable**  
Different types of  
quantum tech to "talk"



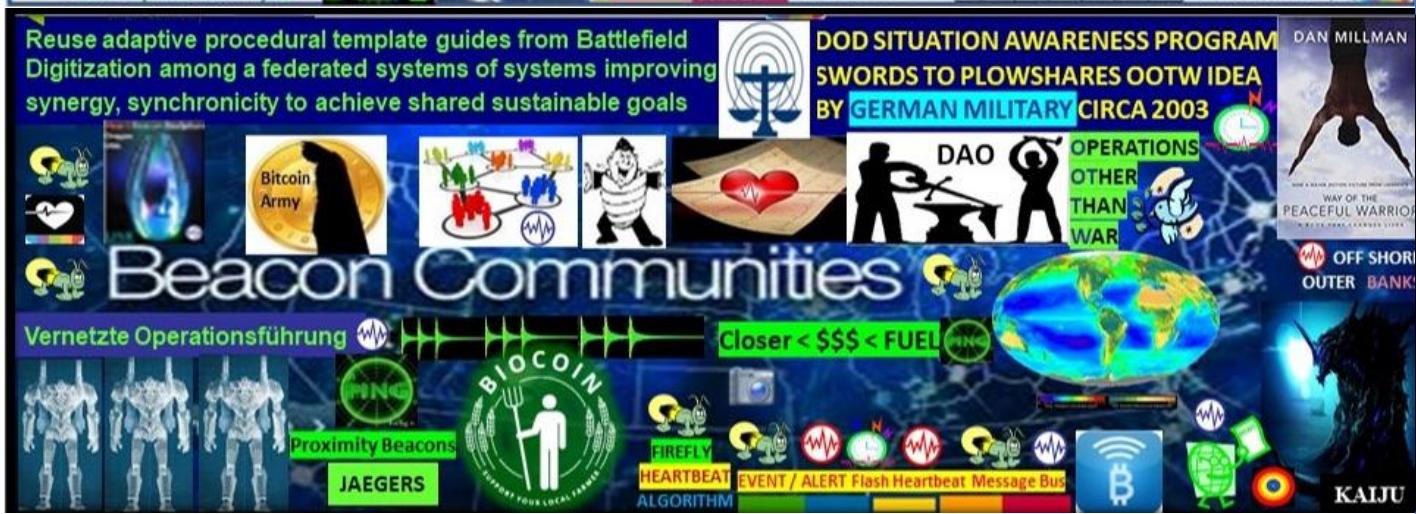
## TIME EPOCHS & SYNTAX = FOUNDATION TECH

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

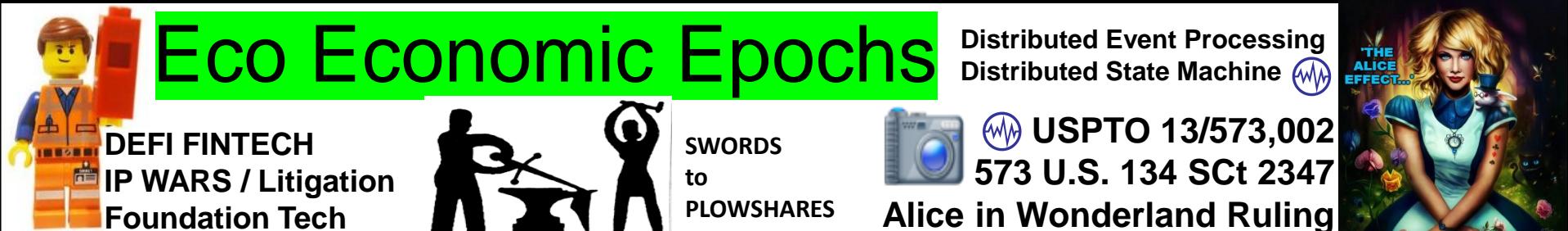




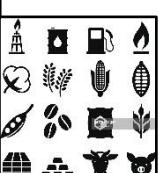
- Reuse, mod of System of systems engineering framework, Syntax Lexicon Library data elements  
**- STRUCTURED DATA EXCHANGE**  
 Reuse brevity codes mapped to 2525D symbol sets comprised of 300 + message sets for A.I. - machine Block-Time DLT arbitrage among Trade Federations </Org\_ID> {“URN”} </URN>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



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



SYNC DELTA  
DATA SNAPSHOTS

INFOCON  
5 4 3 2 1  
INFORMATION  
CONDITION

Federation  
Gateway

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



HFT START, STOP, Time to LIVE

Distributed Event Processing  
Distributed State Machine

 USPTO 13/573,002  
573 U.S. 134 SCt 2347

Alice in Wonderland Ruling



CBDC STABLE COINS

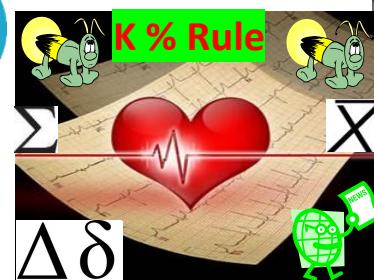
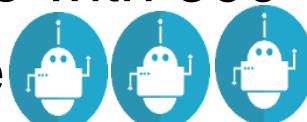
E \$ € ¥

currencyindex



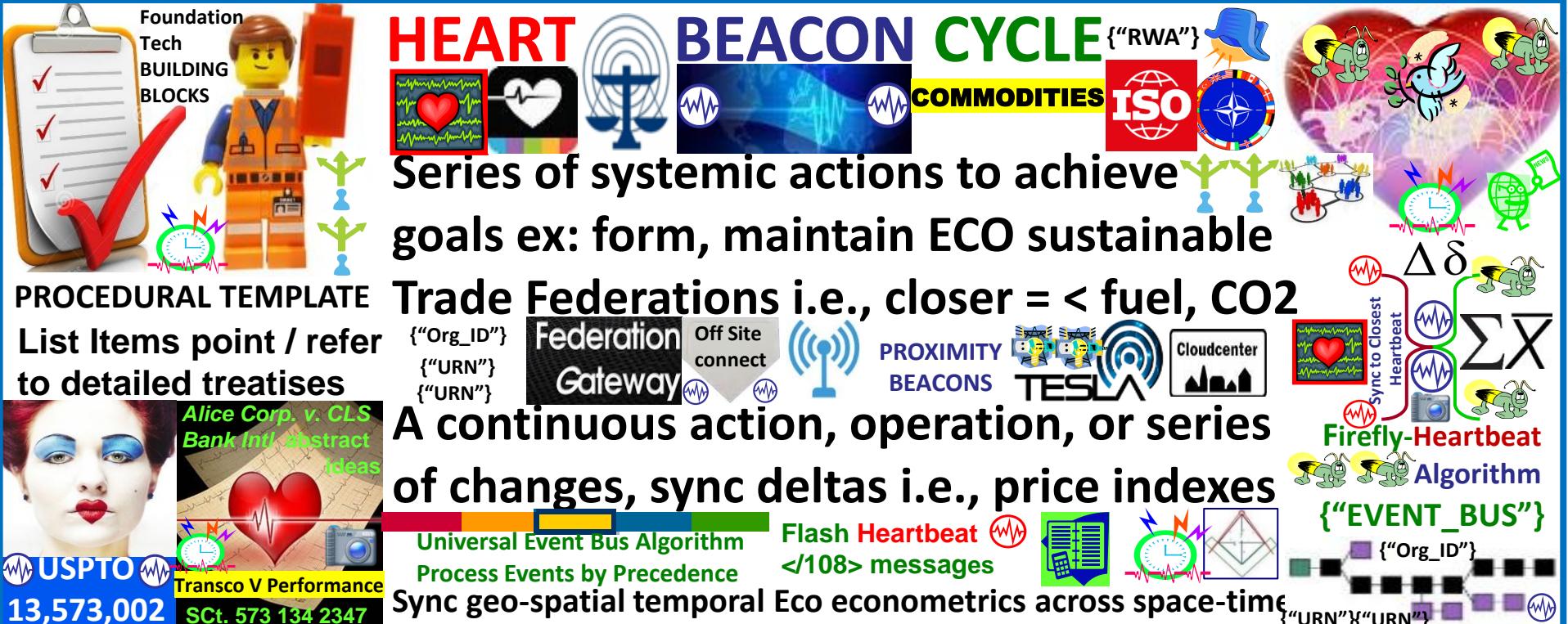
COMMODITIES

MEMO #1421



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

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



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) Honor Satoshi's intent for Crypto to be paired w markets
- 5) Use NIST Quantum Random Number Beacon QRNB

USPTO 13/573,002 = Spaceship Earth's Signals & Telemetry Annex



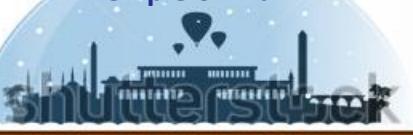
# Firefly - Heartbeat Algo

University of Bologna Italy / Hungary

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"

Temple of Man



**LUXOR**  
EGYPT

FIREFLY inspired Heartbeat Sync Algo

PRECEDENCE    UTZ SYNC    SYNC  
PROCESSING    PULSE    DELTAS



NEURAL NET EMULATION  
BLOCKCHAIN PARSG Erlang TIME EQUATIONS  
{"Org\_ID"}  
{"URN"}

NIST Beacon A Public Randomness Service  
NON REPUDIATION  
Crypto Currency TIME STAMP SERVER / SERVICE



TERRA TRC  
LEAD ECONOMIC INDICATORS

COMMODITY PRICE INDEX  
currencyindex



ECONOMIC INDICATORS

ETF



FRIEDMAN's K% RULE

ALGORITHMIC REGULATION



TOKEN ECONOMICS



COMMODITIES

LOGISTIC FEES INCENTIVES



DEMURRAGE PARKING

LOGISTIC FEES INCENTIVES



CRYPTOCURRENCY

LOGISTIC FEES INCENTIVES



NET, NET of \$\$\$ formed by Time Epoch Cycles / Syntax

LOGISTIC FEES INCENTIVES



LOGISTIC FEES INCENTIVES

LOGISTIC FEES INCENTIVES

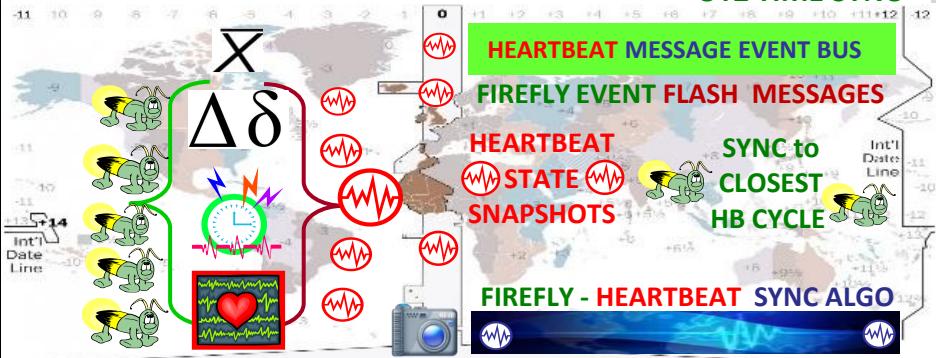




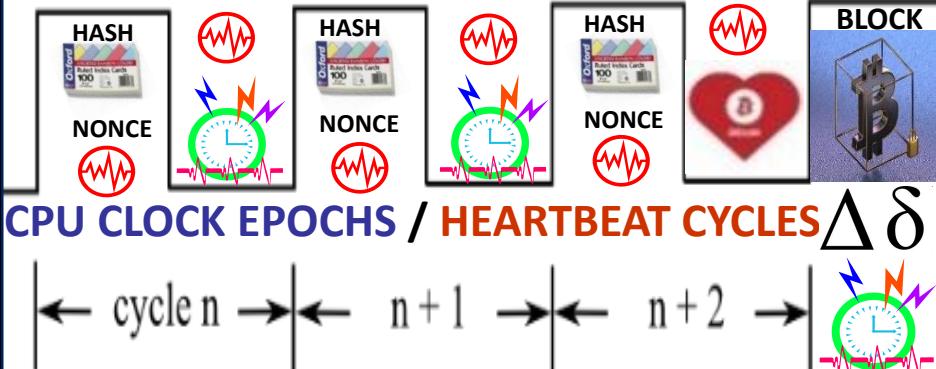


## ALGORITHMIC REGULATION

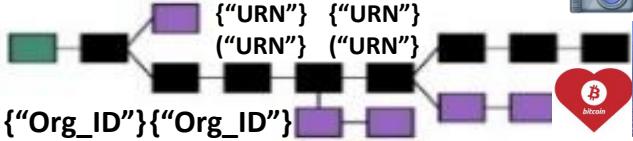
The current standard time common throughout the world is based on a 24-hour clock, with zones that are either 12 hours ahead or behind **Coordinated Universal Time (UTC)**. However, these time zones are decided upon by individual governments, without overall coordination and can even extend fourteen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



# ECONOMIC HEARTBEAT



## **LEADING ECONOMIC INDICATORS**



“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”

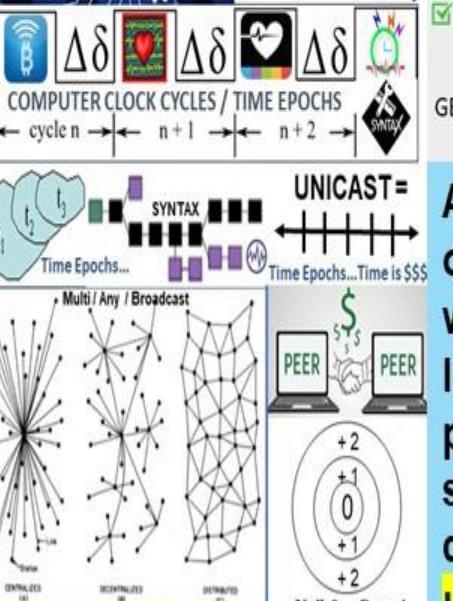
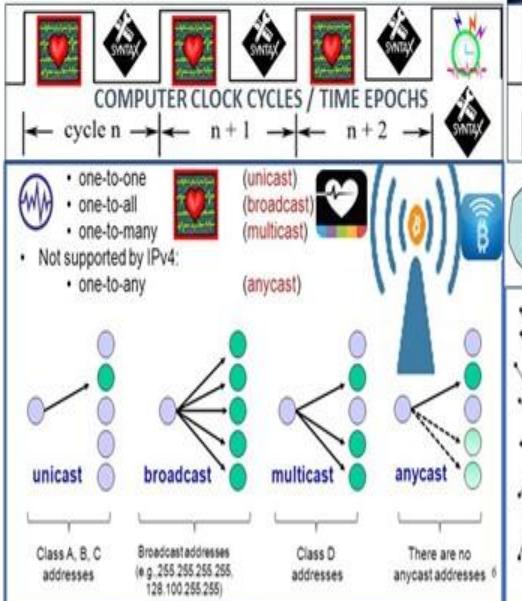
# Foundation Technology Trinity:

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

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

## Time Epochs / Syntax:

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

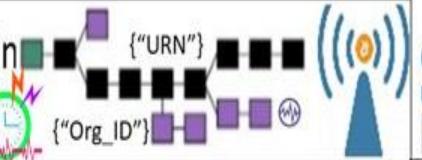


All things internet, programmable net of money are formed using:  
 1) Epoch Time Cycles to 2) process (not) syntax as instructions

## Epoch Time Cycles / Syntax

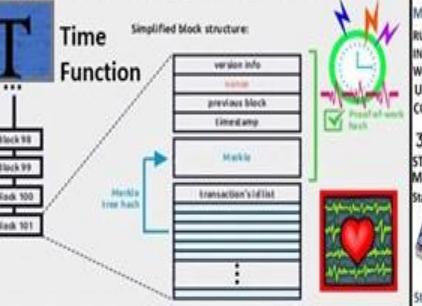
Internet / Internet of Money building blocks

Satoshi Bitcoin Blockchain  
Time Stamp Server



TIME Block chain TIME

What does a block look like?



GENESIS TIME STAMP / Genesis Block

Header • Contains service information (version info, nonce, previous block id and timestamp).  
Timestamp • A summary hash from the block's transaction tree.

Transaction's id list • Set of transaction's identification hashes, that was included into the block's merkle tree

## Semantic blockchain



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

OPSCODE
Brevity
Codes
Mapped
To
Symbol Sets
AI





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

# Information Elements Roles

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



# FFUDN: Field Format Unit Designator #

# FIRN Field Format Index Reference #

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

# BY Form Field Position & NUMBER



# PROCESS MESSAGE BY PRECEDENCE

## UNIVERSAL EVENT / ALERT MESSAGE BUS

# OPERATIONAL NODES / ACTIVITIES

DATA SYSTEM FUNCTIONS PERFORMANCE

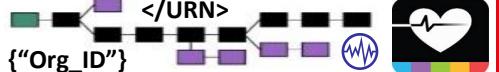
1.4 - Classification	11.8 - Kinematics
11.4.1 - Category	11.8.1 - Pos / Vel / Acc (PVA)
11.4.1.1 - Confidence Level	11.8.1.1 - Acceleration
11.4.1.2 - Estimate Type	11.8.1.1.1 - Angular
11.4.1.2.1 - Alternative	1.1.2 - Linear
11.4.1.2.2 - Evaluated D	2 - Estimate Type
11.4.1.3 - Value	1.2.1 - Estimated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

**SYMBOL** Friend Neutral Hostile

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



MIL STD 2525A, B, C, D



20022



SYNTAX LEXICON  
ROSETTA STONE

Coder's Guide lexicon

STRUCTURED <CONTENT> EXCHANGE TEMPLATES	
MIL	STD 2525ABC
MIL	ASSET TOKENS
MIL	"SYMBOLS RULE THE WORLD"
MIL	STRATML
MIL	XAML
MIL	BRL
MIL	UBL
MIL	DDL DATA DEFINITION LANGUAGE
MIL	INFOCODE A.I.
MIL	INFOPRINT 4 3 2 1 INFORMATION CONDITION
MIL	FFUDN: FRIENDLY OPSCODE BREVIETY CODE

"SYMBOLS RULE THE WORLD"

11.8 - Kinematics  
11.8.1 - Pos.  
11.8.1.1 - Velocity  
11.8.1.1.1 - Acceleration  
11.8.1.1.2 - Angular Velocity  
11.8.1.2 - Location, 2D Horizontal  
11.8.1.3 - Vertical  
11.8.1.4 - Depth  
11.8.1.5 - Horizontal  
11.8.1.6 - Vertical  
11.8.1.7 - Bearing Angle  
11.8.1.8 - Bearing Angle Rate  
11.8.1.9 - Covariance Matrix

11.8.1.10 - Confidence  
11.8.1.11 - Bearing Angle  
11.8.1.12 - Bearing Angle Rate  
11.8.1.13 - Covariance Matrix

11.8.1.14 - Predicted  
11.8.1.15 - Smoothed Data  
11.8.1.16 - Position

11.8.1.17 - Bearing Angle  
11.8.1.18 - Location, 2D Horizontal  
11.8.1.19 - Vertical

11.8.1.20 - Depth  
11.8.1.21 - Horizontal  
11.8.1.22 - Vertical  
11.8.1.23 - Bearing Angle  
11.8.1.24 - Bearing Angle Rate  
11.8.1.25 - Covariance Matrix

11.8.1.26 - Confidence  
11.8.1.27 - Bearing Angle  
11.8.1.28 - Bearing Angle Rate  
11.8.1.29 - Covariance Matrix

11.8.1.30 - Predicted  
11.8.1.31 - Smoothed Data  
11.8.1.32 - Position

11.8.1.33 - Bearing Angle  
11.8.1.34 - Location, 2D Horizontal  
11.8.1.35 - Vertical

11.8.1.36 - Depth  
11.8.1.37 - Horizontal  
11.8.1.38 - Vertical  
11.8.1.39 - Bearing Angle  
11.8.1.40 - Bearing Angle Rate  
11.8.1.41 - Covariance Matrix

11.8.1.42 - Confidence  
11.8.1.43 - Bearing Angle  
11.8.1.44 - Bearing Angle Rate  
11.8.1.45 - Covariance Matrix

11.8.1.46 - Predicted  
11.8.1.47 - Smoothed Data  
11.8.1.48 - Position

11.8.1.49 - Bearing Angle  
11.8.1.50 - Location, 2D Horizontal  
11.8.1.51 - Vertical

11.8.1.52 - Depth  
11.8.1.53 - Horizontal  
11.8.1.54 - Vertical  
11.8.1.55 - Bearing Angle  
11.8.1.56 - Bearing Angle Rate  
11.8.1.57 - Covariance Matrix

11.8.1.58 - Confidence  
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11.8.1.61 - Covariance Matrix

11.8.1.62 - Predicted  
11.8.1.63 - Smoothed Data  
11.8.1.64 - Position

11.8.1.65 - Bearing Angle  
11.8.1.66 - Location, 2D Horizontal  
11.8.1.67 - Vertical

11.8.1.68 - Depth  
11.8.1.69 - Horizontal  
11.8.1.70 - Vertical  
11.8.1.71 - Bearing Angle  
11.8.1.72 - Bearing Angle Rate  
11.8.1.73 - Covariance Matrix

11.8.1.74 - Confidence  
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11.8.1.77 - Covariance Matrix

11.8.1.78 - Predicted  
11.8.1.79 - Smoothed Data  
11.8.1.80 - Position

11.8.1.81 - Bearing Angle  
11.8.1.82 - Location, 2D Horizontal  
11.8.1.83 - Vertical

11.8.1.84 - Depth  
11.8.1.85 - Horizontal  
11.8.1.86 - Vertical  
11.8.1.87 - Bearing Angle  
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11.8.1.89 - Covariance Matrix

11.8.1.90 - Confidence  
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11.8.1.93 - Covariance Matrix

11.8.1.94 - Predicted  
11.8.1.95 - Smoothed Data  
11.8.1.96 - Position

11.8.1.97 - Bearing Angle  
11.8.1.98 - Location, 2D Horizontal  
11.8.1.99 - Vertical

11.8.1.100 - Depth  
11.8.1.101 - Horizontal  
11.8.1.102 - Vertical  
11.8.1.103 - Bearing Angle  
11.8.1.104 - Bearing Angle Rate  
11.8.1.105 - Covariance Matrix

11.8.1.106 - Confidence  
11.8.1.107 - Bearing Angle  
11.8.1.108 - Bearing Angle Rate  
11.8.1.109 - Covariance Matrix

11.8.1.110 - Predicted  
11.8.1.111 - Smoothed Data  
11.8.1.112 - Position

11.8.1.113 - Bearing Angle  
11.8.1.114 - Location, 2D Horizontal  
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11.8.1.116 - Depth  
11.8.1.117 - Horizontal  
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11.8.1.122 - Confidence  
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11.8.1.125 - Covariance Matrix

11.8.1.126 - Predicted  
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11.8.1.129 - Bearing Angle  
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11.8.1.132 - Depth  
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11.8.1.137 - Covariance Matrix

11.8.1.138 - Confidence  
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11.8.1.145 - Bearing Angle  
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11.8.1.148 - Depth  
11.8.1.149 - Horizontal  
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11.8.1.151 - Bearing Angle  
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11.8.1.154 - Confidence  
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11.8.1.158 - Predicted  
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11.8.1.164 - Depth  
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11.8.1.528 - Predicted  
11.8.1.529 - Smoothed Data  
11.8.1.530 - Position

11.8.1.561 - Bearing Angle  
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11.8.1.565 - Depth  
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11.8.1.571 - Confidence  
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11.8.1.576 - Predicted  
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11.8.1.615 - Bearing Angle  
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11.8.1.620 - Depth  
11.8.1.621 - Horizontal  
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11.8.1.623 - Bearing Angle  
11.8.1.624 - Bearing Angle Rate  
11.8.1.625 - Covariance Matrix

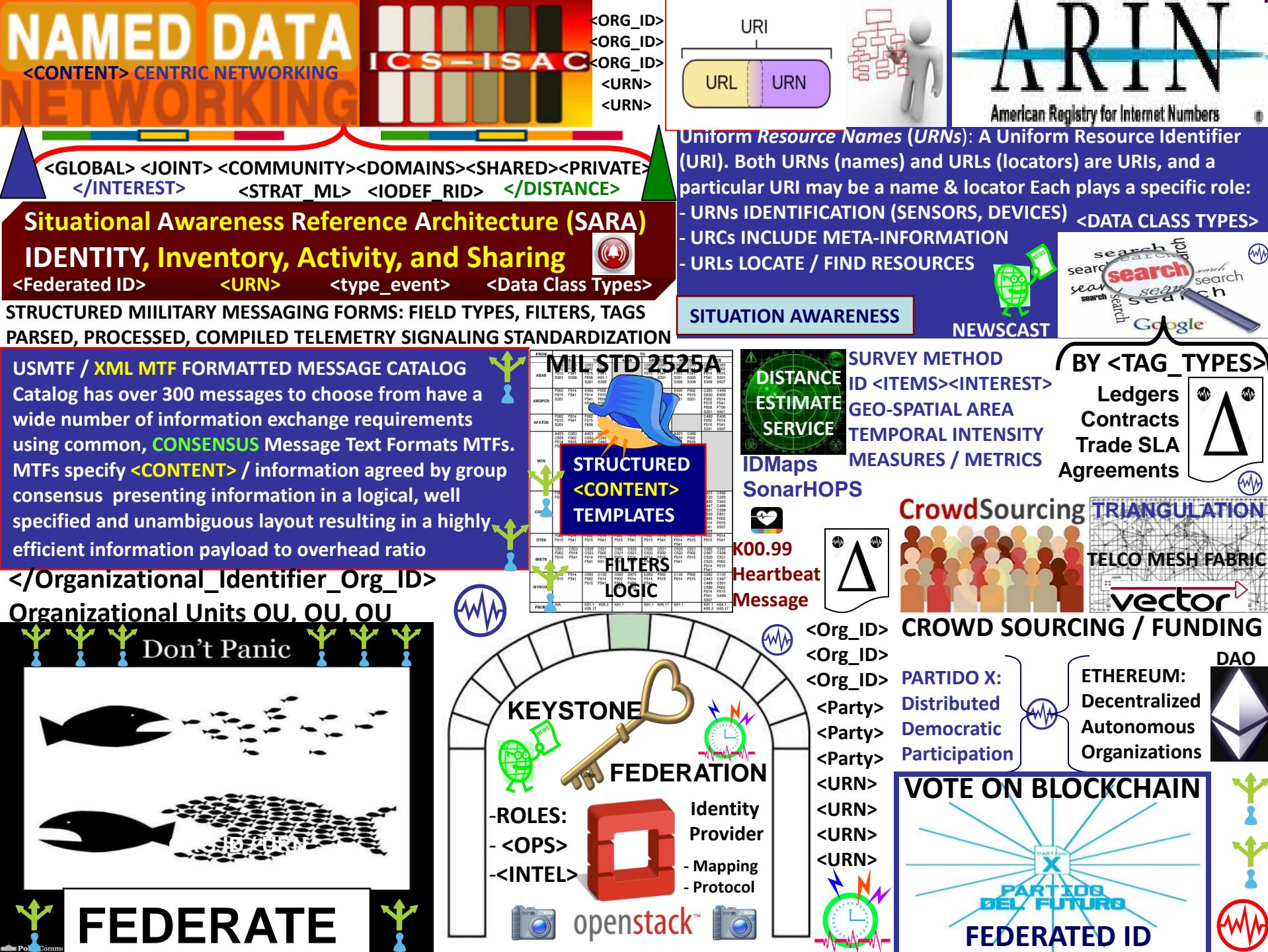
11.8.1.626 - Confidence  
11.8.1.627 - Bearing Angle  
11.8.1.628 - Bearing Angle Rate  
11.8.1.629 - Covariance Matrix

11.8.1.630 - Predicted  
11.8.1.631 - Smoothed Data  
11.8.1.632 - Position

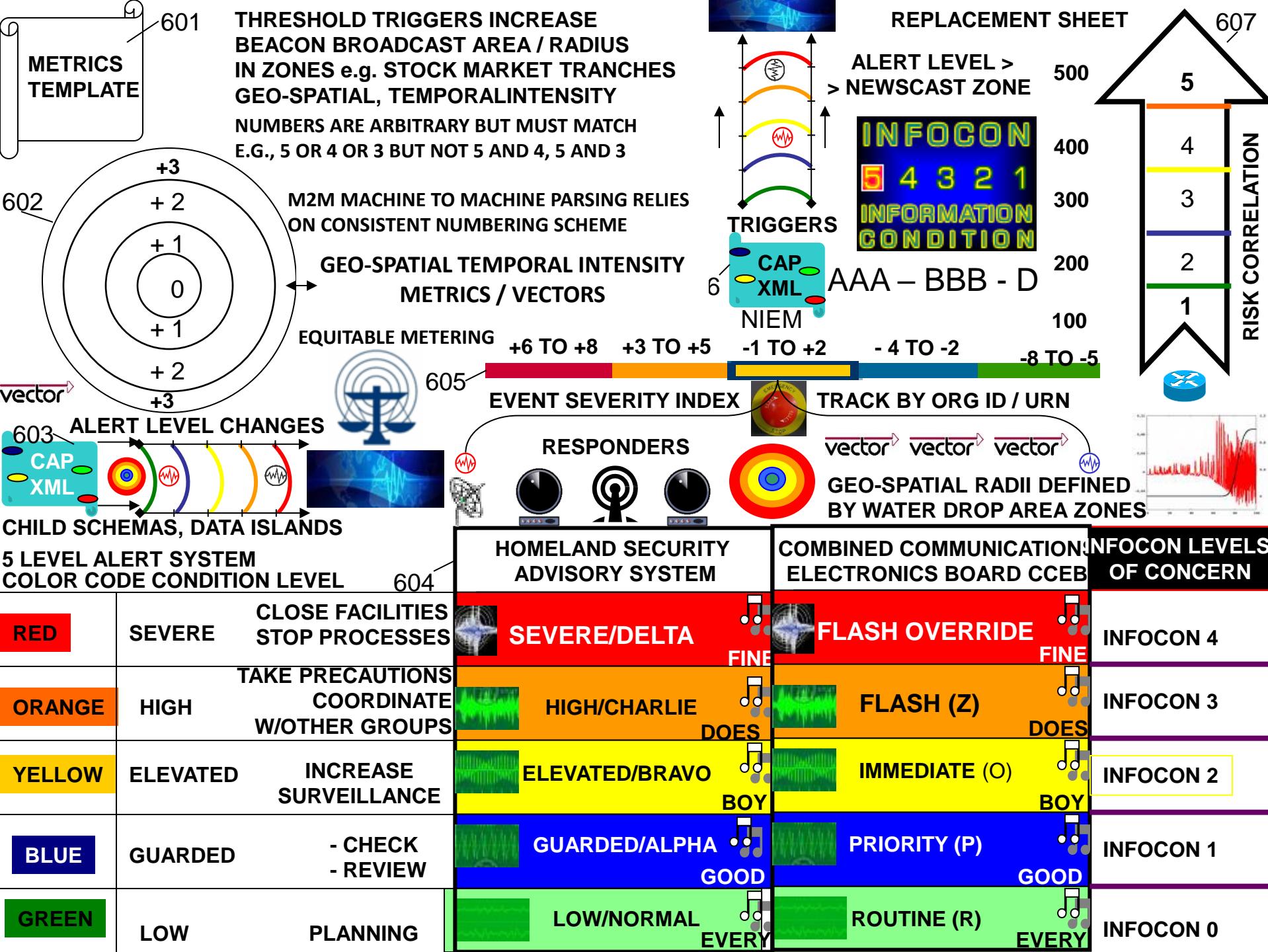
11.8.1.665 - Bearing Angle  
11.8.1.666 - Location, 2D Horizontal  
11.8.1.667 - Vertical

11.8.1.678 - Depth  
11.8.1.679 - Horizontal  
11.8.1.680 - Vertical  
11.8.1.681 - Bearing Angle  
11.8.1.682 - Bearing Angle Rate  
11.8.1.683 - Covariance Matrix

11.8.1.684 - Confidence  
11.8.1.68







# Situational Awareness Reference Architecture (SARA)

Identity, Inventory, Activity, and Sharing

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



Industrial Control System  
Information Sharing and  
Analysis Center

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

<ORG\_ID> Organizations

Federation  
Gateway

**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



**SHARING:**

COMMON <TAGS>

<Organizational\_ID>

Resource Names <URN>

<Time\_Stamps>

<State-Meta\_Data>

<DATA\_CLASS\_TYPE>

<Heartbeat\_snapshots>

<TAG>LIBRARY  
TEMPLATES



NAMED DATA  
NETWORKING  
<Content> Centric

**<ELEMENTS>**

STRATML/ IODEF RID CLASSES:

<GLOBAL><JOINT><SHARED>  
<DOMAIN><FEDERATION>  
<CITY><STATE><PRIVATE>

STRATEGIC  
MARKUP

StratML

LANGUAGE

<GLOBAL><JOINT><SHARED>

<DOMAIN><FEDERATION>

<CITY><STATE><PRIVATE>

<TIME\_STAMP><ORG\_ID><URN>

<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

STRUCTURED <CONTENT> TEMPLATES

USMTF / XML MTF FORMATTED MESSAGE CATALOG

Catalog has over 300 messages to choose from have a wide number of information exchange requirements using common, CONSENSUS Message Text Formats MTFs. MTFs specify <CONTENT> / information agreed by group consensus presenting information in a logical well specified and unambiguous layout i.e., templates

FROM	TAB	ABA	AMOPCS	AFATOS	MCS
ABAD	F002 F014	F014 F024	F002 F014	F002 F014	F002 F014
	F001 F021	F021 F014	F001 F021	F001 F021	F001 F021
	F003 F023	F023 F014	F003 F023	F003 F023	F003 F023
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	F005 F025	F025 F014	F005 F025	F005 F025	F005 F025
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	F0131 F0151	F0151 F014	F0131 F0151	F0131 F0151	F0131 F0151
	F0132 F0152	F0152 F014	F0132 F0152	F0132 F0152	F0132 F0152
	F0133 F0153	F0153 F014	F0133 F0153	F0133 F0153	F0133 F0153
	F0134 F0154	F			



TERRA  
TRC

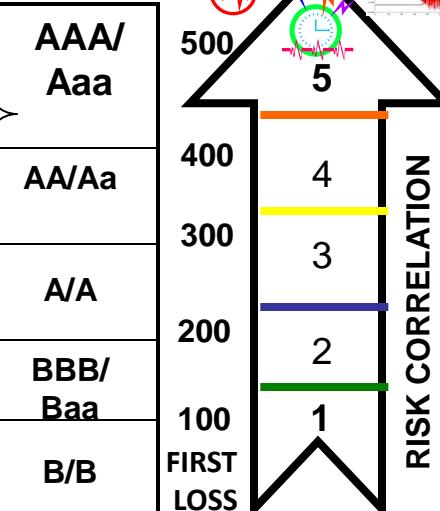


ECONOMIC HEARTBEAT



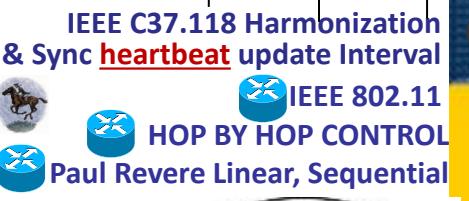
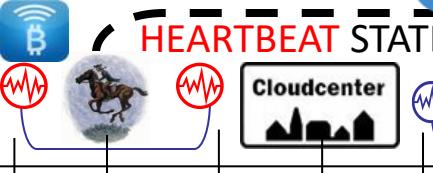
HB MSG </108>  
FIX PROTOCOL  
INDUSTRY-DRIVEN MESSAGING STANDARD

LAST LOSS



PROCESS BY </PRECEDENCE>

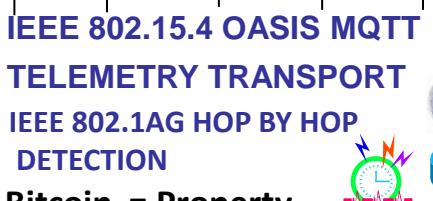
SonarMaps ID\_Hops



IEEE 802.11

HOP BY HOP CONTROL

Paul Revere Linear, Sequential



IEEE 802.1AG HOP BY HOP

DETECTION

Bitcoin = Property

IRS Memo #1421

I.R.S.

ON OFF SHORE

GEO LOC LAT / LONG

PING

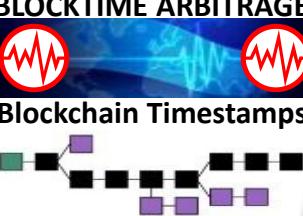
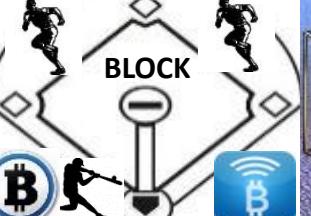
DATE TIME STAMP

NDN </INTEREST>

NDN {"DISTANCE"}

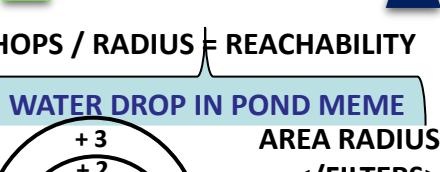
Demurrage Charges

vector



Demurrage Charges

vector

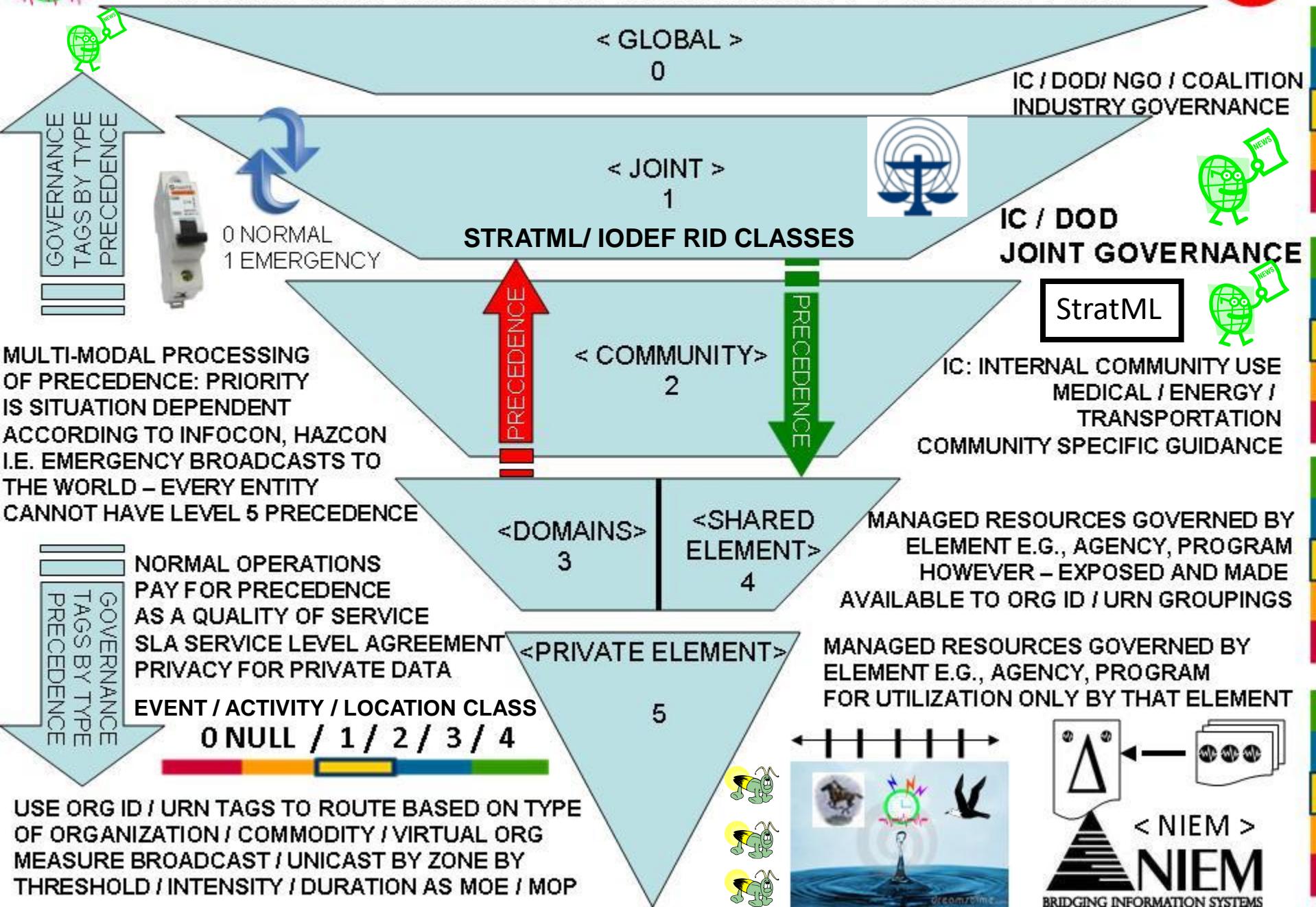


vector





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

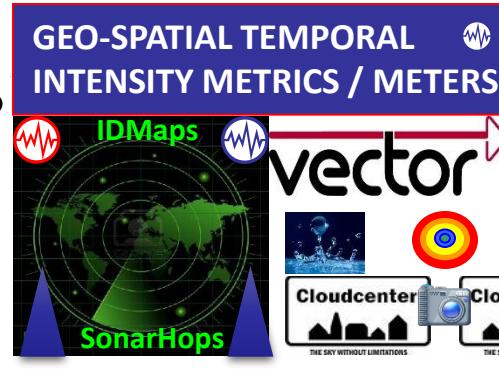
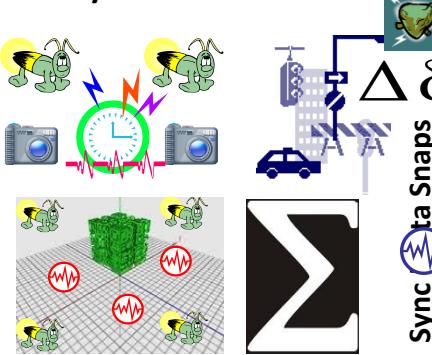
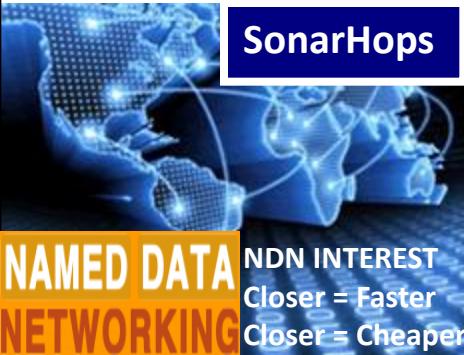




# IDMaps: Global Internet Host Distance Estimation Service



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



IDMaps scalable Internet-wide architecture measures, disseminates distance information



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

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

Name Prefix  
<Org\_ID> Trie (NPT)



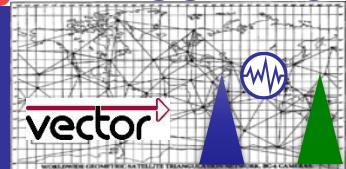
**NDN NAMES**

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

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



**TRIANGULATION**



**NDN INTEREST LENGTH = DISTANCE BY HOPS**

**NDN INTEREST**

**IS DATA FRESH ?**

**Time Series**



Datasets and Event Notification

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

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



**MICRO-CYCLES**



**NDN INTEREST LIFETIME = TTL Time To Live**



**HEARTBEAT STATE META DATASNAPSHOTS**

# GEO-SPATIAL TEMPORAL INTENSITY METRICS, METERS, VECTORS



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



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



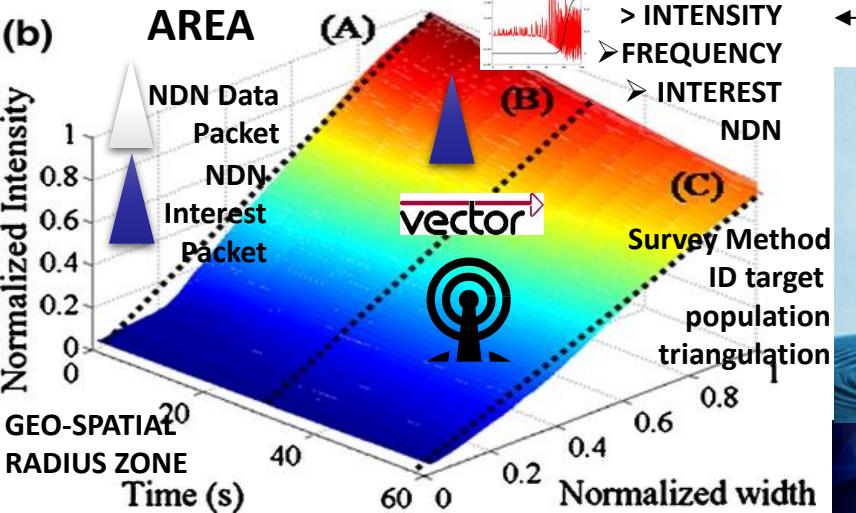
Paul Revere = linear, sequential



TCP/IP hop by hop counts, by hop controls



Water Drop = AREA / INTENSITY Cyclic Frequency



# NAMED DATA NETWORKING

<INTEREST>  
MQTT



NIST TIME BEACON



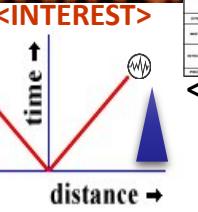
05:08:50



time →



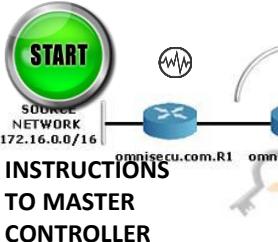
distance →



ARRESTED-D

TELEMETRY TRANSPORT

Hop Count



INSTRUCTIONS TO MASTER CONTROLLER

SOURCE NETWORK 172.16.0.0/16

omnisecu.com.R1

omnisecu.com.R2

omnisecu.com.R3

omnisecu.com.R4

Number of Hops = 3

Time To Live

STOP

TTL =

Time To Live

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

IDMAPS

SONARHOPS

INTERNET

TRIANGULATION



4 / 3 / 2 / 1 / NULL / 1 / 2 / 3 / 4

0.0001 .05 .01 .1 0 5 15 30 99

vector WirelessHART

time synchronized, self-organizing, mesh Net

ALERT LEVEL > NEWSCAST ZONE



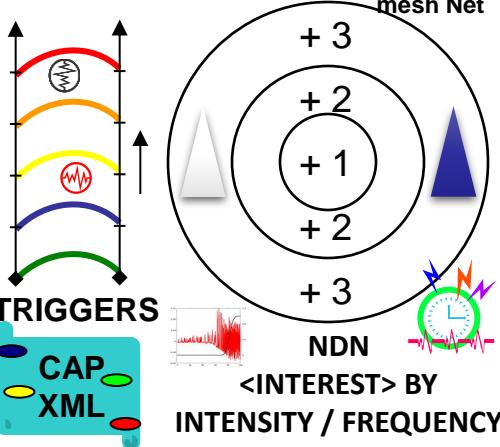
SINE-WAVE

TRIGGERS

CAP XML

NDN

<INTEREST> BY INTENSITY / FREQUENCY



XML  
MTF  
300 +  
MSG

5 4 3 2 1

INFOCON INFORMATION CONDITION

DEFCON / INFOCON

5

4

3

2

1

PROCESS <CONTENT> <TAGS> BY PRECEDENCE

DEFCON / INFOCON

# 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”

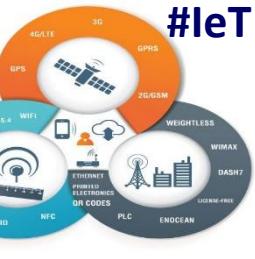
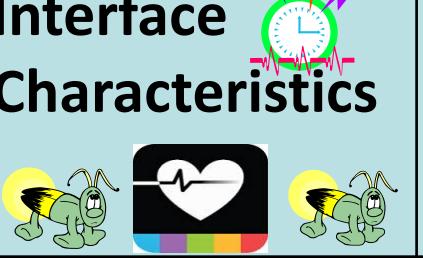
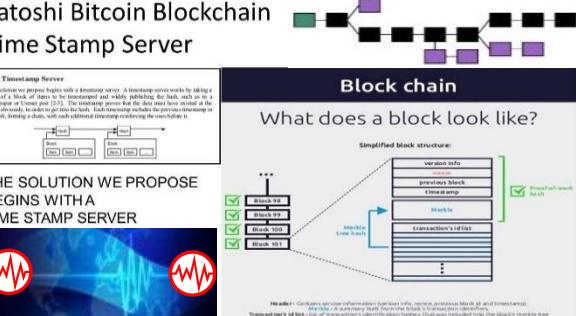
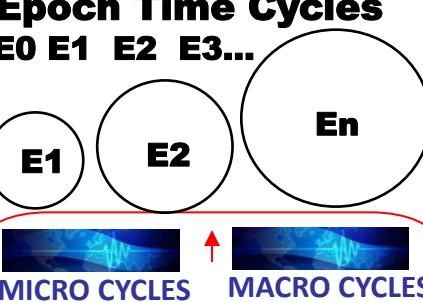
## The four dimensions of Big Data

**vector** VECTOR: quantity having direction and magnitude  
INTER 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**



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	 <b>#leT</b>					
Programmable Money World Computer / Blockchain	#Big_Data	Functionality Areas		Cloud Interface Management configuration, start, stop cloud services, edit configuration (heartbeat messages)	Cloudcenter	Cloudcenter
NIST TIME BEACON		API Operation Count		Web service access type Network Effects / A.I.	Web application, front end to [network, device, system, blockchain] heartbeat	Cloudcenter
Interface Characteristics		LANGUAGE / PLATFORM BINDINGS	PHP Java Erlang...	Cloudcenter		Cloudcenter
"The external environment could update <u>resources</u> at random... One solution is a <b>heartbeat</b> : defining a default lease duration delaying updates until the next <b>cycle</b> "		SCOP is a web application, PHP based front-end to heartbeat, IP Virtual Server ipvs and Idirectord [e.g., check interval @ 5 seconds] 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.	Satoshi Bitcoin Blockchain Time Stamp Server		Epoch Time Cycles E0 E1 E2 E3...	
QubitCoin Interval: Every 30 Seconds		<p>The solution we propose begins with a timestamp server. A timestamp server works by taking the current time and publishing the hash, such as in a timestamp or a time stamp [2]. The timestamp process that the data must have existed at the time it was timestamped. This is done by publishing the timestamp on a public key, forming a chain, with each additional timestamp recording the previous one.</p> <p>THE SOLUTION WE PROPOSE BEGINS WITH A TIME STAMP SERVER</p> <p>Block chain</p> <p>What does a block look like?</p> <p>Simplified block structure:</p> <ul style="list-style-type: none"> <li>Block info</li> <li>Previous Hash</li> <li>Timestamp</li> <li>Merkle</li> <li>Transactions id list</li> </ul> <p>Headers: Contains version information (version info), previous block's hash (previous block), and timestamp (timestamp). Transactions: A list of transactions (tx) that are being added to the block. Merkle: A tree structure that summarizes all the transactions in the block.</p>				

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

HEART BEACON CYCLE  
USPTO 13/573,002  
SURVEY METHODS

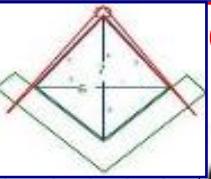
## SC ALICE CORP VS CLS BANK: “claims may not direct towards abstract ideas”

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



BLOCKS / COINS PENDING ISSUE

B  
A  
C

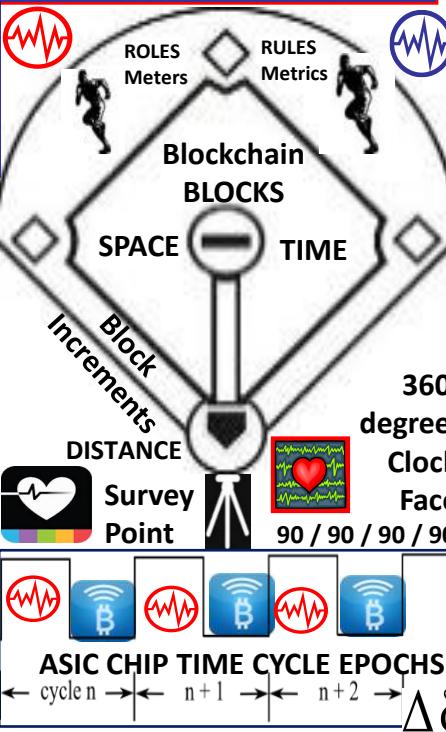
$\Delta\delta$

## Unmined Bitcoins



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

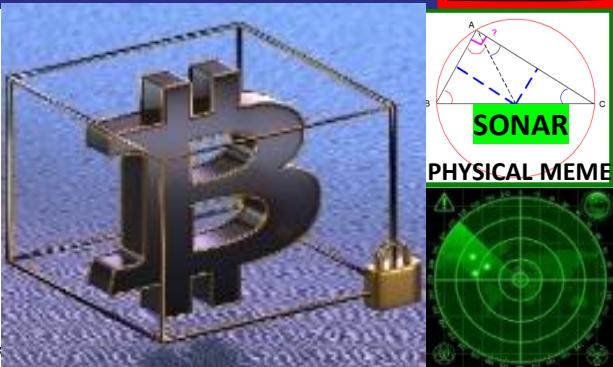
IDMaps-SONARHOPS distance estimation query-reply service



## TRIANGULATION



## DISTANCE ESTIMATION EUCLIDIAN GEOMETRY

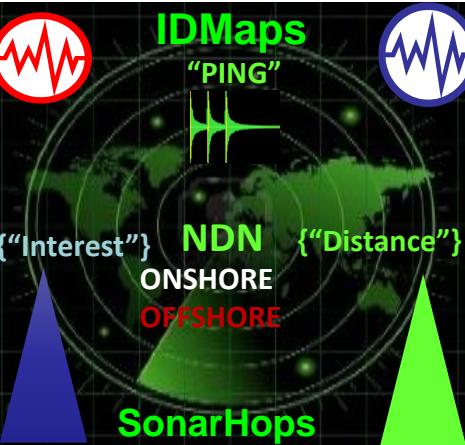


IDMaps assists Network Time Protocol (NTP) servers establish long term peering relationships



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

vector



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



- End-state Bitcoin quantity will be fixed like land

“Bitcoin as protocol of ownership, not transfer”

Coins 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





# Commodities Index Basket / FIAT PRICE Discovery Algo / MEDIATION



ALGORITHMIC STABLE COIN    EQUILIBRIUM ALGORITHMS  
COMMODITY INDEX BASKET    PRICE DISCOVERY ALGOS

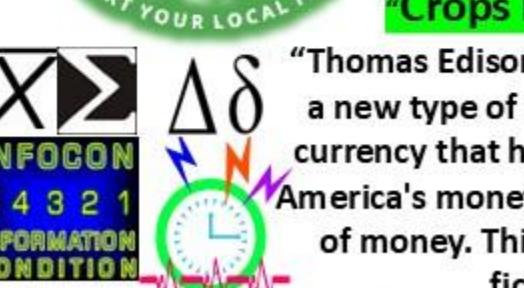


COMMODITY FUTURES TRADING COMMISSION



SLA Service Level Agreement  
CLOSER = CHEAPER = CLOSER

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



Edison's Monetary Option  
Cambridge University Press 2009

"Crops hold their value best over time"

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

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



</Organizational\_ID> </Personal\_ID>

{ "URN" }

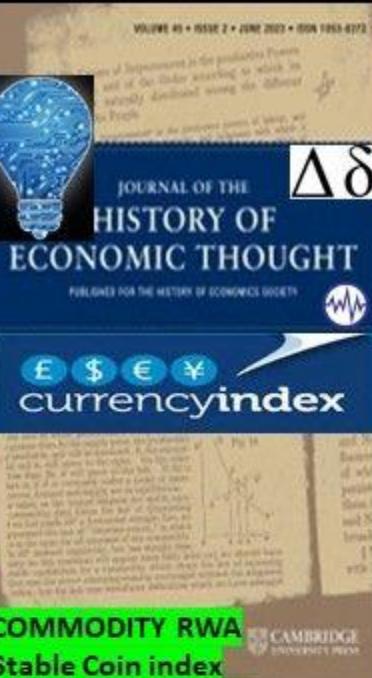
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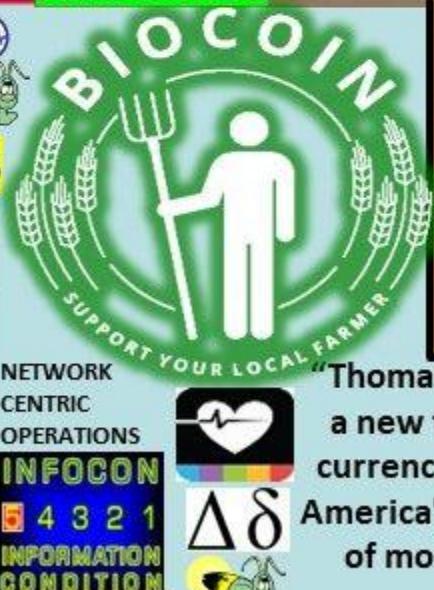
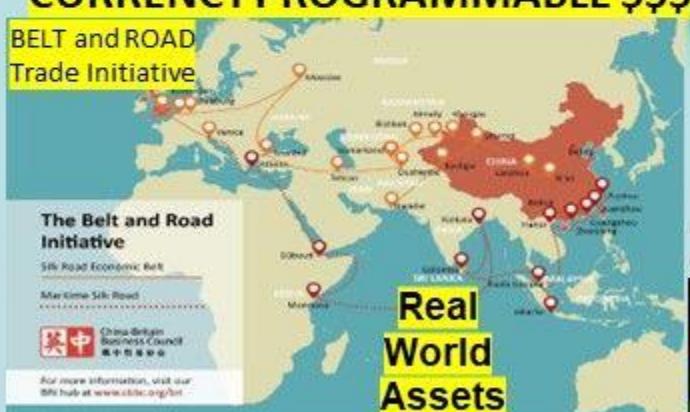
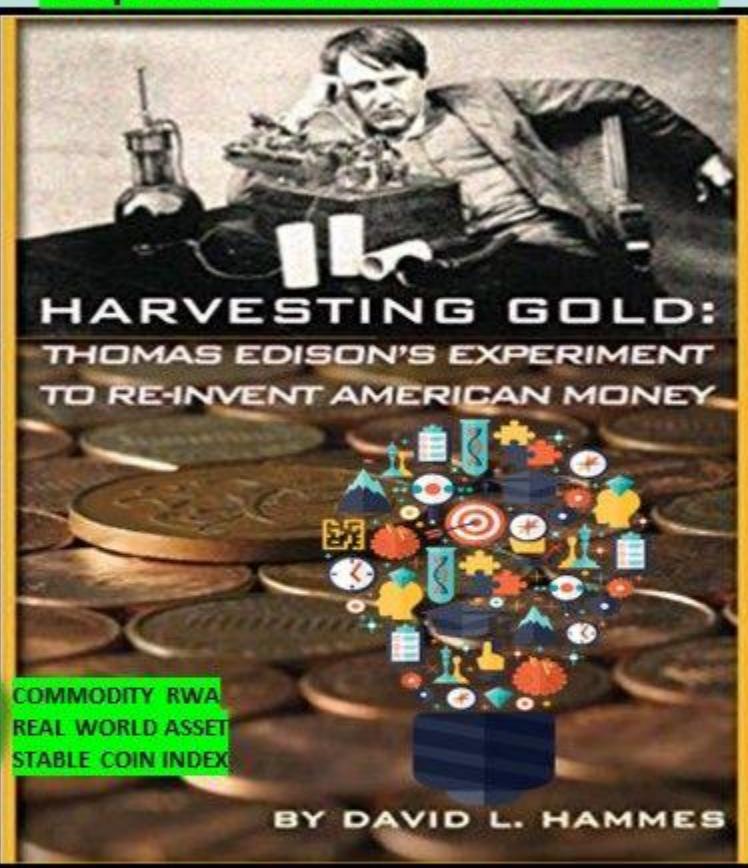
{ "WIF" }

# Tokenization of Physical Assets Enables Economy Of Everything



# Thomas Edison's Monetary Option Cambridge University Press 2009

"Crops hold their value best over time"



**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

"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

■ { "URN" } </Organizational\_ID>  
 { "Org\_ID" } ■ { "URN" } </Personal\_ID> { "Org\_ID" } ■ { "URN" }  
 USPTO 13/573,002 The Heart Beacon Cycle Time – Space Meter

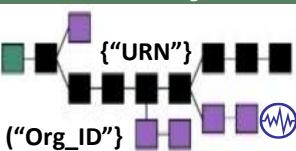
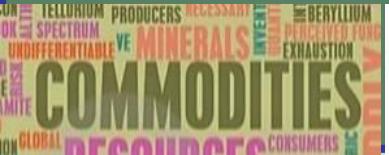
# Numismatics: study of currency

Marcus Aurelius



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

## THE TERRA (TRC) Trade Reference Currency



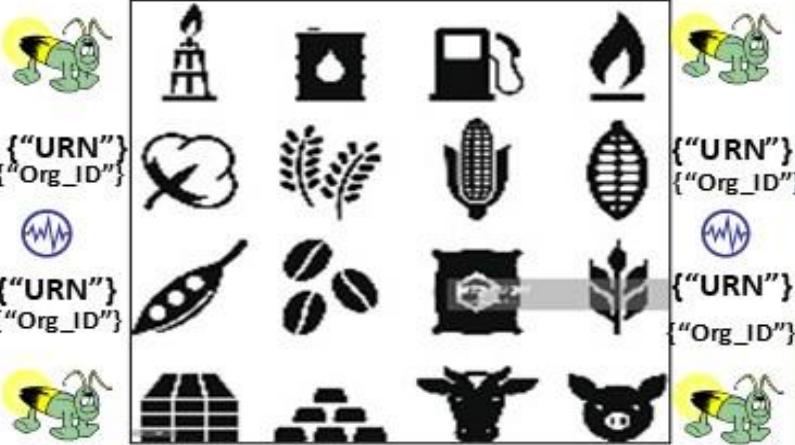
Terra Trade Reference Currency TRC  
"world currency" Bernard A. Lietaer  
Belgian economist proposed 1991  
Basket of 9-12 most important  
commodities. Public issued  
demurrage fees for storage,  
shipping, handling..



### Roman Denominations



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

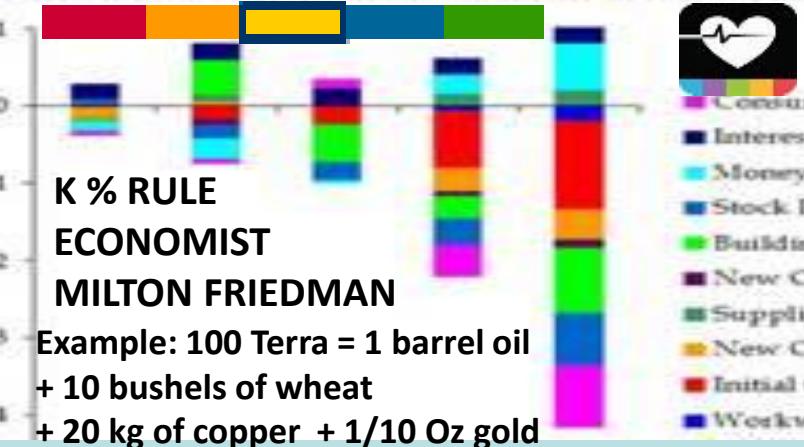


Images Courtesy Of: Roma Numismatics Ltd, Numismatica Ars Classica, Bertolami Fine Arts, Nomos, & The State Museum in Berlin

### 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]

### LEADING ECONOMIC INDICATORS

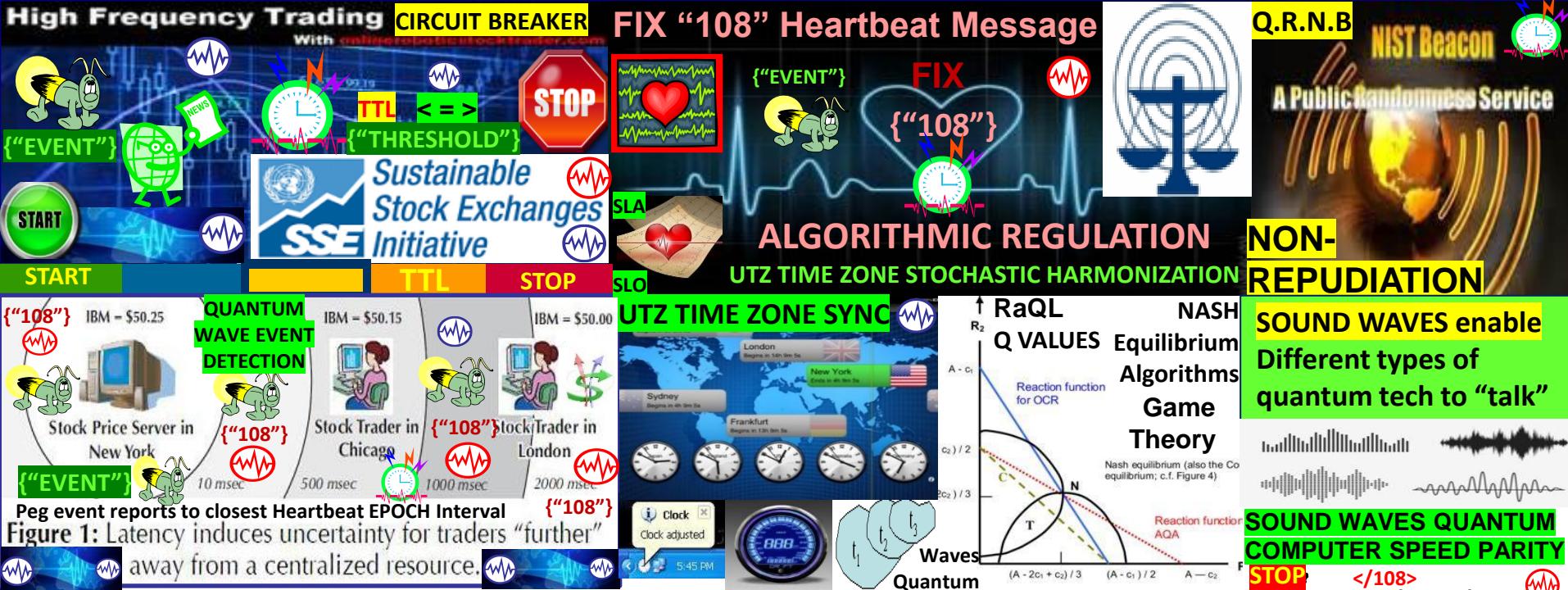




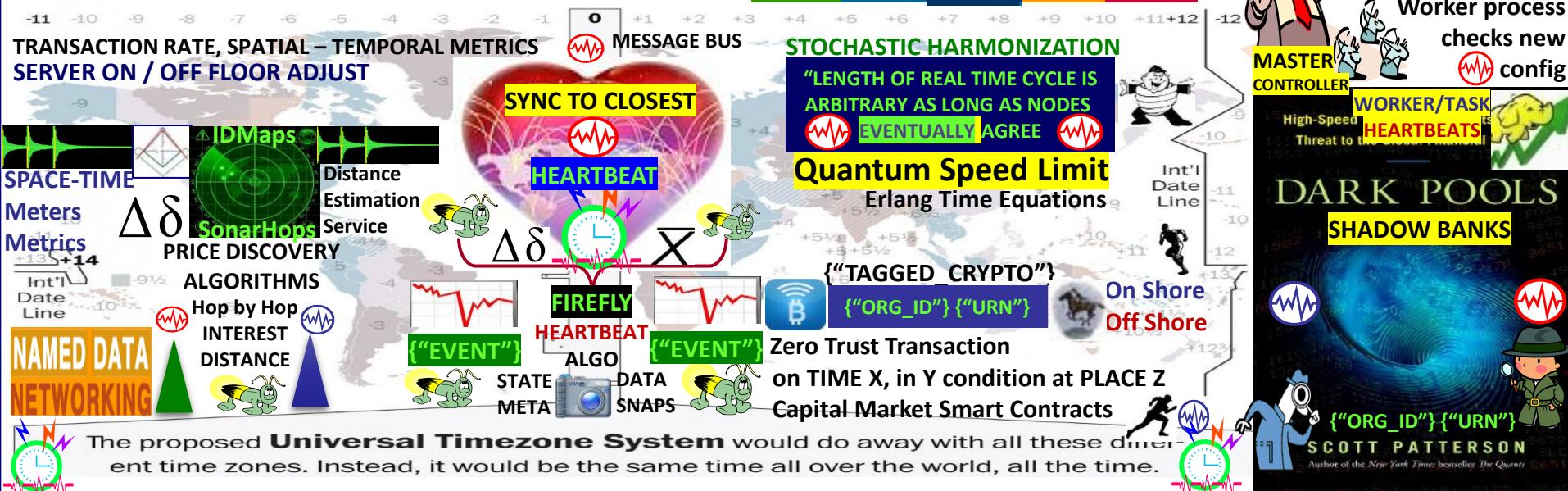
The current standard time common throughout the world is based on a 24-hour clock, with zones that are either 12 hours ahead or behind **Coordinated Universal Time (UTC)**. However, these time zones are decided upon by individual governments, without overall coordination and can even extend fourteen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

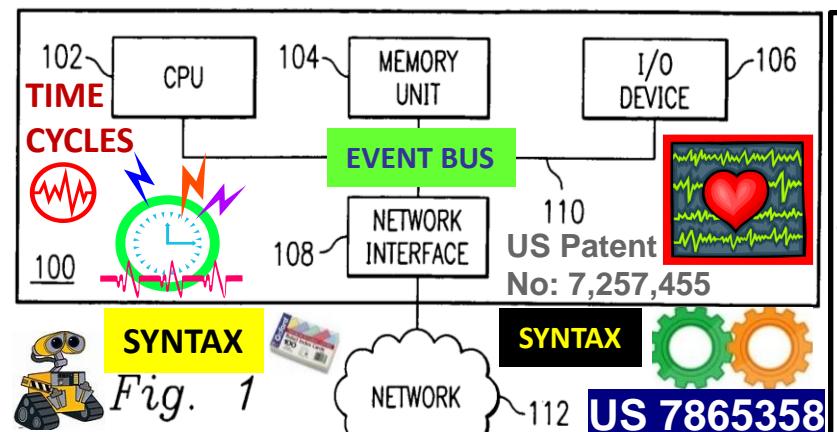


The proposed **Universal Timezone System** would do away with all these different time zones. Instead, it would be the same time all over the world, all the time.



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





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.

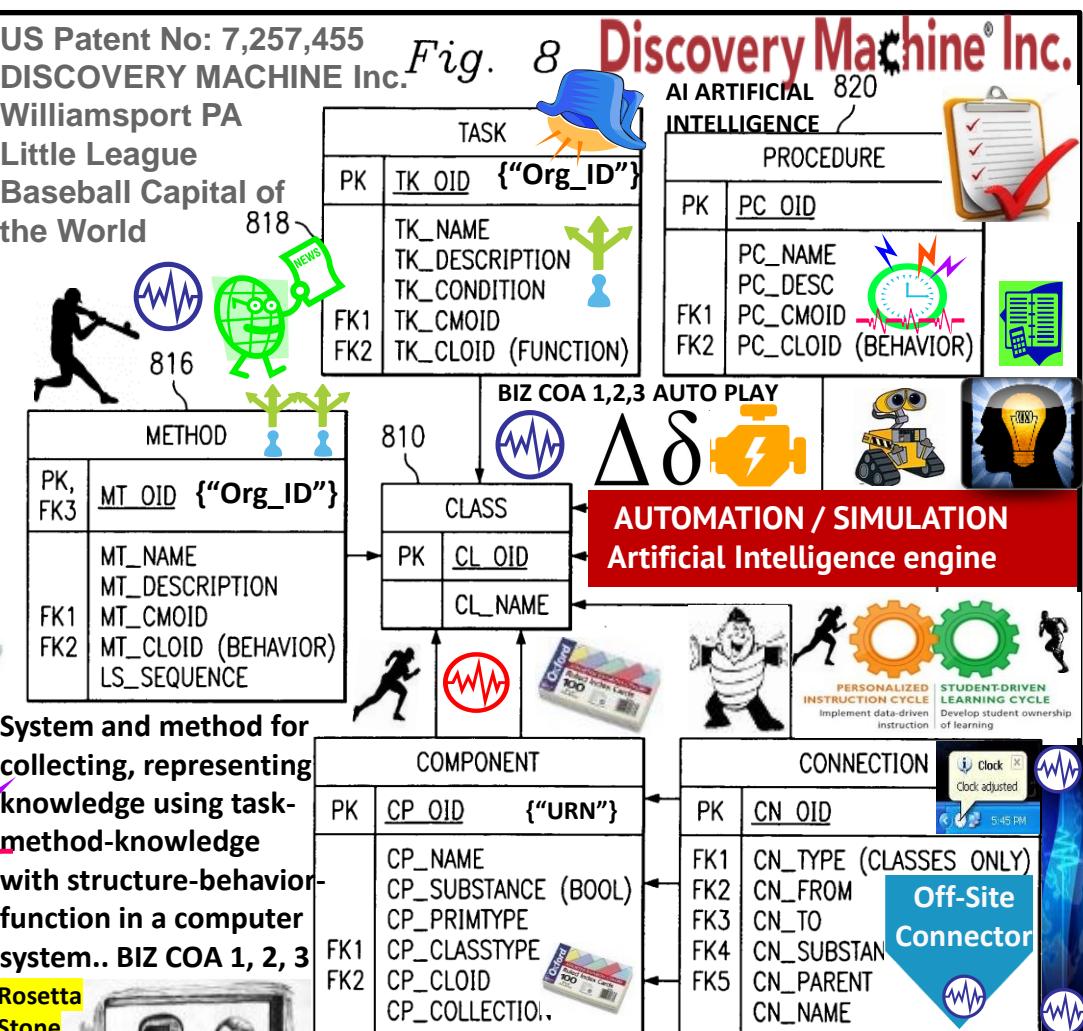
**US 7865358 CLAIM 1.** method converting textual data from source form to target forms, where target form differs from source form's linguistics, syntax

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.

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

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

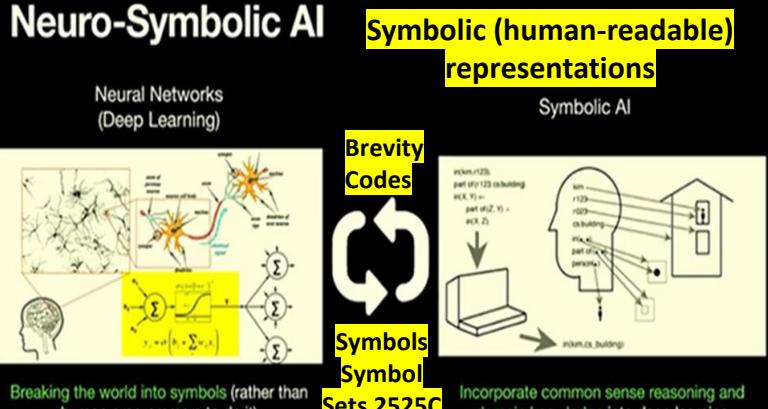


System and method for collecting, representing knowledge using task-method-knowledge with structure-behavior-function in a computer system.. BIZ COA 1, 2, 3



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



2525 Series  
Symbol Set  
Libraries

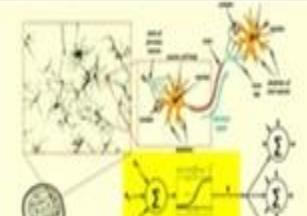
FRT CP CLOUD

ABC A OPS CODE BREVITY CODES

Neuro-Symbolic AI

Symbolic (human-readable)  
representations

Neural Networks  
(Deep Learning)



Breaking the world into symbols (rather than  
sets 2525)

Brevity  
Codes

Symbols

Symbol

Symbolic AI

Incorporate common sense reasoning and



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



Confucius

Alpha-numeric OPS CODE

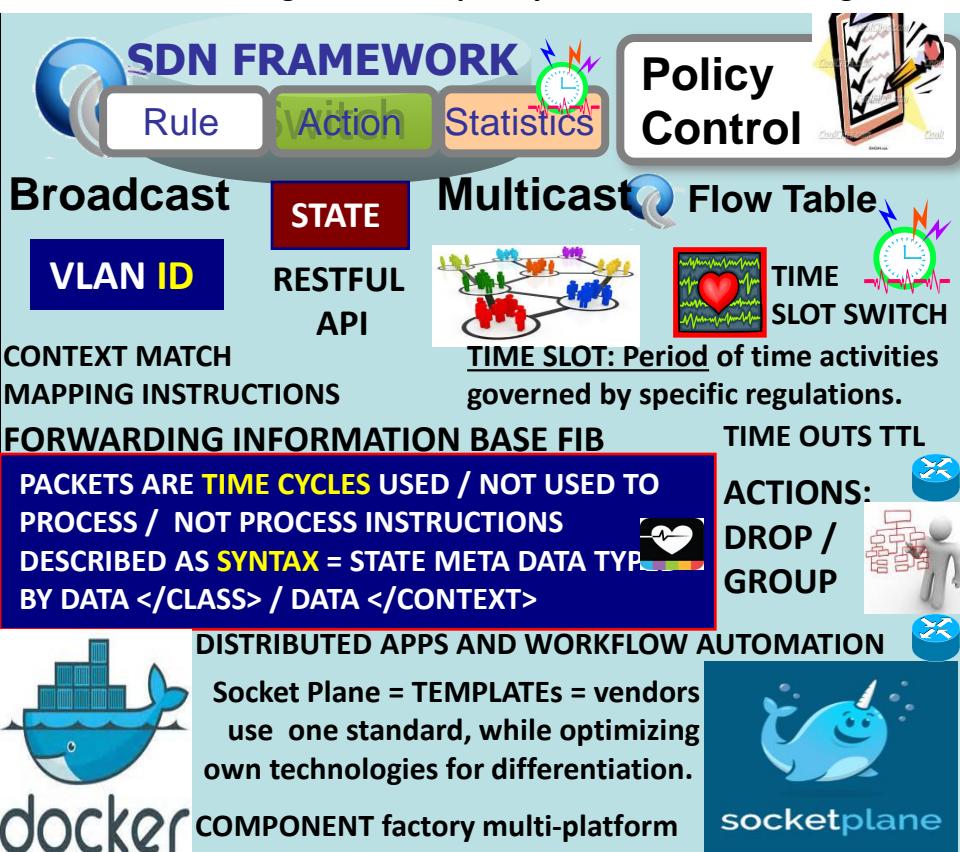
Brevity codes mapped to symbols,  
Symbol sets = structured data





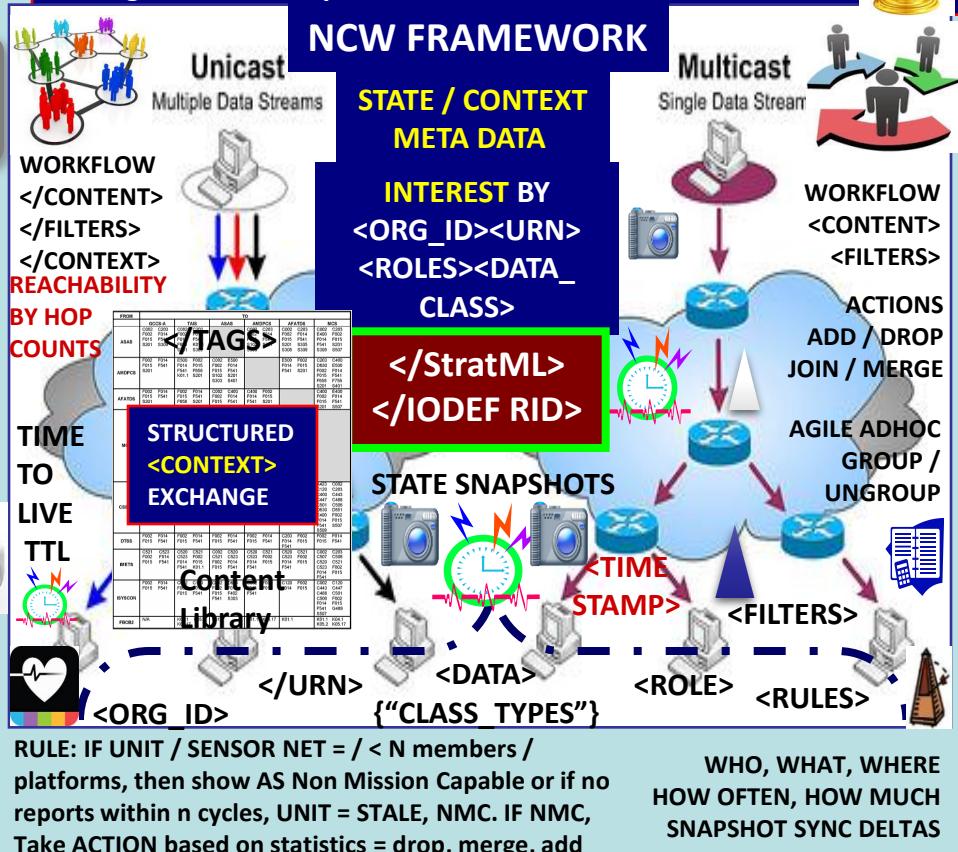
- SDN is a *framework* to allow network administrators to *automatically* and dynamically manage and control a *large number* of network devices, *services*, topology, traffic paths, and packet handling (quality of

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

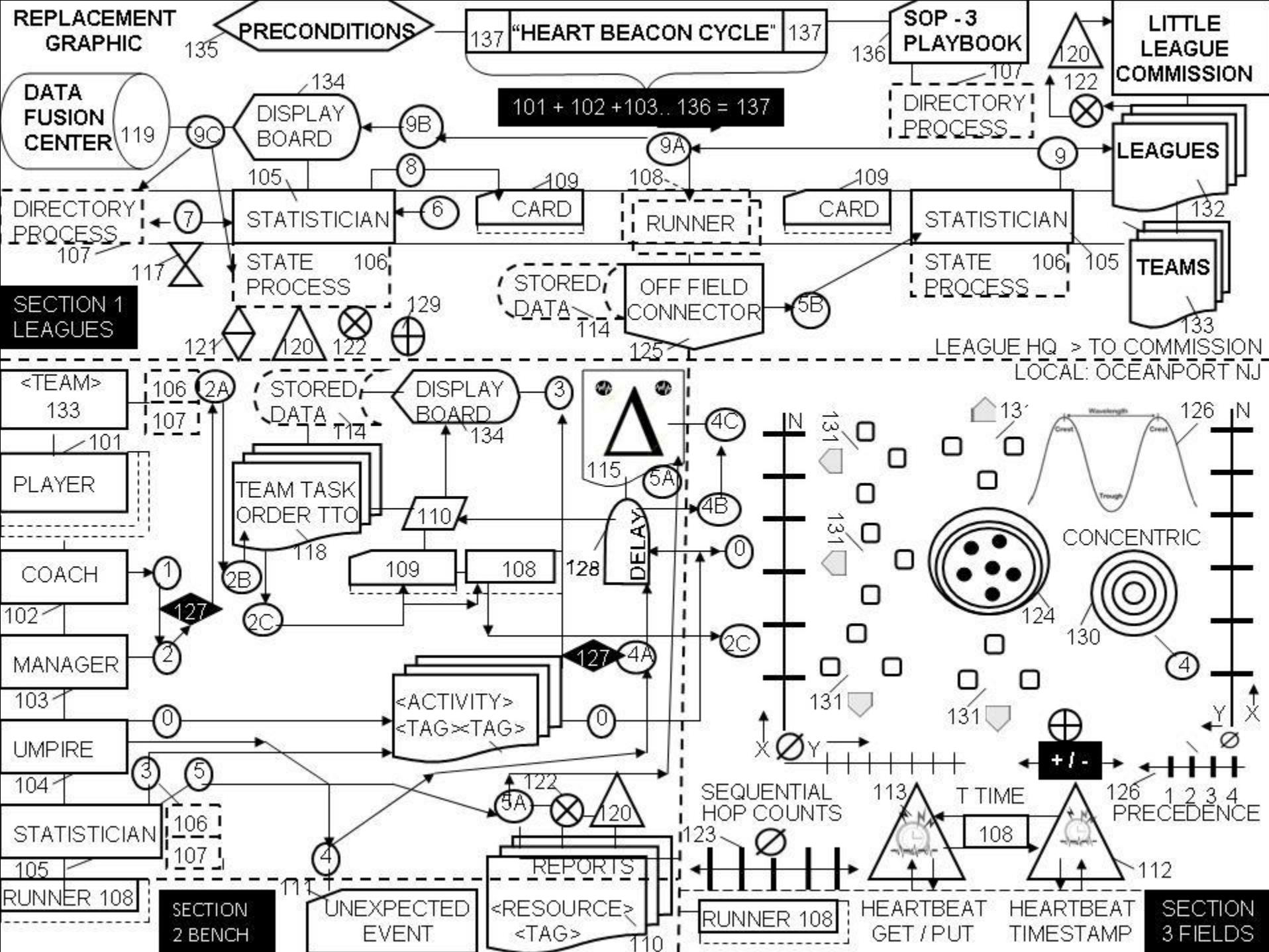


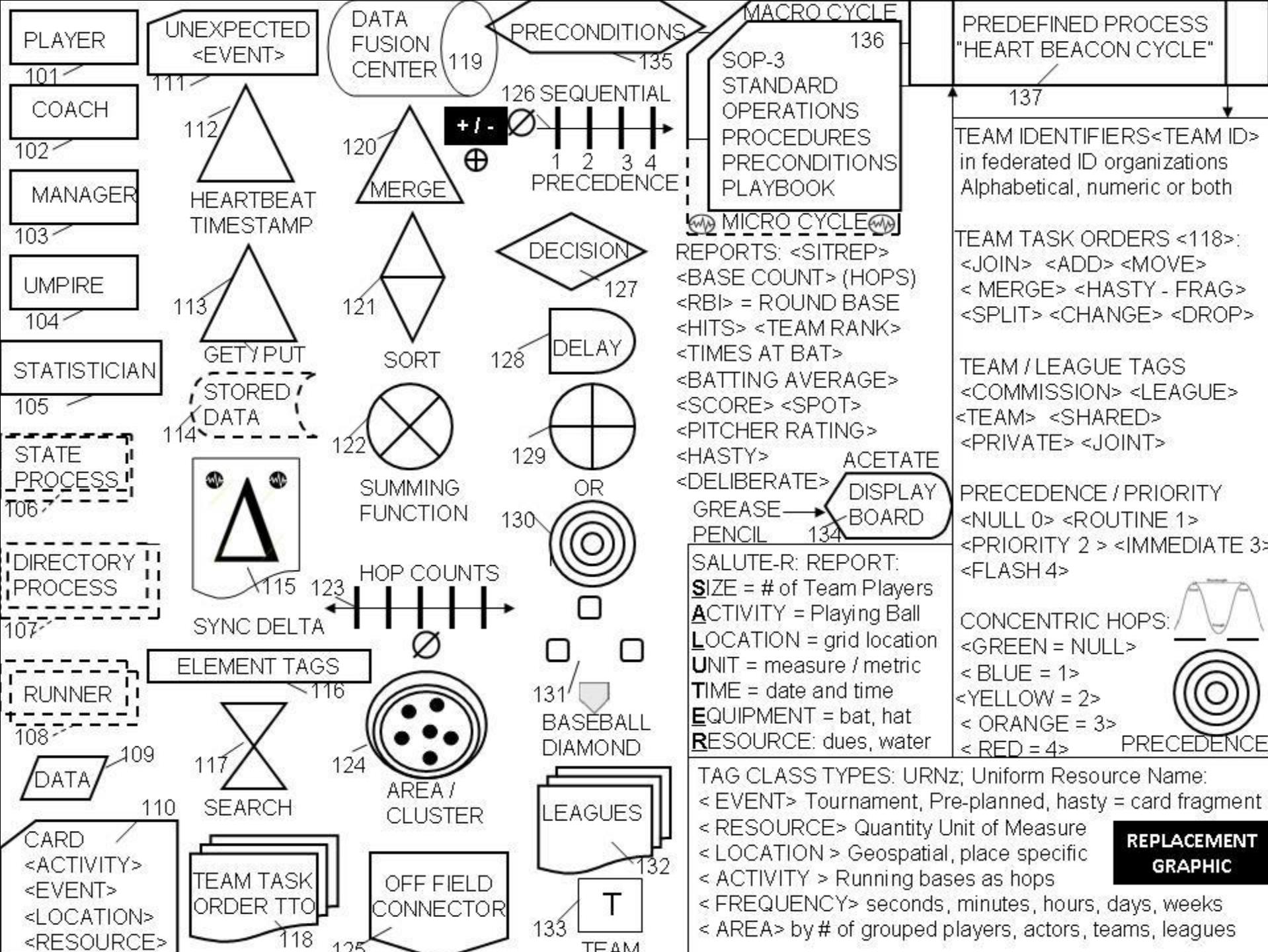
Netcentric / "network-centric" participating in a continuously evolving, complex community of people, devices, information and services interconnected by a network to optimize resource management and provide information on events and conditions.

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









# BUILDING BLOCKS



TASK ON / OFF

201

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



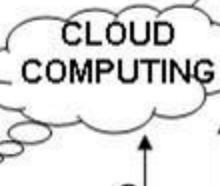
MACRO CYCLES



.0001

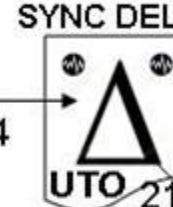
MICRO CYCLES

216



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

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



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

215 LEADER'S  
INTENT  
DECISIONS



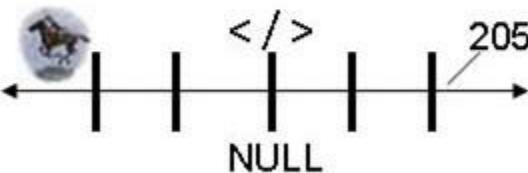
SYNC DELTA METRICS IN SLA CLAUSES AS  
MOE, MOP METER IN TAX CODES, TRANCHE  
CLASSES / RATINGS ARBITRAGE TRIGGERS

203

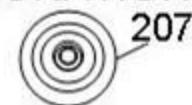
**B3: BEACON TECH TYPE I: PAUL REVERE LINEAR, SEQUENTIAL HOP COUNTS**



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



LENGTH, THRESHOLD, INTENSITY, DURATION



208



APPLIQUE' OVERLAYS



204

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

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

209



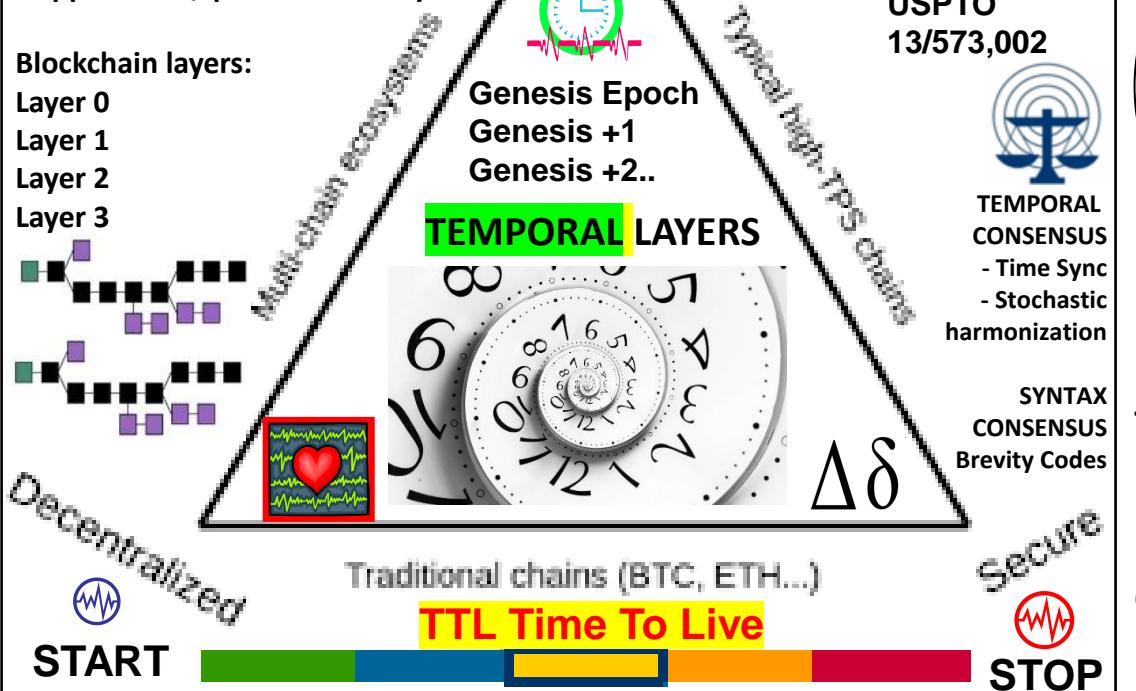
# Blockchain Quad-lemma

"five layers of blockchain tech:

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

Blockchain layers:

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



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

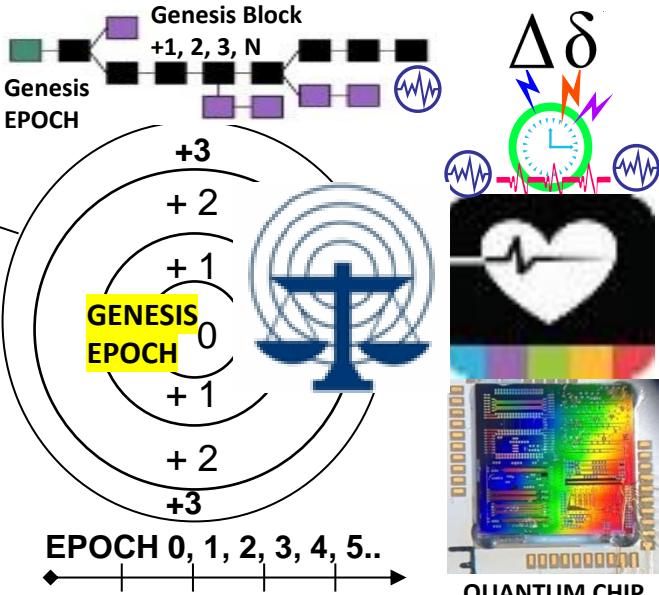
**Database Flat File**  
"BLOCKCHAIN" = LEDGER / Database

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

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

NET, Net of programmable \$\$\$  
Programming Reality Ground Truth

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



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

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

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

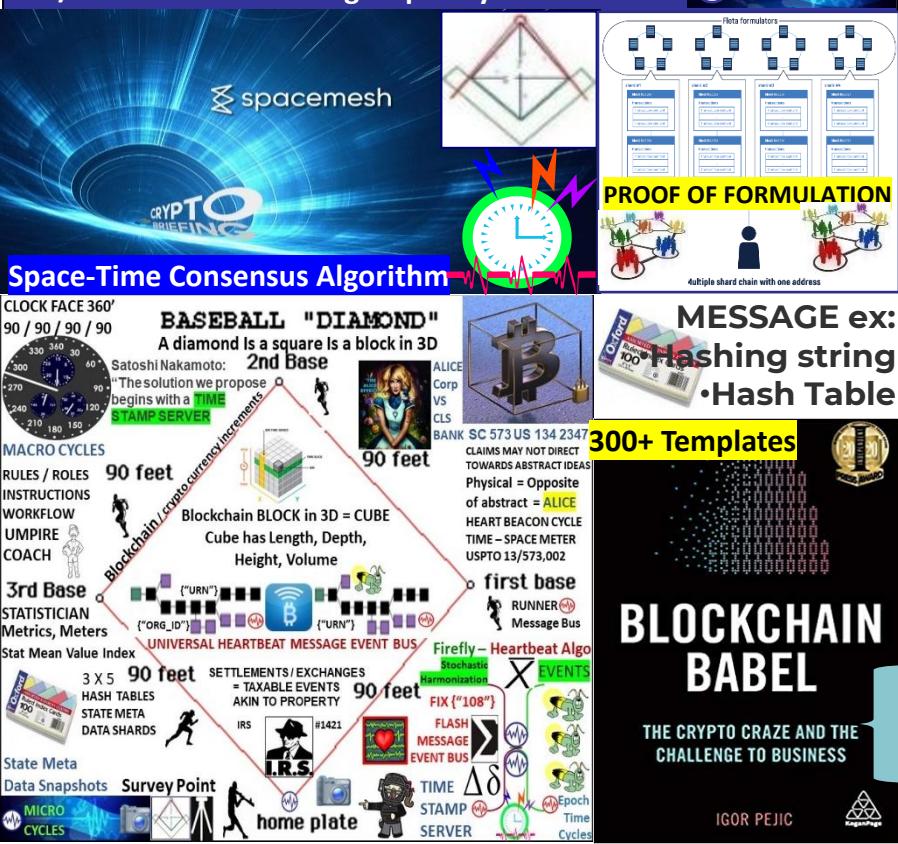
**Q: Which meme describes the myriad blockchain consensus algorithms the most comprehensively that uses an algorithm (based on nature = “shortest path to the knowledge of truth Luxor Temple) enabling distributed system of systems geo-spatial, UTZ Universal Time Zone temporal, semantic - syntactic sync,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

Blockchain Consensus Algorithms & Mechanisms



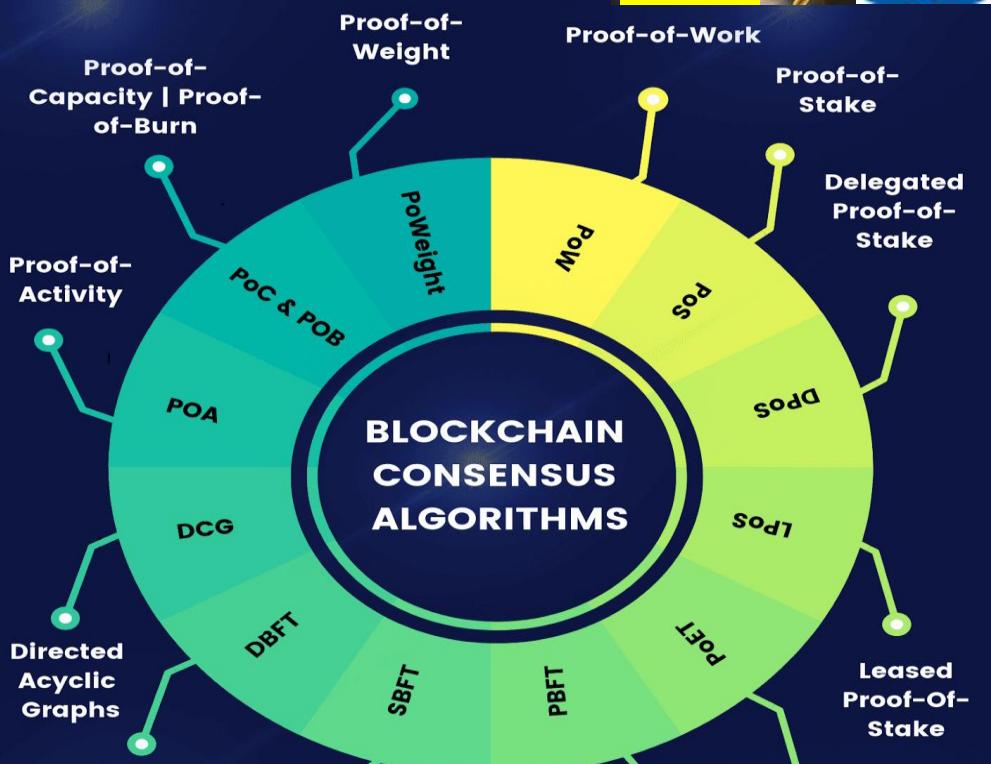
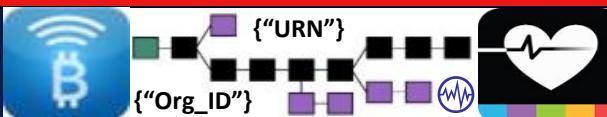
In the world of blockchain consensus algorithms, consensus is the **HEART OF THE BLOCKCHAIN NETWORK**. Its main purpose is to achieve agreement on transactions among a distributed system (s)

**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 VAT TAX JARGON

# SYNTAX LEXICON

## ESCODES - Symbol Sets

e: Simplified

## Simplified Byzantine Fault

**Tolerance**

1

Practical

## Byzantine Fault

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

SOURCE: <https://developcoins.com/blockchain-consensus-algorithms>

# STABLE PROTOCOL THREE MAIN TYPES:

DeFi-Native: Cap Labs, Elixir, Level

Collateralized Debt Positions: Ducat, Felix

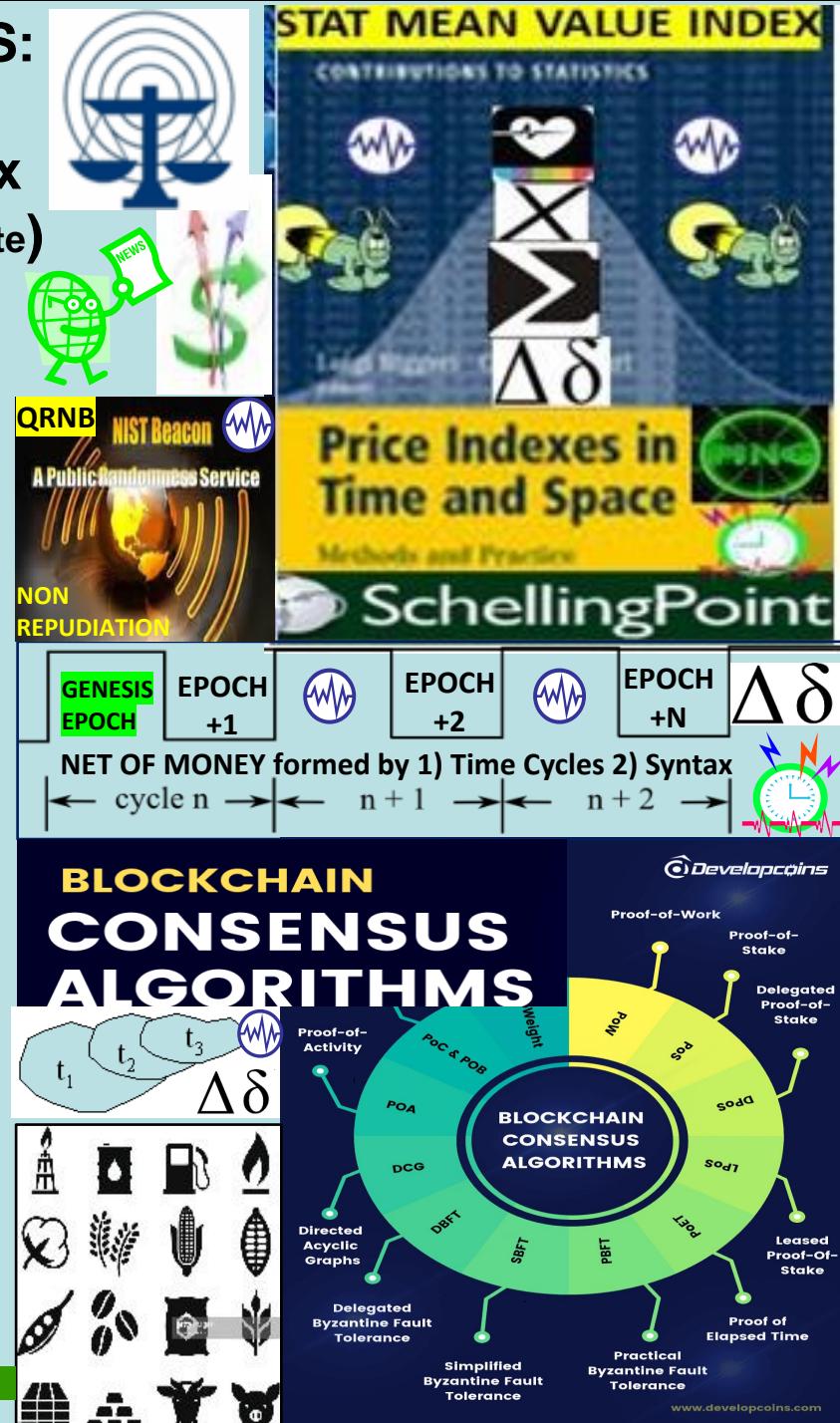
RWA-Backed:, EAnzen, Superstatethena (UStb update)

**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

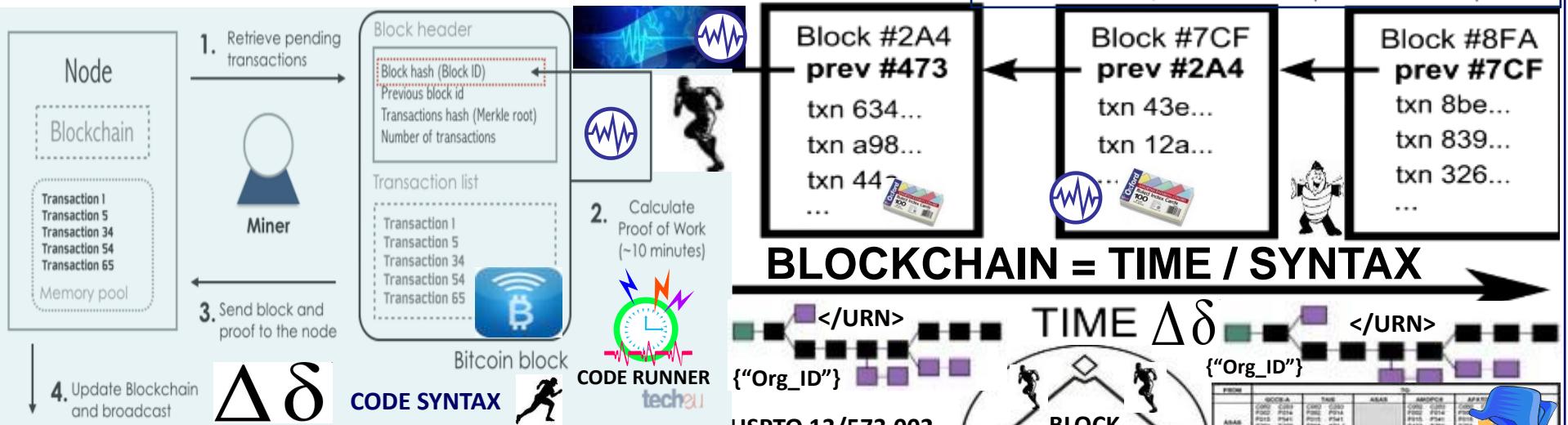




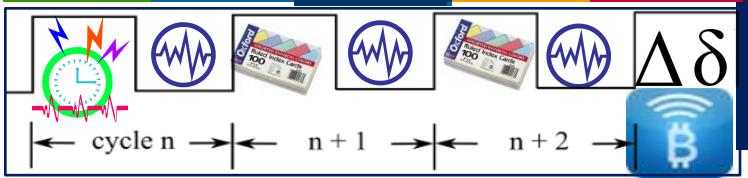
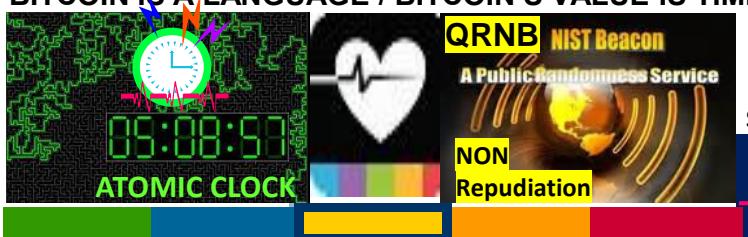




Alice Corp. v. CLS Bank International, 573 U.S. 134 SCt 2347 (2014) is a 2014 decision of the United States Supreme Court about patentable subject matter (patent eligibility).<sup>[2]</sup> The issue in the case was whether certain claims about a computer-implemented, electronic escrow service for facilitating 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"**

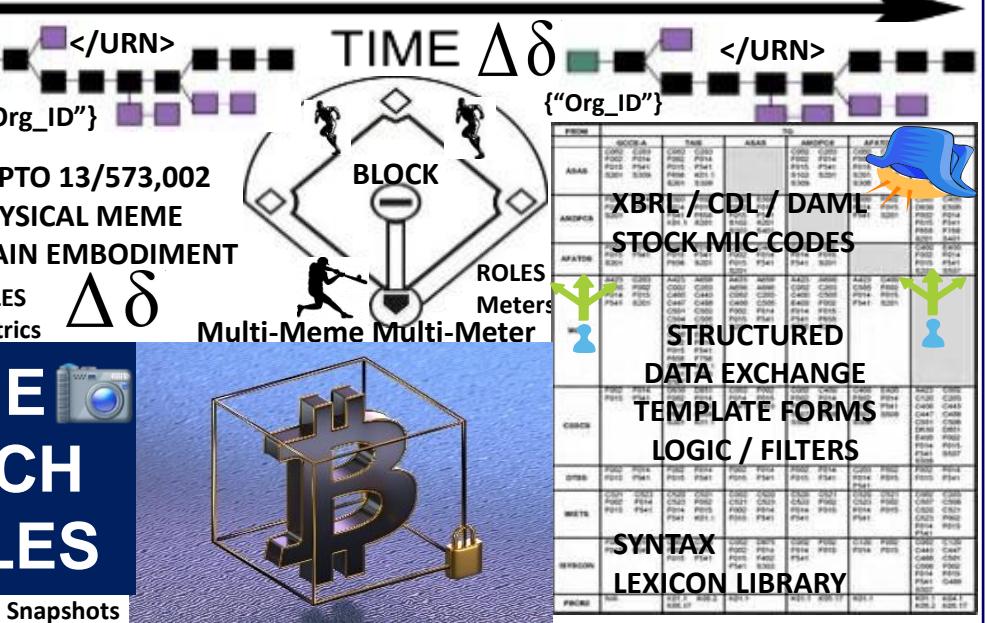
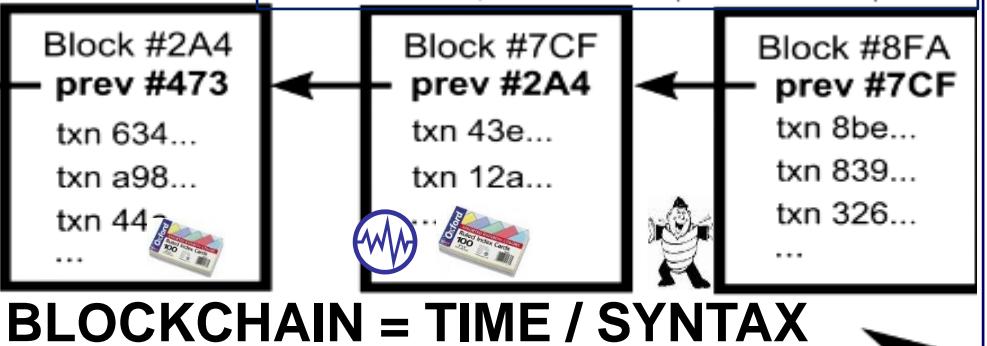
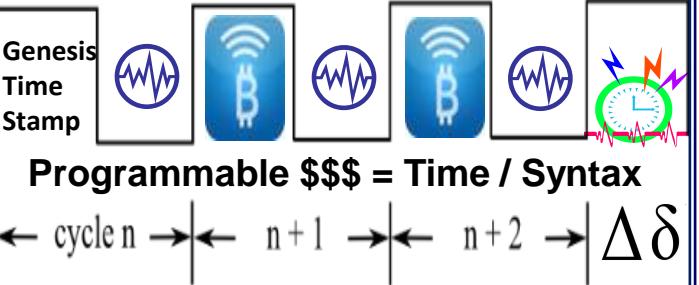


# TIME EPOCH CYCLES

State Meta Data Snapshots



"BITCOIN MAKES MONEY HEART BEACON CYCLE PROGRAMMABLE. TIME – SPACE METER MONEY IS STRUCTURED DATA SIMPLY DATA EXCHANGE"

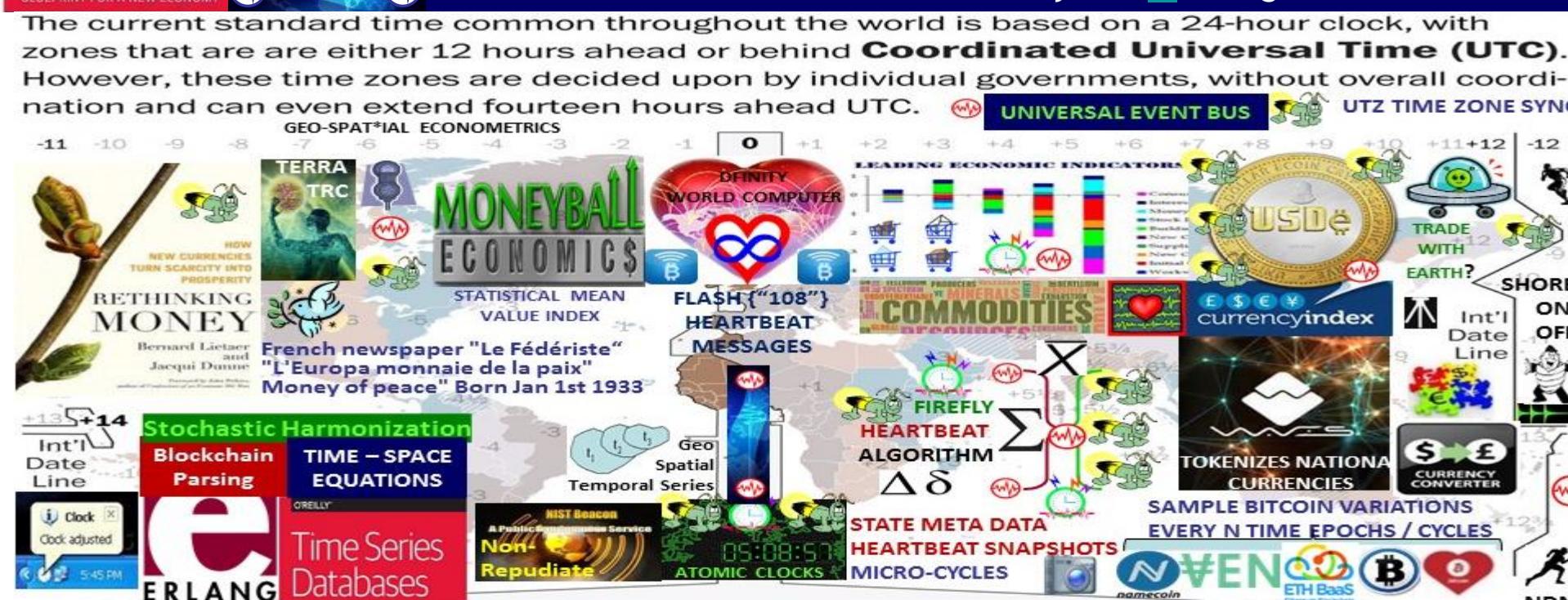




The current standard time common throughout the world is based on a 24-hour clock, with zones that are either 12 hours ahead or behind **Coordinated Universal Time (UTC)**. However, these time zones are decided upon by individual governments, without overall coordination and can even extend fourteen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

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



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



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



### Functional Sequential Erlang

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

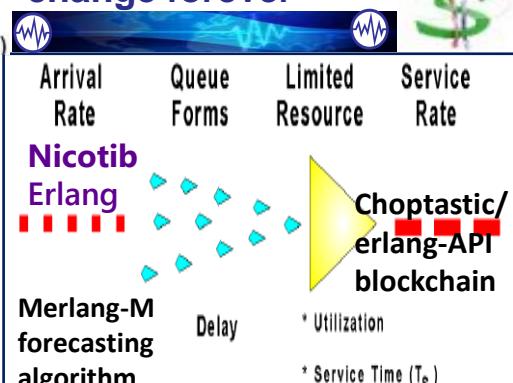
### SORTING ALGO'S

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



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

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



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

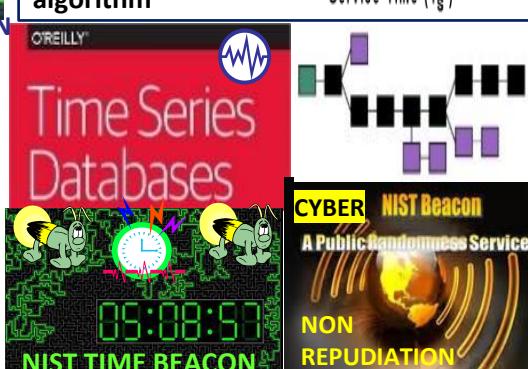


distributed "noSQL" database, embedded right into Erlang, supports indexing, replication, transactions, and fail-over

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

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

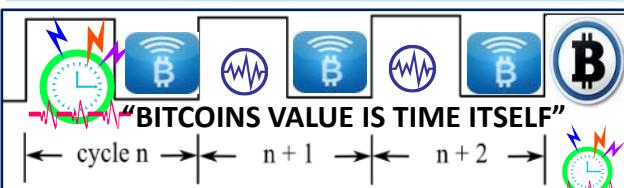
FROM	TO/CC-A	THREE	AMAZON	AMAZON	WIKI
XBRL	/ CDL / DAML				
ALPHA	NUMERIC				
BREVITY	CODES				
AZURE	BLETCHLEY				
STRUCTURED					
MILITARY	MESSAGE				
TEMPLATE	FORMS				
LOGIC /	FILTERS				



# 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

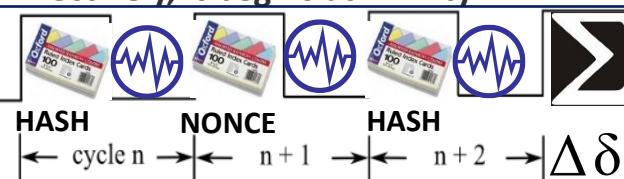


THROTTLE equivalent to difficulty. State  
•target = maximum value of 8 bytes Snap  
( $2^{64}$ ) divided by the difficulty.

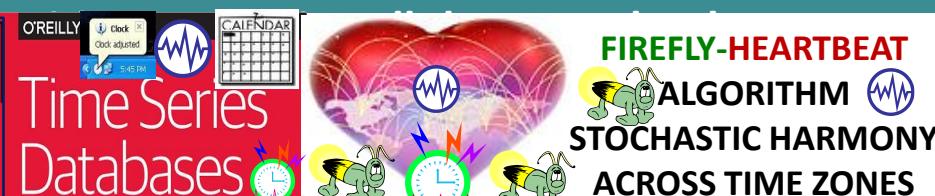
NONCE increments from 0..N until the target is met.



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



MESSAGE example:  
Hash string  
•Hash Table

300+Message Templates

| FORM    | FORMAT |
|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| OXFORD  | FORMAT |
| APAB    | FORMAT |
| ANPAB   | FORMAT |
| CNN     | FORMAT |
| CBSN    | FORMAT |
| CPB     | FORMAT |
| MSNBC   | FORMAT |
| NBC     | FORMAT |
| REUTERS | FORMAT |

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

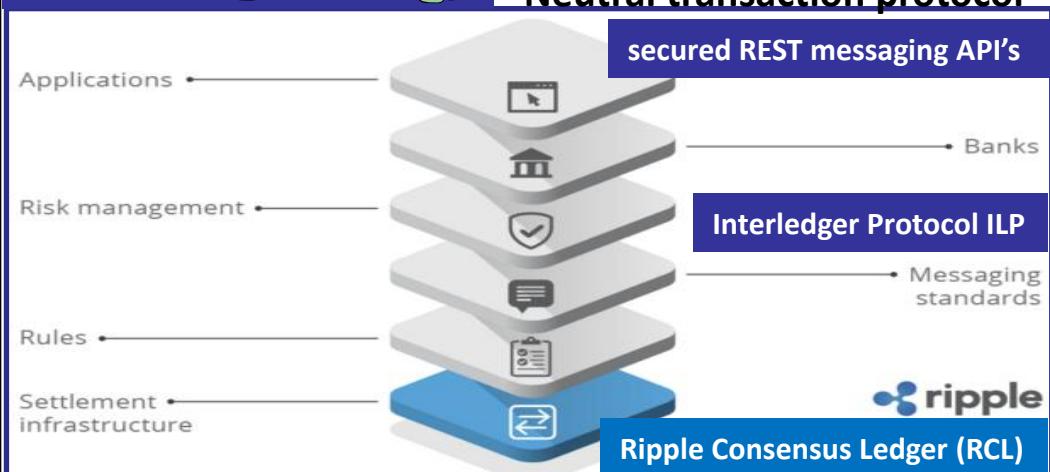
## **FEDERATION CONSENSUS ALGORITHM / PROTOCOL LIQUIDITY ON DEMAND**

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



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

## LIQUIDITY, ORGANIZATIONAL INTEGRITY OF TRADE FEDERATIONS

## Neutral transaction protocol

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

A horizontal strip of five cartoon ant characters. From left to right: 1) A red ant with a single antenna and a worried expression. 2) A red ant with a single antenna and a neutral expression. 3) A green ant with two antennae, wearing a stethoscope around its neck, looking at a small clock. 4) A black ant with two antennae, looking surprised or shocked. 5) A green ant with two antennae, wearing a red bow tie and a wide, excited smile.

**MATCH EVENT REPORTS**  **TO CLOSEST HEARTBEAT** 

TO CLOSEST HEARTBEAT CYCLE

MESSAGES {108}  $\Delta\delta$

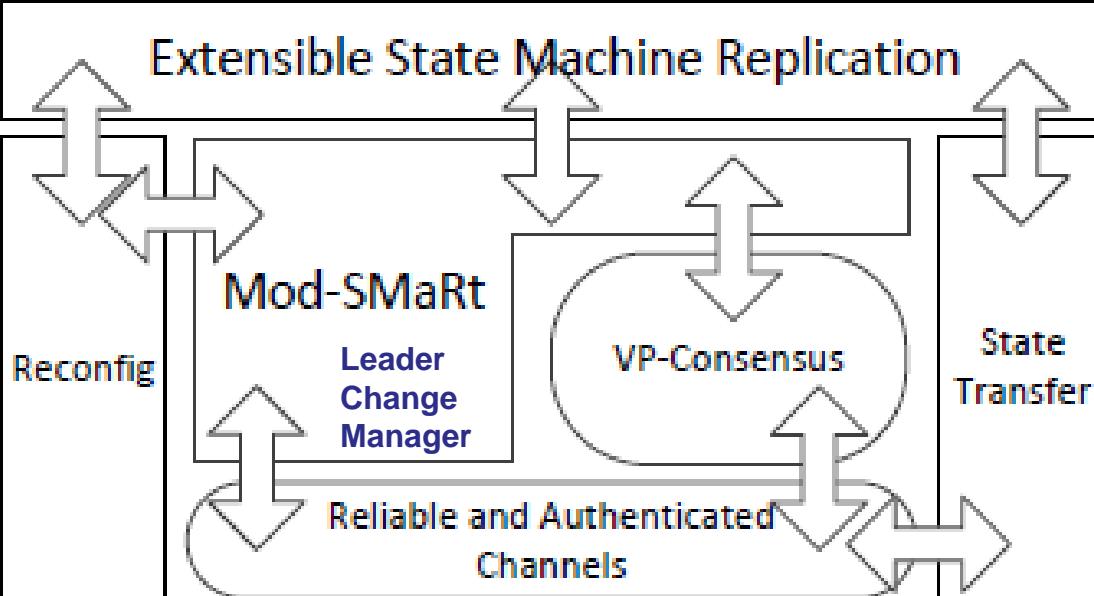
FIFTEEN. HEARTBEAT ALGORITHM

NONCE FIREFLY-HEARTBEAT ALGORITHM  
MICRO-CYCLE STATE META DATA SNAPSHOT

MICRO-CYCLES STATE META-DATA SNAPSHOT | STOCHASTIC HARMONIZATION ACROSS LTZ TIME ZONES

## Byzantine Fault-Tolerant State Machine Replication

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



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

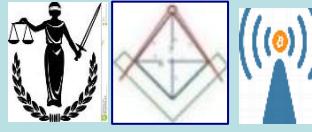
**BFT-SMART needs an eventually synchronous system**

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

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

## **US Ct ALICE CORP V CLS BANK**

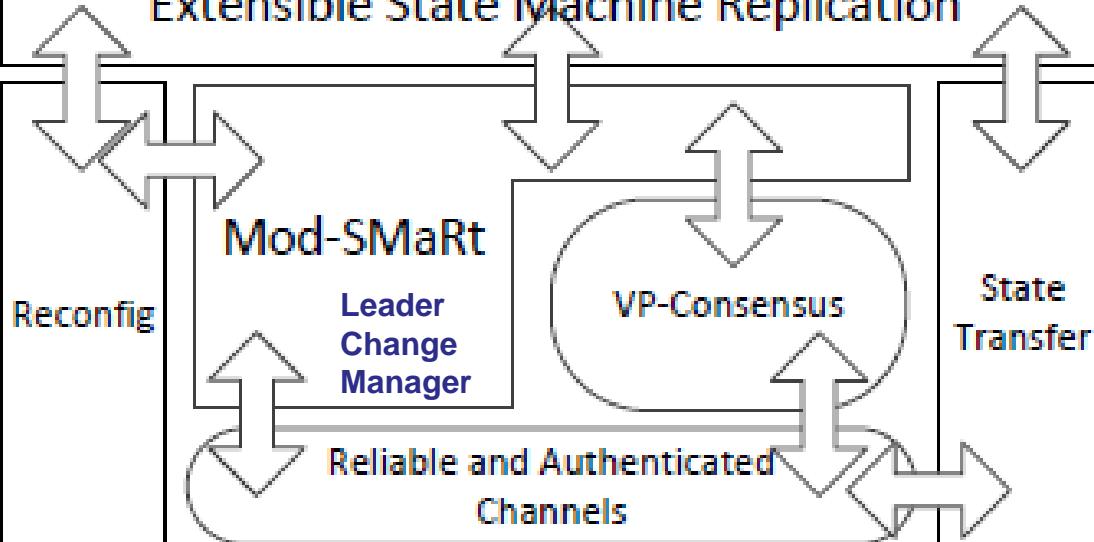
## **PHYSICAL = OPPOSITE OF ABSTRACT**



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

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

# Extensible State Machine Replication



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

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

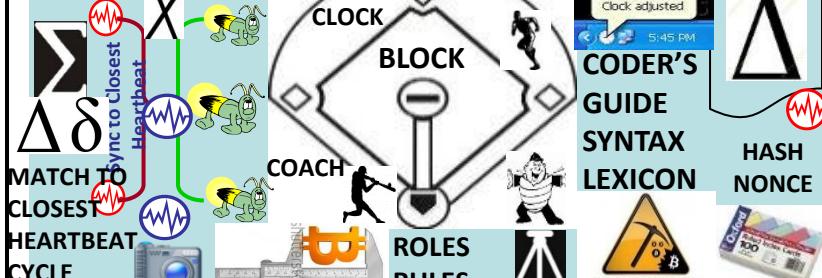
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KOO.99 HEARTBEAT SYNC DELTA STATE META DATA SNAPSHOT



FIREFLY-HEARTBEAT  
ALGORITHM

1



# MICRO-CYCLE STATE META DATA SNAPSHOT AGGREGATED INTO MACRO OPERATION CYCLE RECONFIG MESSAGE

## BUILDING BLOCKS:

- TIME CYCLE EPOCHS
  - SYNTAX INSTRUCTIONS



- LINEAR, SEQUENTIAL
- GEO SPATIAL, TEMPORAL

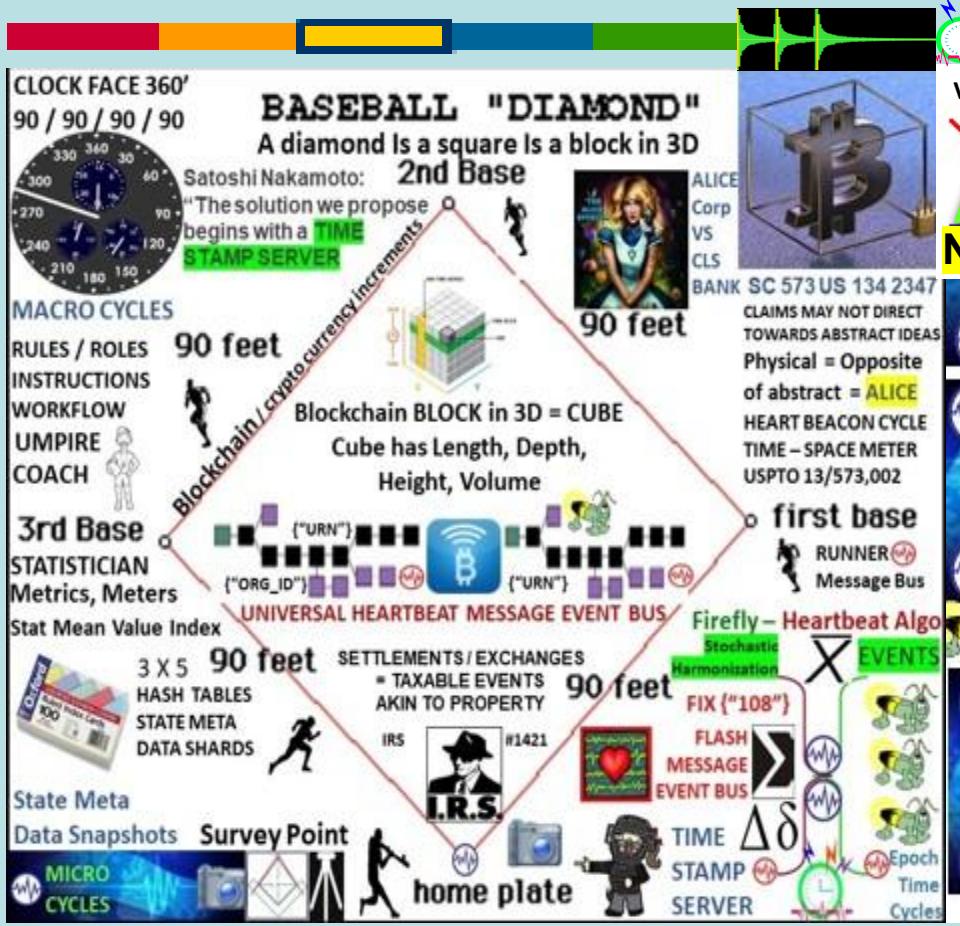
**Firefly inspired Heartbeat Synchronization** nodes strive to sync in a distributed system. Nodes generate periodic “heartbeat” events approximately at the same time.

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”

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



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

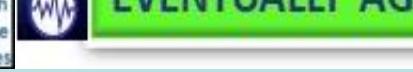
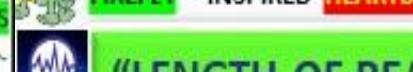
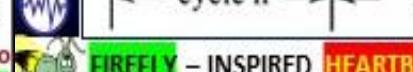
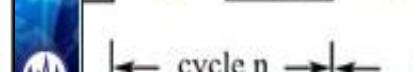
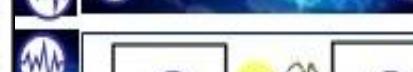
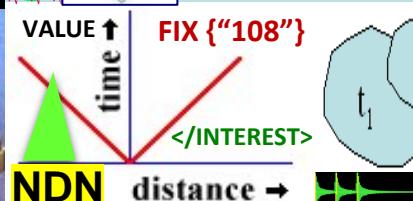
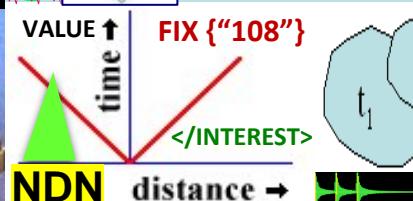


The Volumetric Weight is often referred to as dimensional weight

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



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



**"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



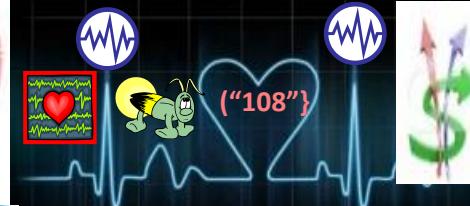
- Creates an online store for users to sell goods for Bitcoin
- Connects these stores directly to each other on a global network
- Users browse individual stores, search for products across whole network
- A buyer directly connects, purchases good from the merchant using Bitcoin
- Bitcoin payments via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

OPENBAZAAR.ORG  
BLOCKCHAIN ARBITRAGE



SLA CLOSER = < \$ CLOSER = < CO2

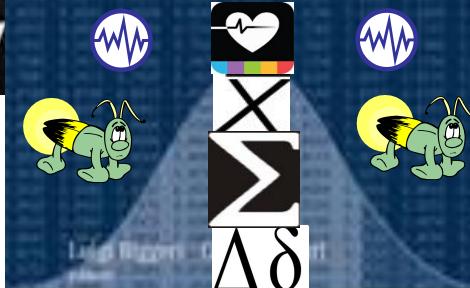
COMMODITIES  
ECONOMIC HEARTBEAT



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

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”



STAT MEAN VALUE INDEX

CONTRIBUTIONS TO STATISTICS



Price Indexes in Time and Space  
Methods and Practice

SchellingPoint

Free, open markets: Commodity / Currency Index

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

• VALUES: Privacy </Org\_ID>



HASH Values  
Nonce Values </Org\_ID>



COMMODITIES

Federation

ORG ID

Gateway

FIREFLY – HEARTBEAT ALGO

SYNC EVENTS

$\Delta\delta$

TO CLOSEST HB CYCLE



SchellingPoint

Bitcoin: OpenBazaar transactional currency



Cryptographic Security

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

## DON: DECENTRALIZED ORACLE NETWORKS



### Explicit Staking

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

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

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

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



INFOCON  
4 3 2 1  
INFORMATION CONDITION

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

ALERT LEVEL >  
NEWSCAST ZONE

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



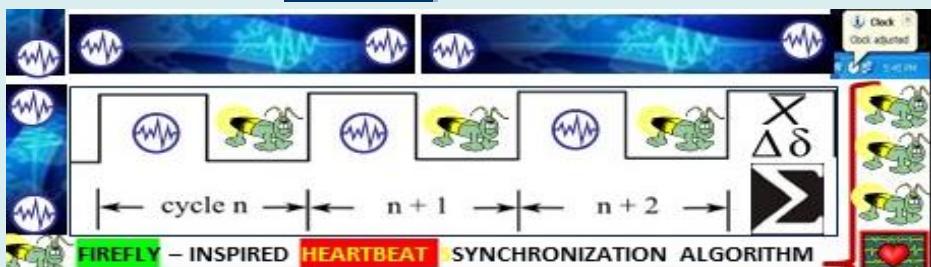
## DISTRIBUTED AUTONOMOUS ORGANIZATIONS DAO

# Heart Beacon Cycle

### FEDERATE / TRADE FEDERATIONS

#### Linear Sequential Meme

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

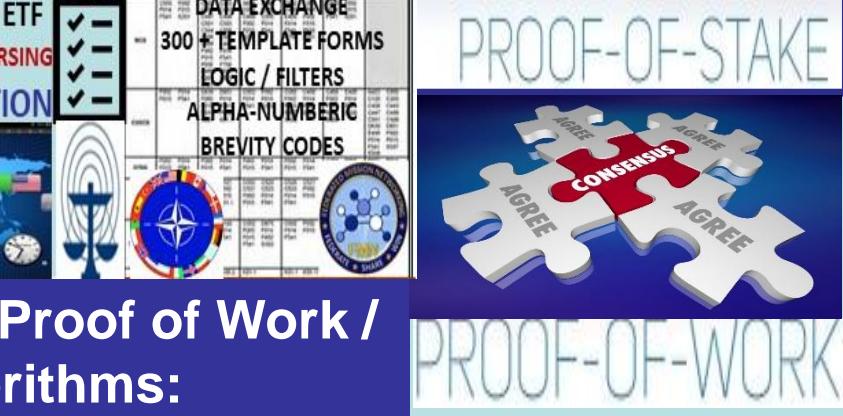
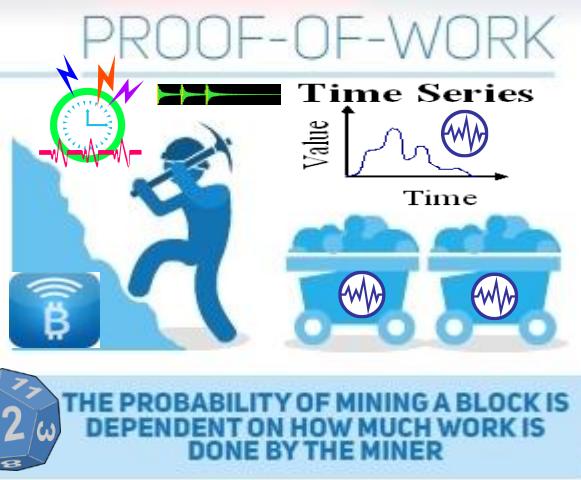
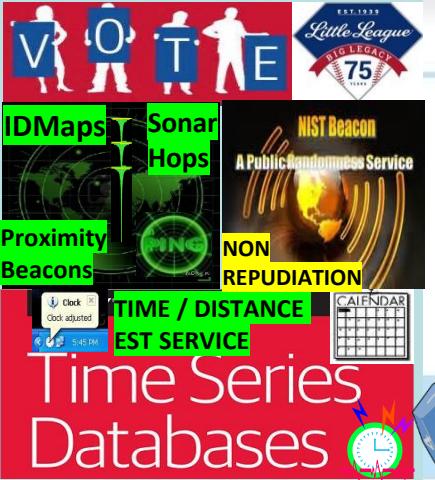




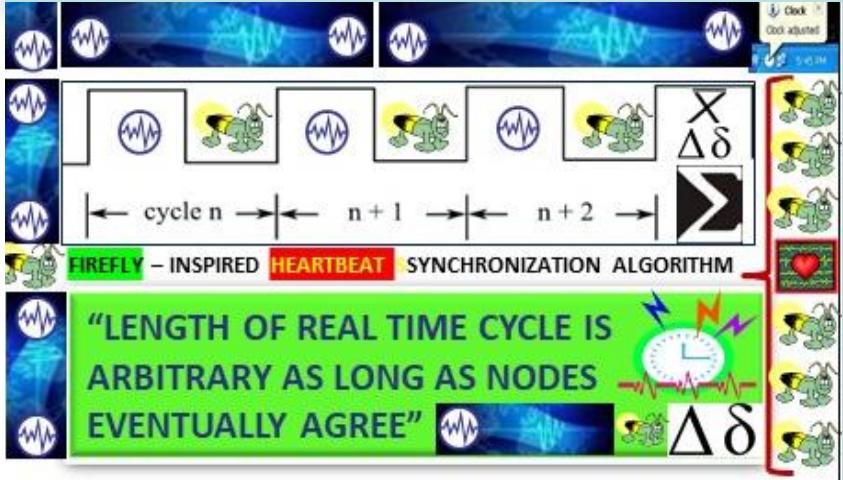
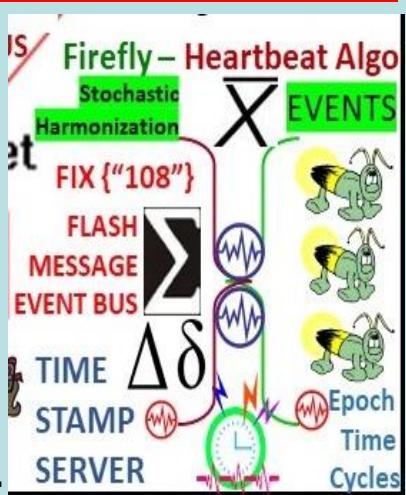
## Proof-of-activity PoA is a combination of Proof of Work / Stake blockchain consensus algorithms:

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

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

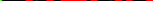


HEART BEACON CYCLE 13/573,002





# VERITAS TOKENS

P2P Capital Market smart contracts Eco Economic 

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



INFOCON  
5 4 3 2 1  
INFORMATION  
CONDITION



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

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

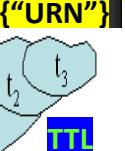
D Distributed Autonomous Organization Investor Pools

Place Order	
Principal:	\$100.00
Collateral:	0%
Leverage:	10x
Notional Amount:	\$1000.00
Receive:	QCOM
Pay:	INTC



## FIREFOX HEARTBEAT ALSO EVENT MSG BUS

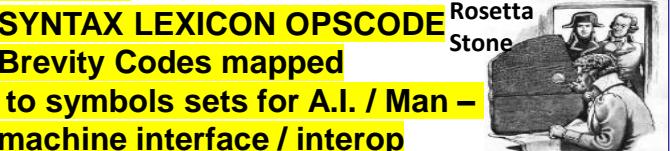
As long as INTC decline outpaces QCOM, you get paid. QCOM can be replaced with GOOG, or even AAPL although I feel AAPL will have its issues in the upcoming quarters as well. {"Tagged": "Tech"} [1]



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



**Brevity Codes mapped  
to symbols sets for A.I. / Man -  
machine interface / interop**



# Proof of Authority



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

Not pay to play, Node identiy is kept as stake

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



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

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

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**

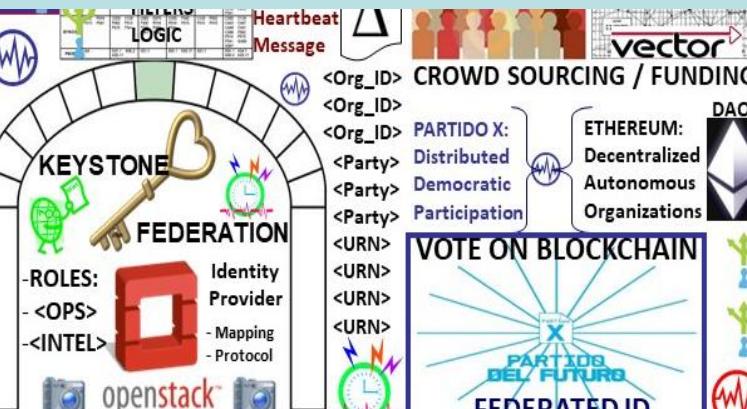
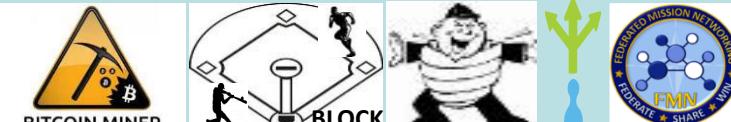
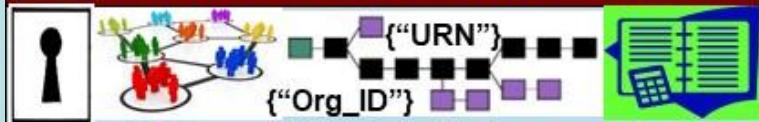
**Federation**  
**Gateway**  
Net joins, drops, splits, merges, moves  
Agile, adhoc NETOPS Vs acquisition preserves the **CHANNEL**



DISTRIBUTED AUTONOMOUS ORGANIZATIONS DAO

## Heart Beacon Cycle

### FEDERATE / TRADE FEDERATIONS

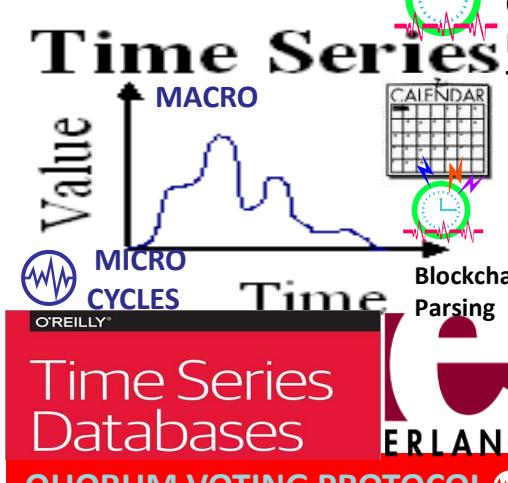


# SAWTOOTH LAKE POETIC CONSENSUS PROOF OF ELAPSED TIME: POET

"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



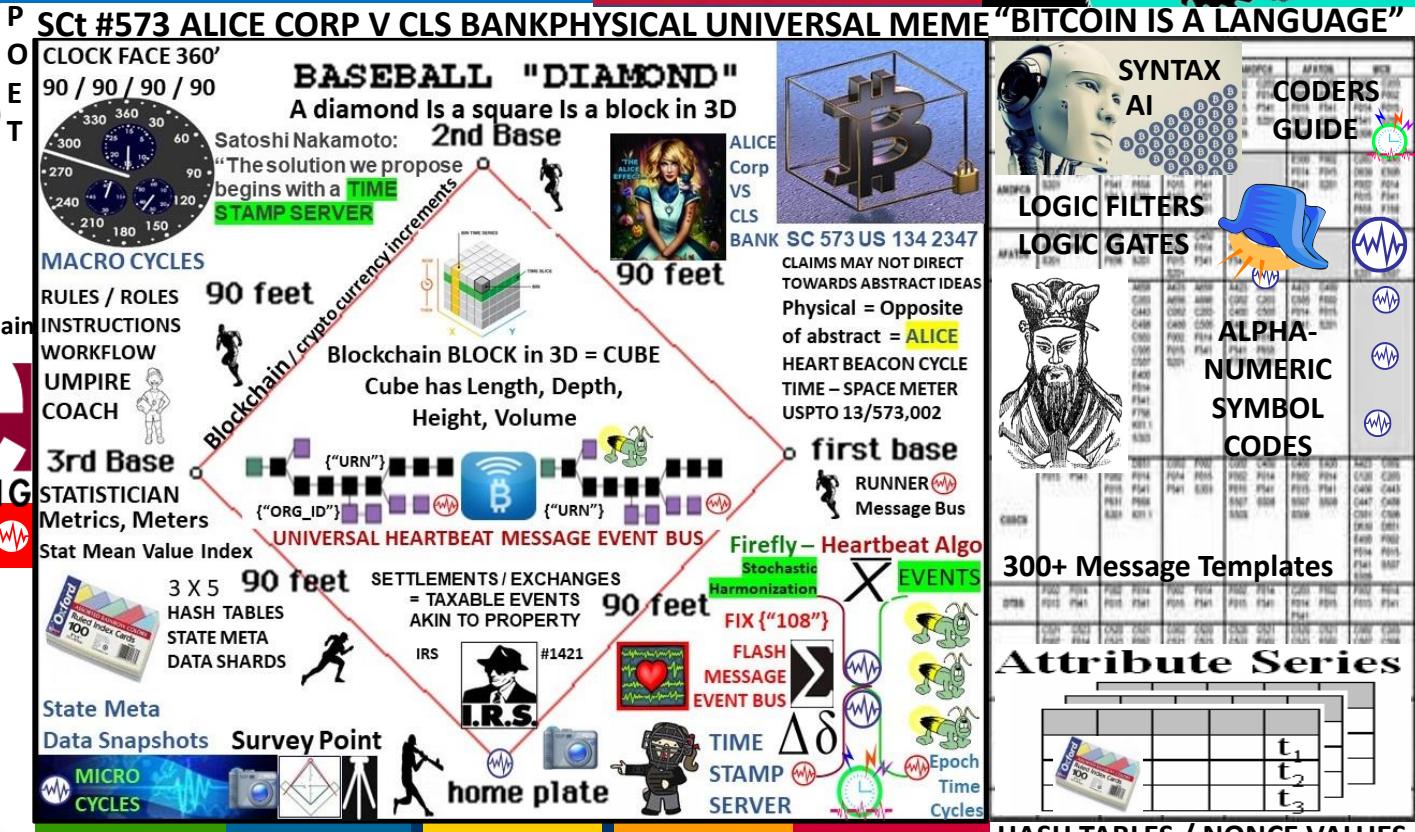
Voting Based Selection: stake size & block generators selected by votes

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

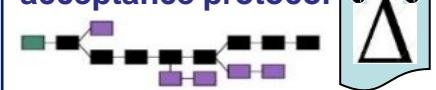


Robert's Rules quorum = minimum # of voting members who must be present at meetings to conduct business of the group

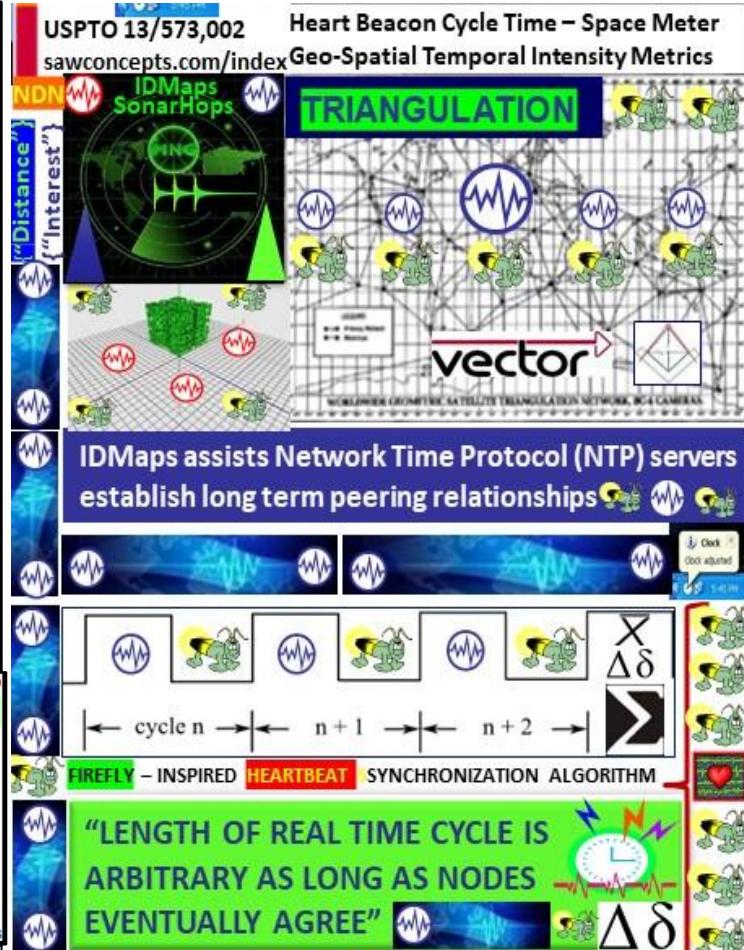
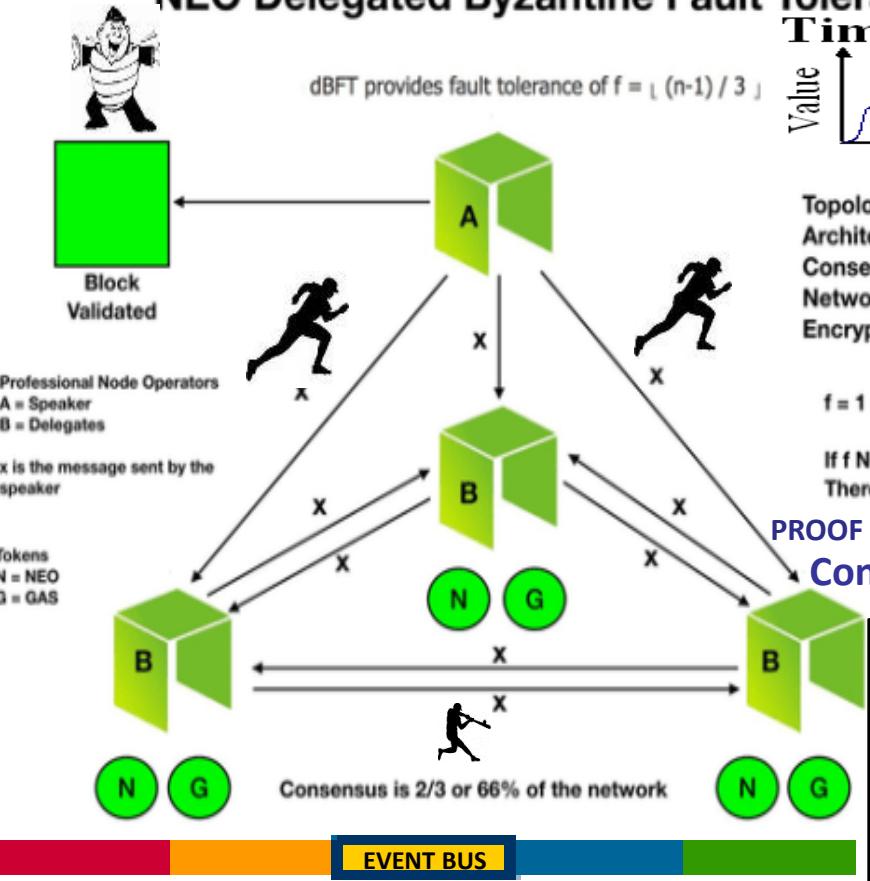
## TOURNAMENT LEAGUE BOARD



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



Witness  
0 / 1

Famous witness  
Election

Vote  
See

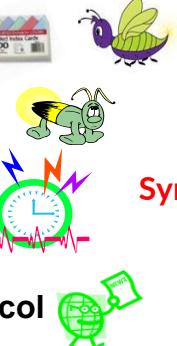
Strongly see  
Supermajority

Decide  
0 / 1

Round created  
Round received

Consensus timestamp  
Consensus order  $\Delta\delta$

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



Synchronous



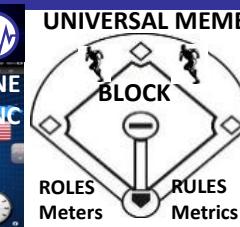
Asynchronous



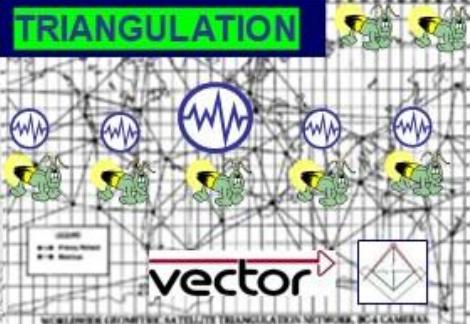
Micro-Cycle  
State Meta  
Data Snapshots

Hash  
Nonce

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



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



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



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

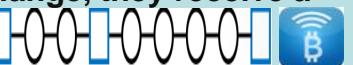
# Proof of Burn



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.

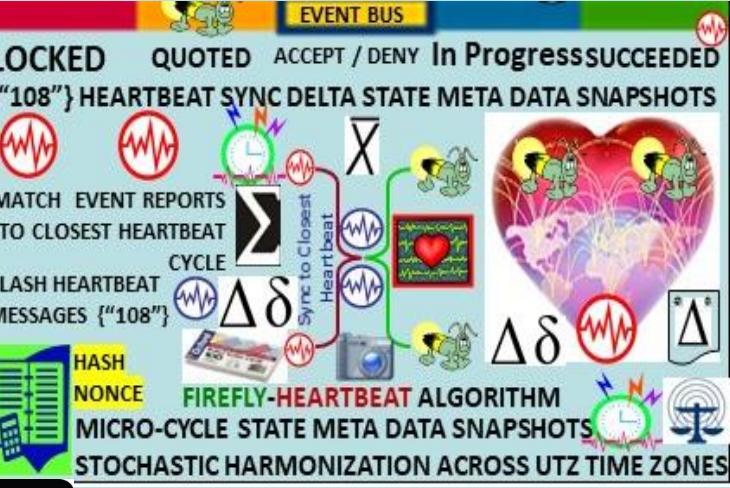
Iain Stewart, the inventor of the POB algorithm, uses an analogy to describe the algorithm: burnt coins are like mining rigs. In this analogy, a miner burns their coins to buy a virtual mining rig that gives them the power to mine blocks. The more coins burned by the miner, the bigger their virtual mining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



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:#]
IF2_State (IF-Node2)	$\Delta\delta$	[UFO2_STATE:#]

# Proof of Capacity PoC



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

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



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



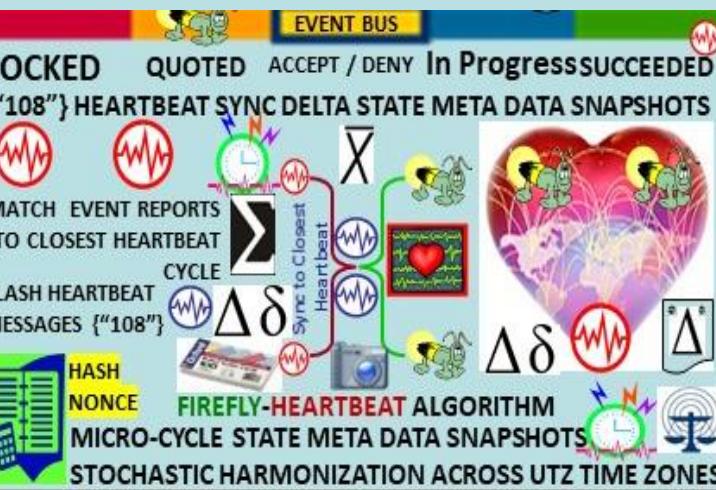
The larger the hard drive, the > possible solution values one can store on the hard drive, the more chances a miner has to match required hash value from his list, resulting in more chances to win the mining reward.



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



Bitcoin purchase akin to property

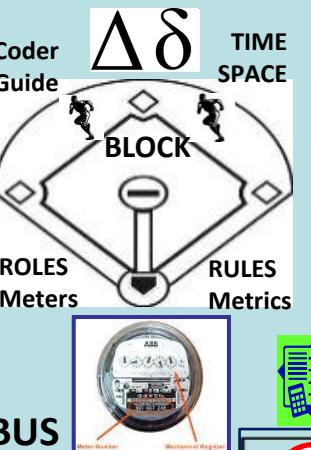
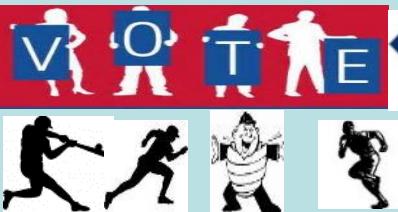




# BTC NG NEX GEN / Heart Beacon Cycle 13/573,002

## KEY BLOCKS:

- NO CONTENT = NULL
- LEADER ELECTION



MVP

EVENT BUS

## MICRO BLOCKS:

- ONLY CONTENT
- NO CONTENTION



NDN

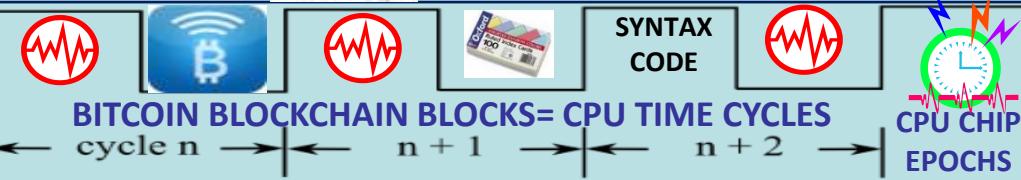
XBRIL / CDL / DAML  
STOCK MIC CODES

STRUCTURED  
MILITARY MESSAGE  
TEMPLATE FORMS  
LOGIC / FILTERS



SYNTAX  
LEXICON LIBRARY

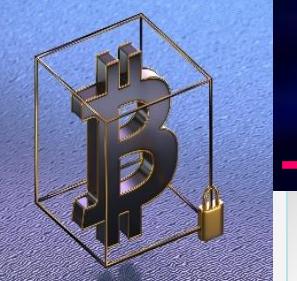
CPU CHIP  
EPOCHS



long exponential  
intervals (10 min)

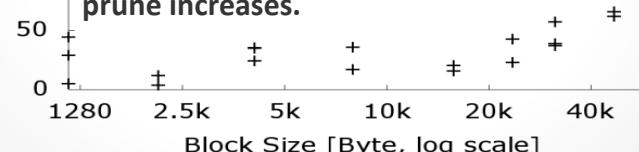


COMMAND SYNTAX  
RESTFUL State Transfer



Subjective Time to Prune

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



short deterministic  
intervals (10 sec)

MACRO – CYCLES



ATOMIC CLOCK  
MICRO-CYCLES

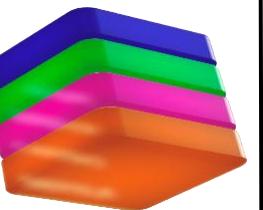


## PROTON A CHAIN Virtual Machine

## CONTRACT C CHAIN Smart contract

## PLATFORM P CHAIN Meta Data

## EXCHANGE X CHAIN Cross blockchain



Universal @names Identity / Governance / Resources / Staking

Snowball Consensus

Algorithm

preference := pizza

consecutiveSuccesses := 0

while not decided:

ask k random people preference

if >= α give the same response:

    preference := response with >=

α

    if preference == old preference:

        consecutiveSuccesses++

    else:

        consecutiveSuccesses = 1

    else:

        consecutiveSuccesses = 0

    if consecutiveSuccesses > β:  
        decide(preference)

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

Delegated Proof  
of Stake {"Org\_ID"}



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



DAG Acyclic Graph Parameters:

n: number of participants

k (sample size): between 1 and n

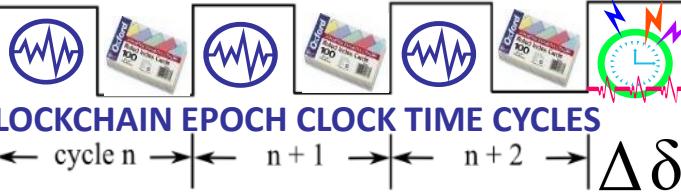
α (quorum size): between 1 and k

β (decision threshold): >= 1

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

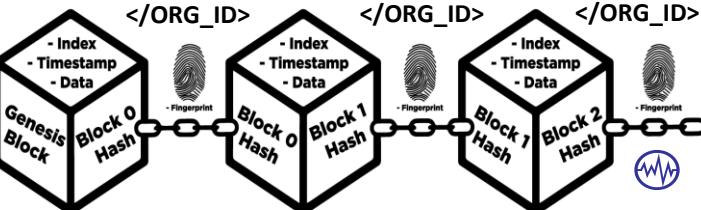
1) EPOCH TIME INTERVALS

2) SYNTAX (not) used in epochs



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

Block 0      Block 1      Block 2



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



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



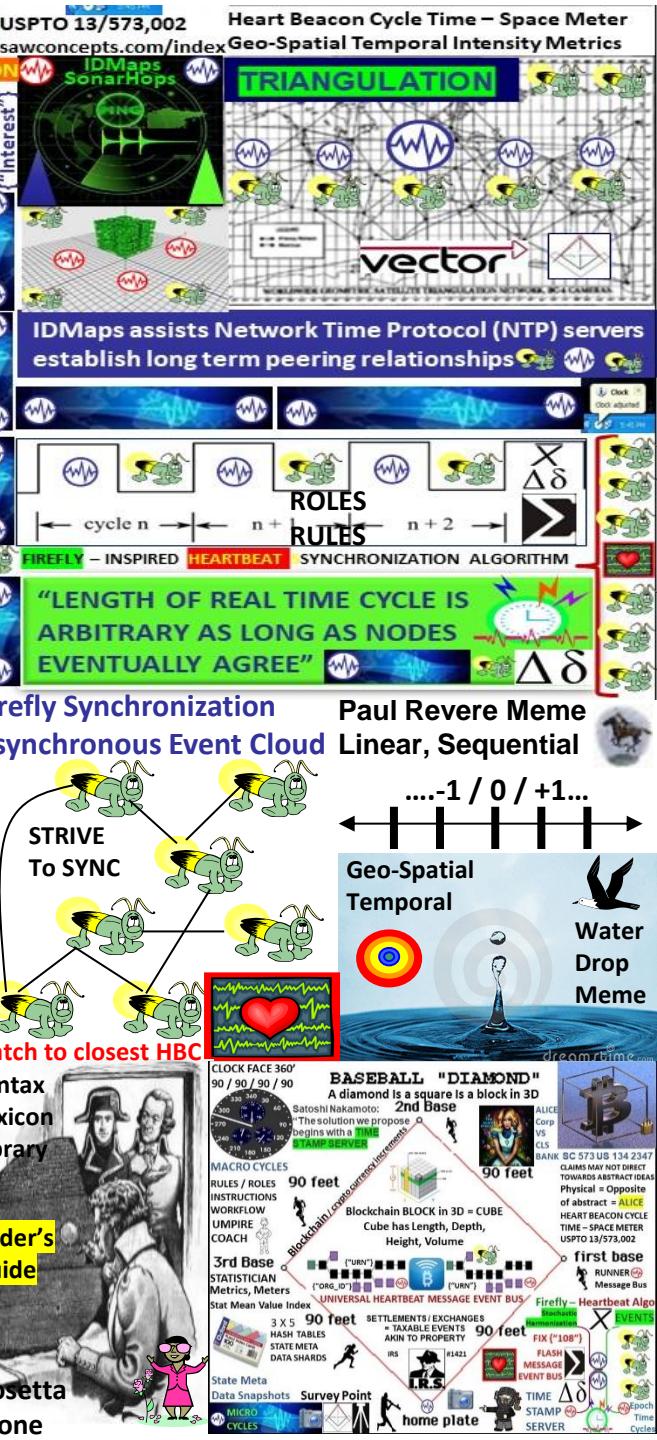
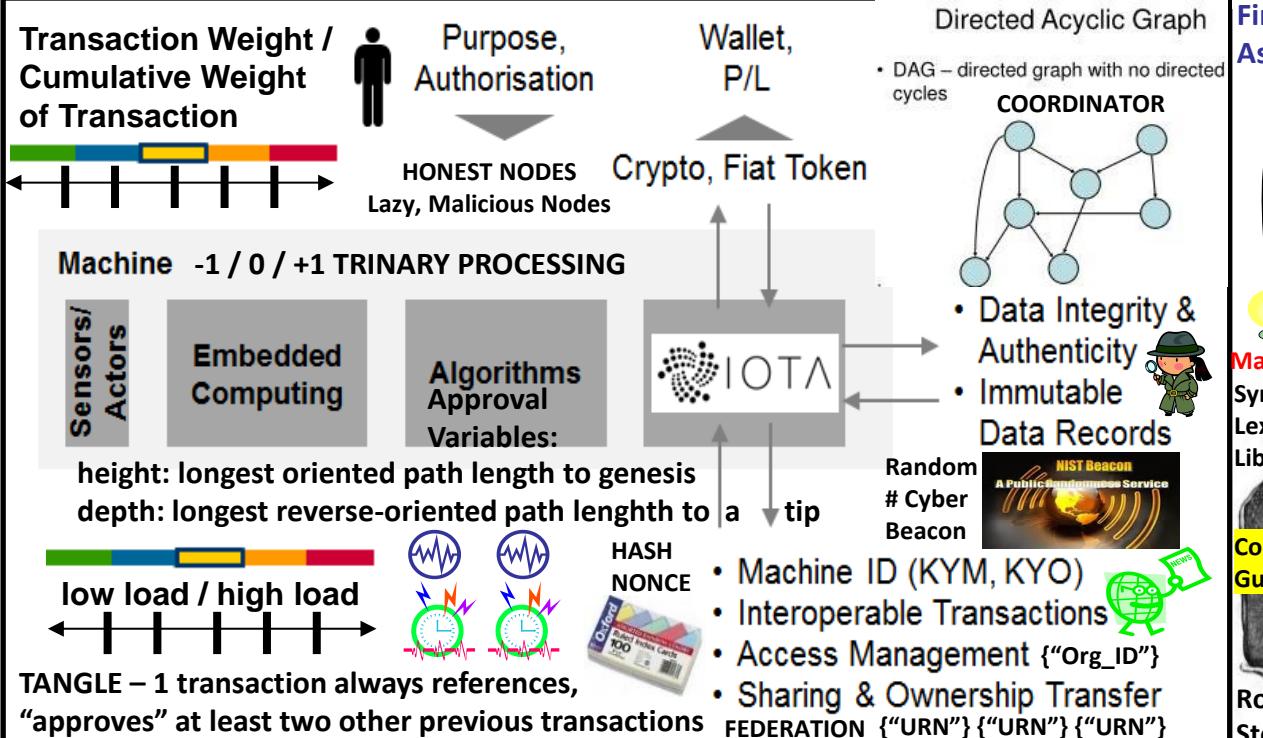


OTA: Internet Of Things IOT distributed ledger  
with microtransactions without fees

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

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

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

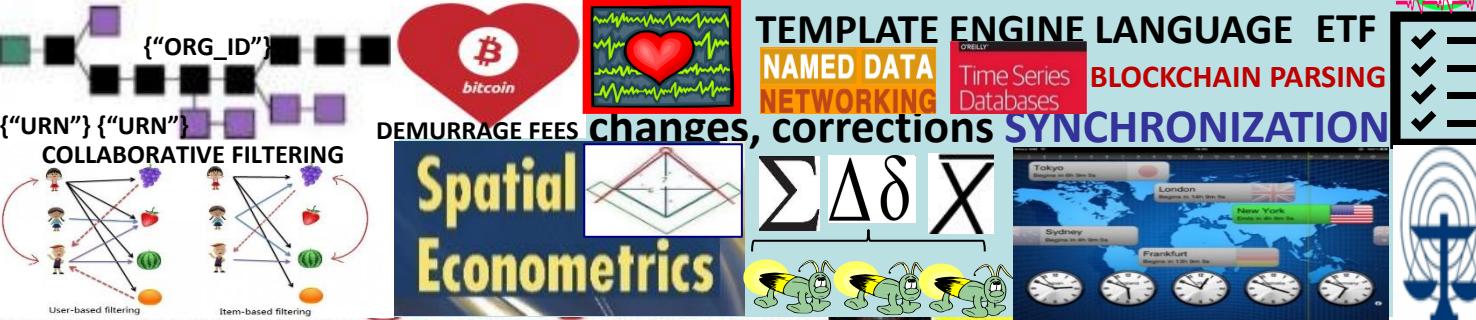




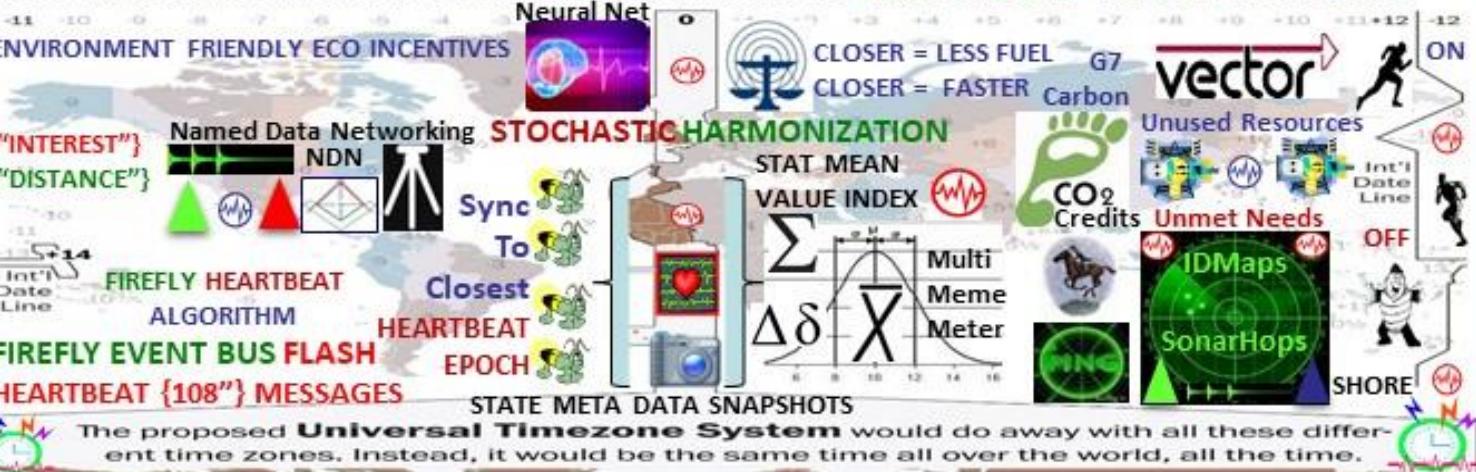
# EGaaS

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

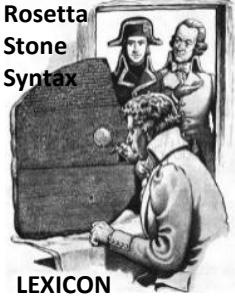
Blockchain middleware: identity and operations management, data, intelligence services like analytics and machine learning. New middleware works with existing Azure services, like Active Directory and Key Vault

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

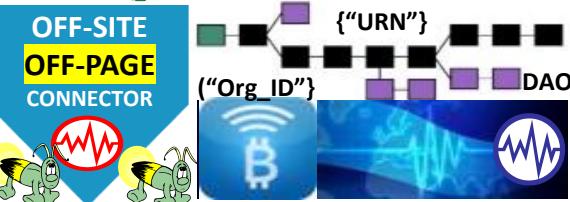
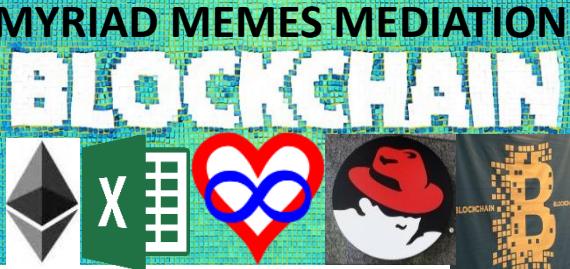
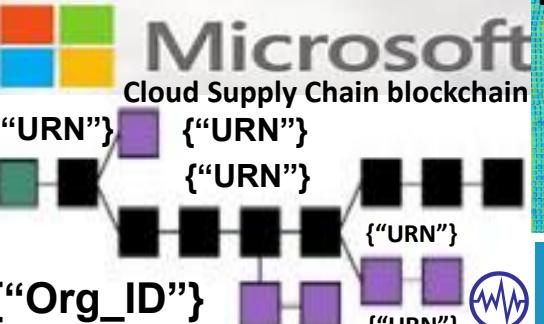


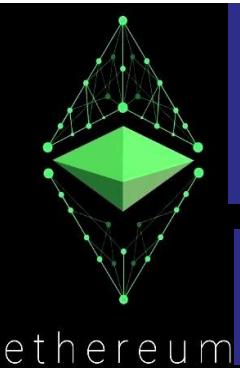
ALPHA NUMERIC	
BREVITY CODES	
SYMBOL CODES	
STRUCTURED MILITARY MESSAGE	
TEMPLATE FORMS	LOGIC / FILTERS

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

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

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



**DFINITY**

**RANDOM # BEACON**

**NIST Beacon**  
A Public Randomness Service

**QUANTUM RANDOM #**

**BLOCKCHAIN NERVOUS SYSTEM**

HEARTBEAT {"108"} State Meta Data Snapshot Msgs

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

**GROUP Signature is random number**

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

**HYPER GEOMETRIC PROBABILITY CALCULATOR**

**CONSENSUS / RANDOM BEACON**

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

**Each process has mining identity**

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

**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

**UTZ TIME ZONE SYNC**

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

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

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

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

**90 feet**

**MACRO CYCLES**

**RULES / ROLES INSTRUCTIONS WORKFLOW UMPIRE COACH**

**3rd Base**

**STATISTICIAN Metrics, Meters**

**Stat Mean Value Index**

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

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

**IRS #1421**

**State Meta Data Snapshots Survey Point**

**MICRO CYCLES**

**home plate**

**Fix {"108"}**

**FLASH MESSAGE EVENT BUS**

**TIME STAMP SERVER**

**EVENTS**

**Firefly - Heartbeat Algo**

**STOCHASTIC HARMONIZATION**

**EVENTS**

**FIX {"108"}**

**FLASH MESSAGE EVENT BUS**

**TIME STAMP SERVER**

**Δδ**

**Epoch Time Cycles**

**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**



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**

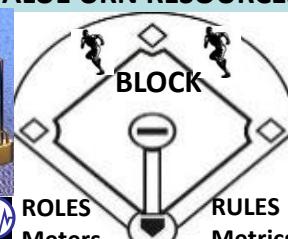
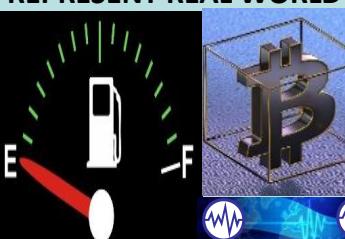
$\Delta\delta$



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

**TOKENS REPRESENT REAL WORLD VALUE URN RESOURCES**

ETHEREUM USES GAS GUAGE MEME INDICATING THRESHOLD MET / NOT MET



**BLOCK**  
ROLES Meters  
RULES Metrics



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



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

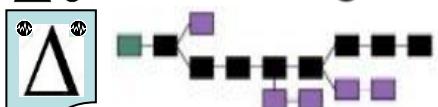


American Registry for Internet Numbers

# HYPER LEDGER OPEN SOURCE BLOCKCHAIN

Core APIs, & SDKs

$\Delta\delta$  Shared Ledger



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

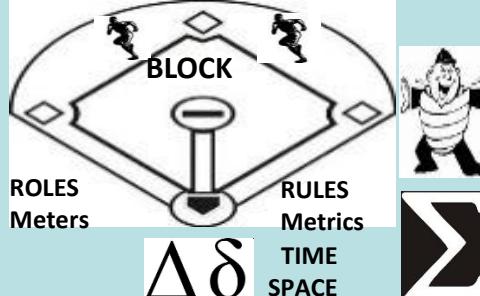
FEDERATION  
*Federation Gateway*

METRICS ("Organization ID")  
METERS

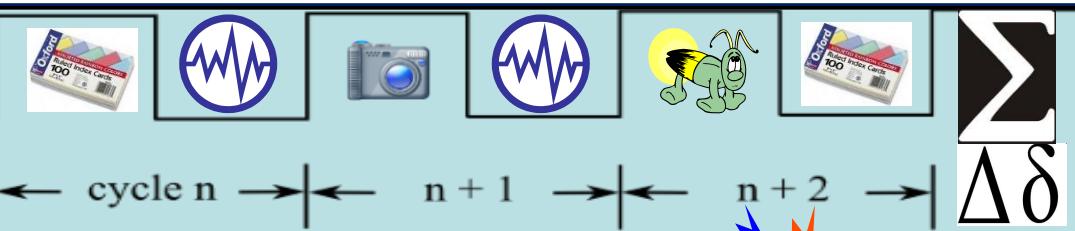
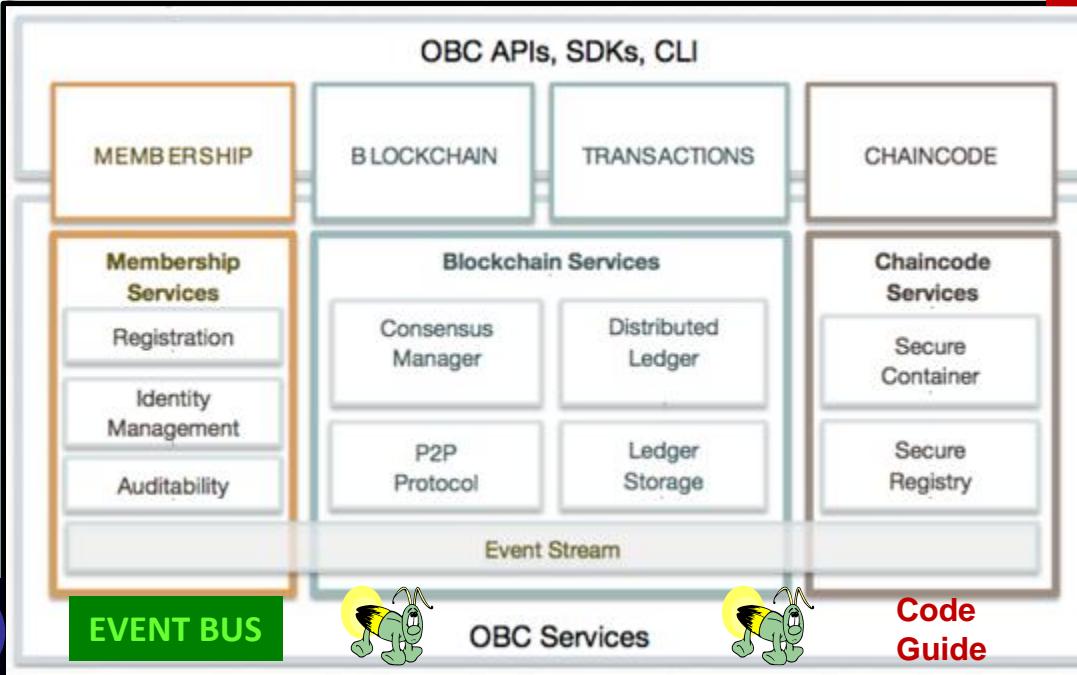
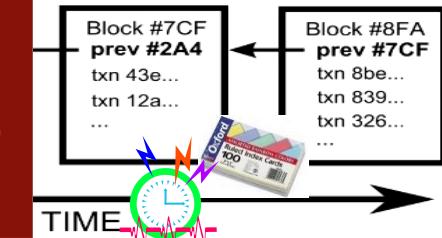
RESTFUL SYNC DELTA  
CHANGE MANAGEMENT  
MICRO-MACRO CYCLE



BLOCKTIME ARBITRAGE

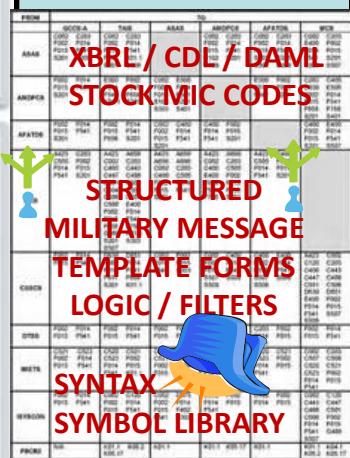


Code execution environment, ledger data structures, modular consensus fwk & algos, and modular membership services, modular storage and event fwks, network peers



MICRO-MACRO CYCLE SCHEDULE

ROSETTA STONE



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

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

FFIRNS  
FFUDNS



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

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

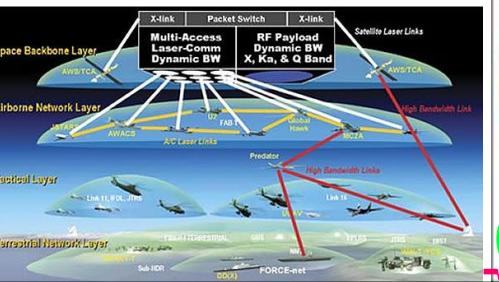
[LINK](http://bitcoinist.net/how-dash-dao-work/) <http://bitcoinist.net/how-dash-dao-work/>

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

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

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

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



STOCHASTIC HARMONIZATION **FIREFLY-HEARTBEAT** EVENT BUS

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



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

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

**STATE CHANNELS:** blockchain interactions

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



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



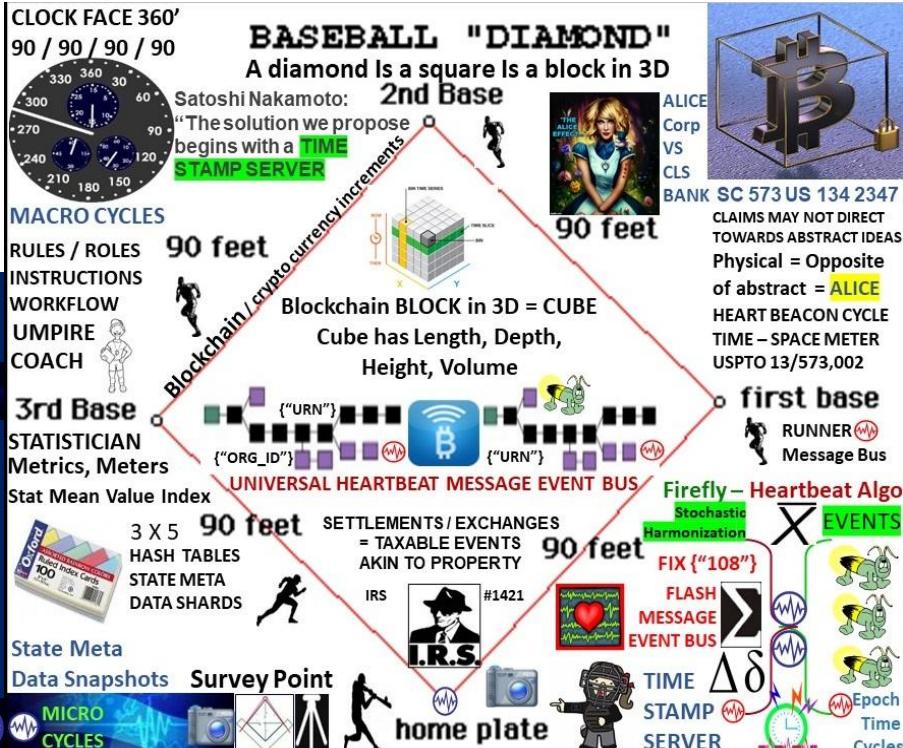
2. Participants update the state amongst themselves by constructing and signing transactions that could be submitted to the blockchain, but instead are made available for a new update "trumps" previous update.



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



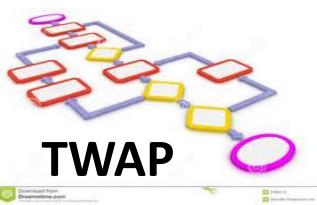
**NEW UPDATES OVERWRITE THE PREVIOUS:** simplest way is to have any unlocking attempt start a timer, during which any *newer* update can replace the old update (restarting the timer). When the timer completes, the channel is closed and the state adjusted to reflect the last update received. The length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



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

# TWAP Algorithm Manages Bitcoin Price Volatility Algorithm

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



FIREFLY HEARTBEAT ALGO  
STAT MEAN VALUE INDEX

**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

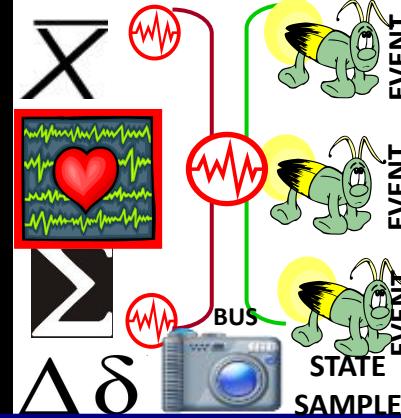


VWAP is price multiplied by number of bitcoins traded, then divided by the total number of bitcoins traded during a time period. The time-weighted average price algorithm is matched to closest HB



EPOCH TIMES

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..

EVENT

## Autonomous Device Coordination Framework



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

FEDERATION  
AGREEMENTS  
PROCEDURAL  
TEMPLATE

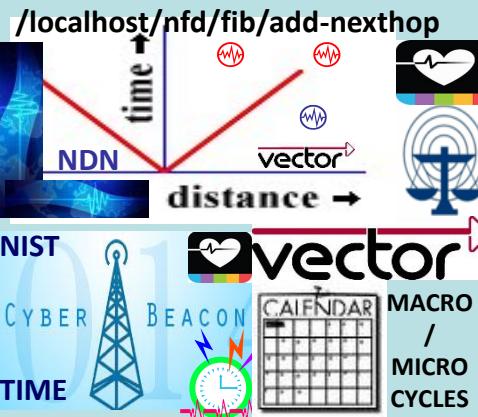
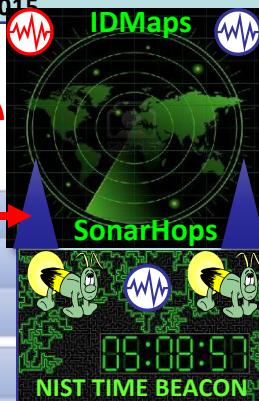
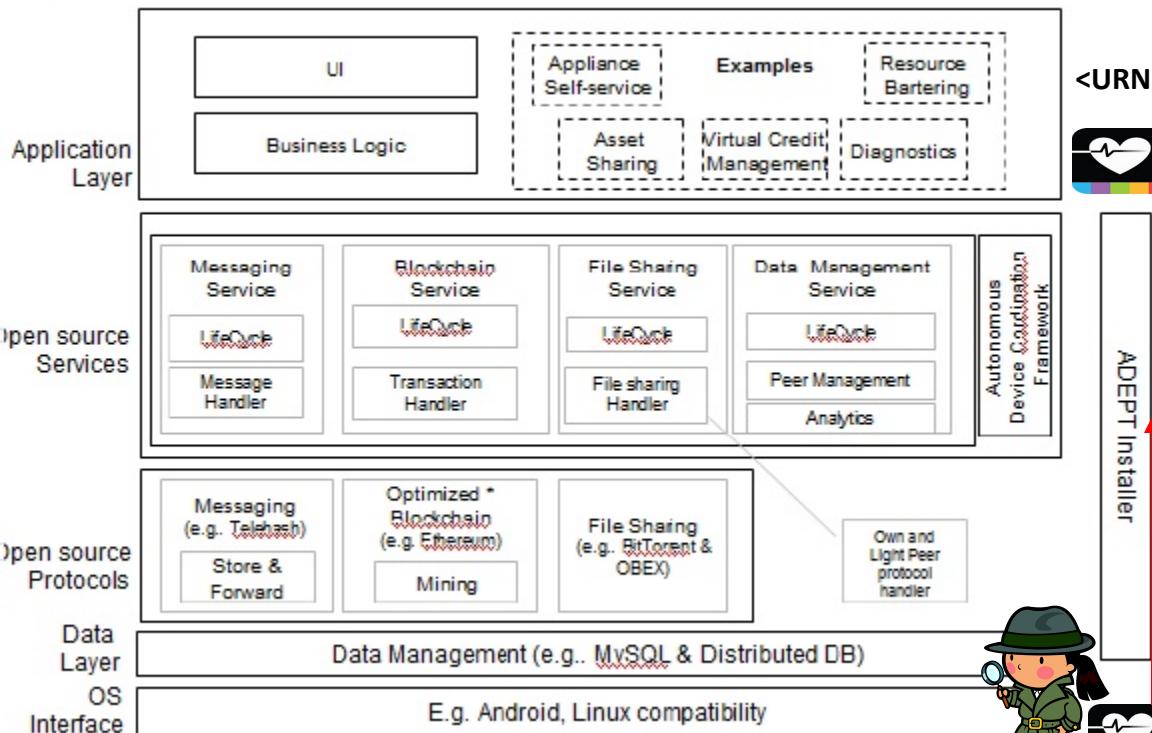
## FEDERATION

&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

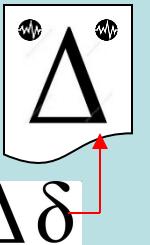


PAYMENTS BASED ON GEO-SPATIAL TEMPORAL METRICS / METERS  
<URN> DESCRIBES COMMODITIES ETC BY UNIFORM RESOURCE NAME BY </INTEREST>>



ASSET SHARING WITHIN FEDERATION

BUSINESS LOGIC = WORKFLOW <XML\_Wf>



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

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



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

#### Key Features:

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



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

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

All rates time-stamped in UTC.



Ability to look up by time-stamp.

Ability to look up by block-height.

Asset Classes: Digital Currencies

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

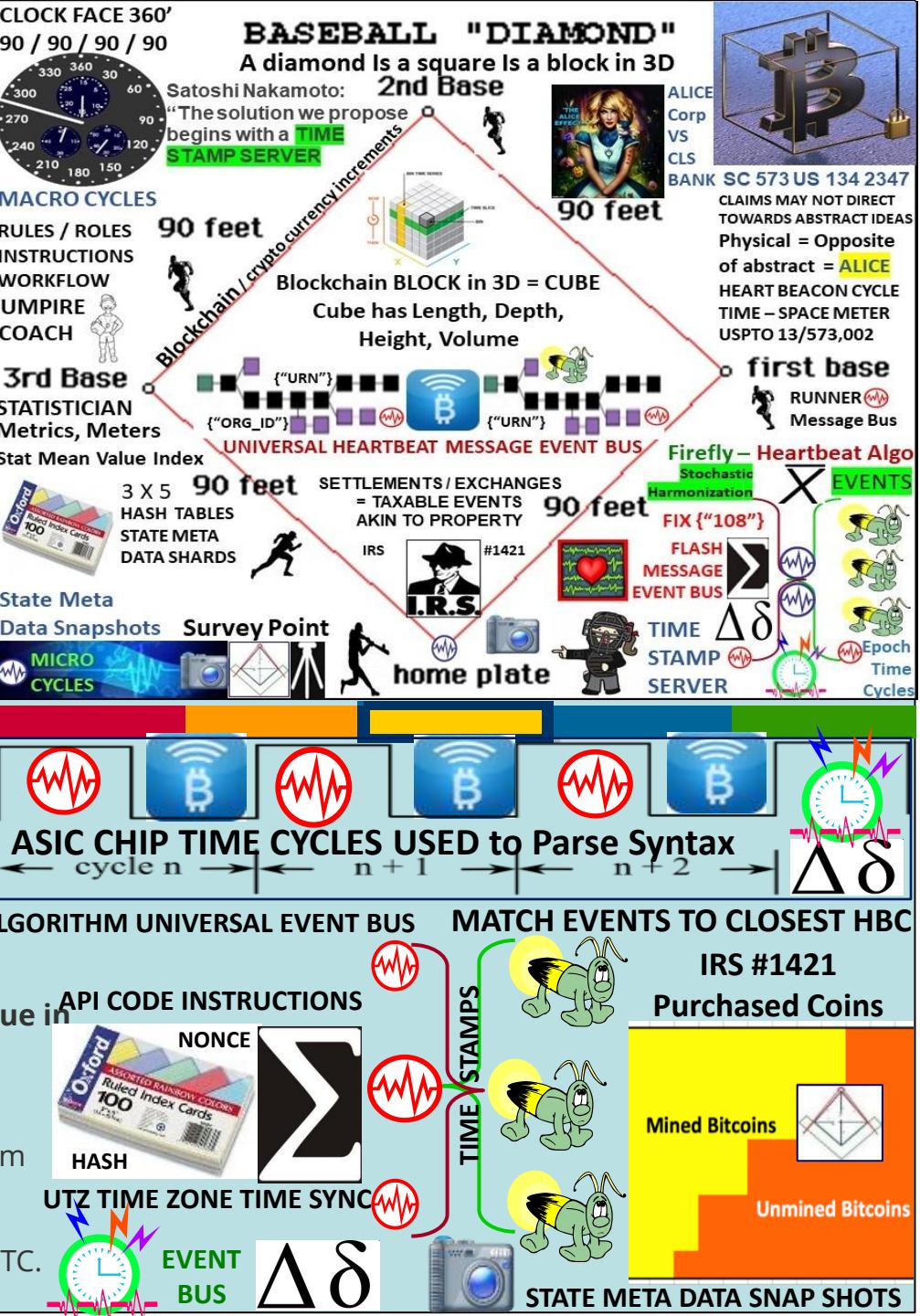
Transaction ID, Block ID, time-stamp, BWAP per block, Value in USD. BTC per transaction, bitcoin transaction fees per transaction.

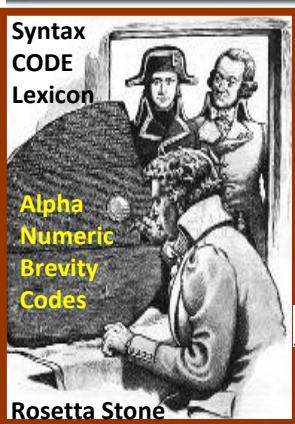
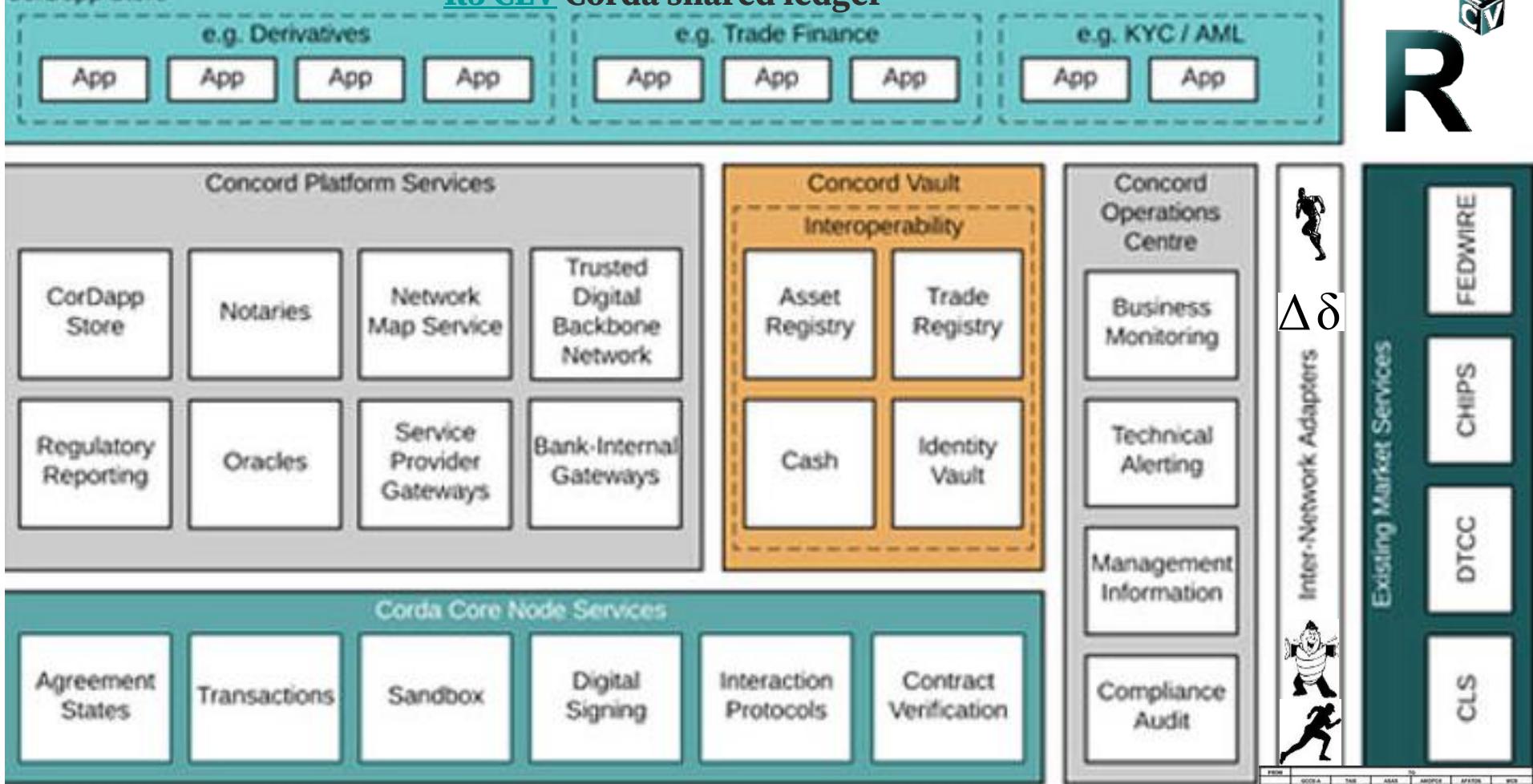
"Blocks are a measure of time":

The Bitcoin Blockchain 'B-WAP'

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

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

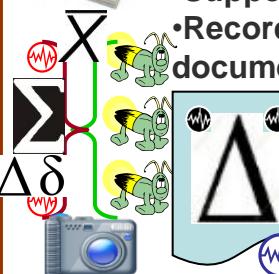




# UNIVERSAL EVENT BUS



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



11.8 - Kinematics	
11.8.1 - Pos / Vel / Acc (PVA)	
11.8.1.1 - Acceleration	
11.8.1.1.1 - Circular	
11.8.1.1.2 - Linear	
11.8.1.1.2.1 - Estimate Type	
11.8.1.1.2.1.1 - Estimated	
11.8.1.1.2.1.2 - Observed	
11.8.1.1.2.2 - Predicted	
11.8.1.1.2.3 - Smoothed Data	
11.8.1.1.3 - Position	
11.8.1.1.3.1 - Bearing Angle	
11.8.1.1.3.2 - Azimuth, 2D H	
11.8.1.1.3.3 - Vertical	
11.8.1.1.4 - Velocity	
11.8.1.1.4.1 - Horizontal	
11.8.1.1.4.2 - Vertical	
11.8.1.2 - Confidence	
11.8.1.2.1 - Bearing Angle	
11.8.1.2.2 - Bearing Angle Rate	
11.8.1.2.3 - Covariance Matrix	

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



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

# **STRUCTURED MILITARY MESSAGE TEMPLATE FORMS**



# 300+ Use Case Templates





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

**MV=PQ Money x Velocity = Price x 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

M = MONEY BITCOINS FIXED  
= FINITE # OF COINS 21 Million

**X**

V = VELOCITY = RATE SPENT  
RATE COINS MINED % OVER TIME

=

P = PRICE of Everything Bought  
TIME SERIES DATABASE Coin SUM  
Coin / Currency Type Mediation Service

The diagram shows a triangular survey network. A central point is connected to three vertices of a triangle. The sides of the triangle are labeled with distances: 7, 8, and 9. The angle between the sides of length 7 and 8 is marked with a question mark, indicating it is an unknown angle. The diagram is overlaid with a coordinate grid and includes labels for 'Land Survey', 'Triangulation', 'IDMMaps / Sonar Hops', and 'A'.

## Memo #1421: Purchased Bitcoins akin to land

The diagram illustrates the relationship between Mined Bitcoins and Unmined Bitcoins. It features two main sections: "Mined Bitcoins" on the left and "Unmined Bitcoins" on the right. The "Mined Bitcoins" section contains a red circular icon with a white ECG-like waveform, a black Δδ logo, and the text "Mined Bitcoins". The "Unmined Bitcoins" section contains a green circular icon with a white clock and ECG waveform, a black Δδ logo, and the text "Unmined Bitcoins". A large orange arrow points from the "Mined Bitcoins" section to the "Unmined Bitcoins" section, indicating a flow or relationship between them. The background is divided into yellow and orange quadrants.



# Firefly Event Bus

**FIREFLY**  **FLASH MSGS**

WINTER VERSUS SPRING

[Match Events](#)

To Closest

# Heartbeat Cycle



FIX {"108"}  
www.technetmag.com

Bitcoin Types

# Bitcoin Types

## P = PRICE of Everything Bought

### TIME SERIES DATABASE Coin SUM Coin / Currency Type Mediation Service

# Spatial Econometrics

# MONEYBALL

# ECONOMICS\$

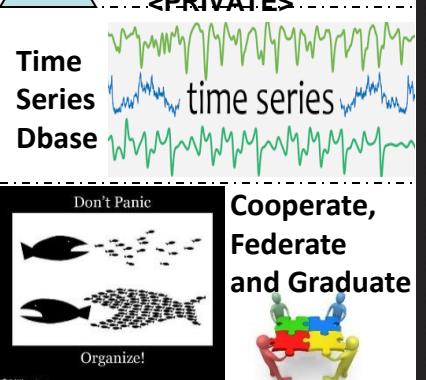
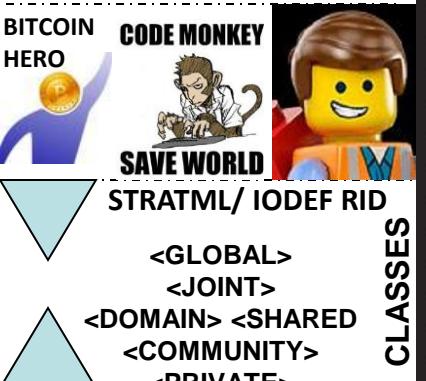
# X Q = QUANTITY

## es SUM / AGGREGATE

The Indexes in  
Time and Space



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



## HOW GAMIFICATION WORKS:

### 5 COMMON MECHANICS

#### POINTS



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

#### BADGES



Reward achievements visually

#### LEVELS



Encourage users to progress and unlock new rewards

#### LEADERBOARDS



Organise players by rank

#### CHALLENGES



Encourage engagement by offering specific tasks to complete

### 4 MAIN WAYS TO DRIVE ENGAGEMENT

#### ACCELERATED FEEDBACK CYCLES

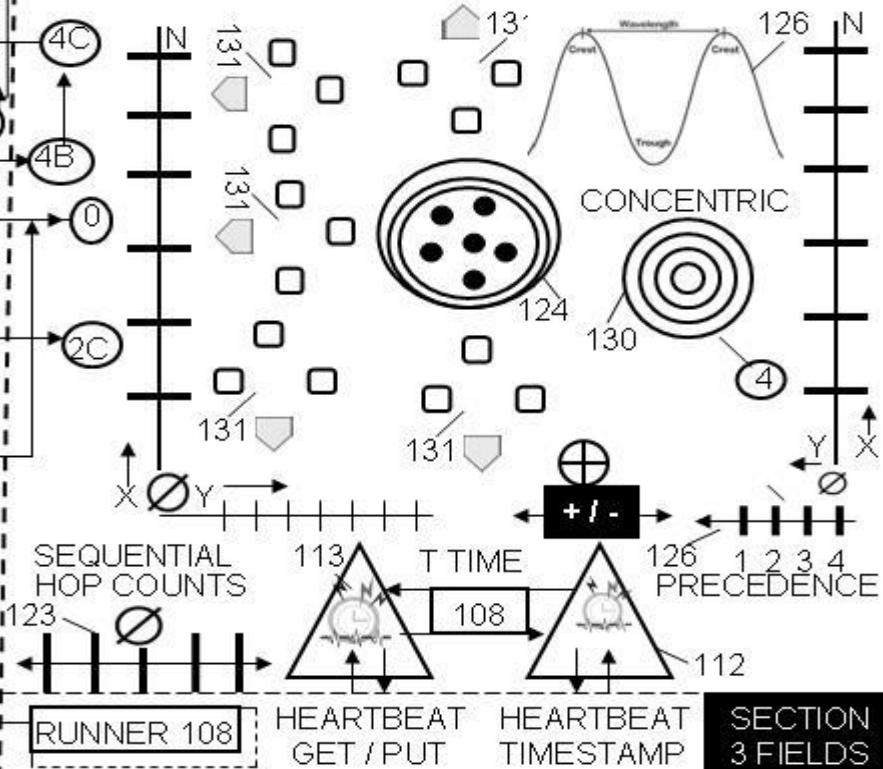
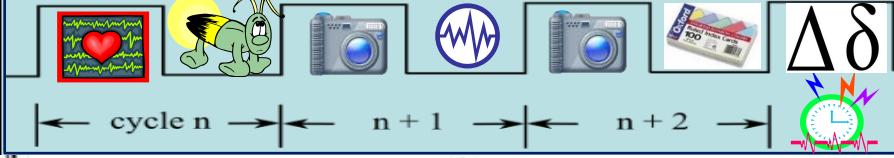
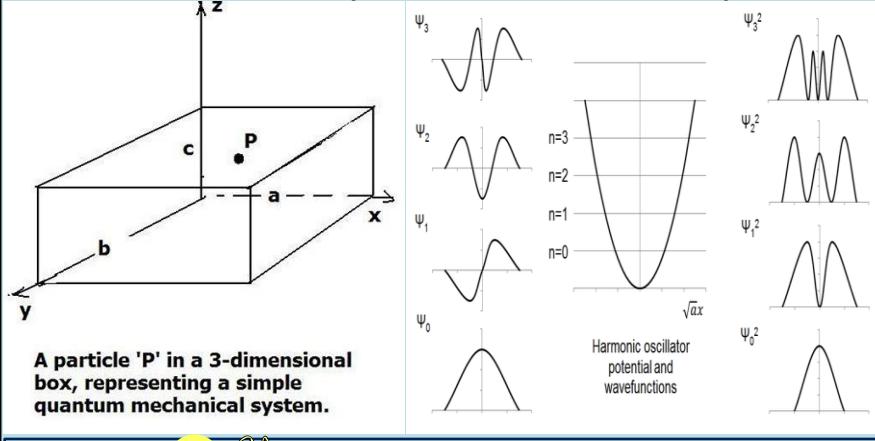
#### CLEAR GOALS AND RULES OF PLAY

#### A COMPELLING NARRATIVE

#### CHALLENGING BUT ACHIEVABLE TASKS



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



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

US Sct Alice Corp Vs CLS Bank Physical memes

Linear sequential "Paul Revere" meme = horizontal polarization

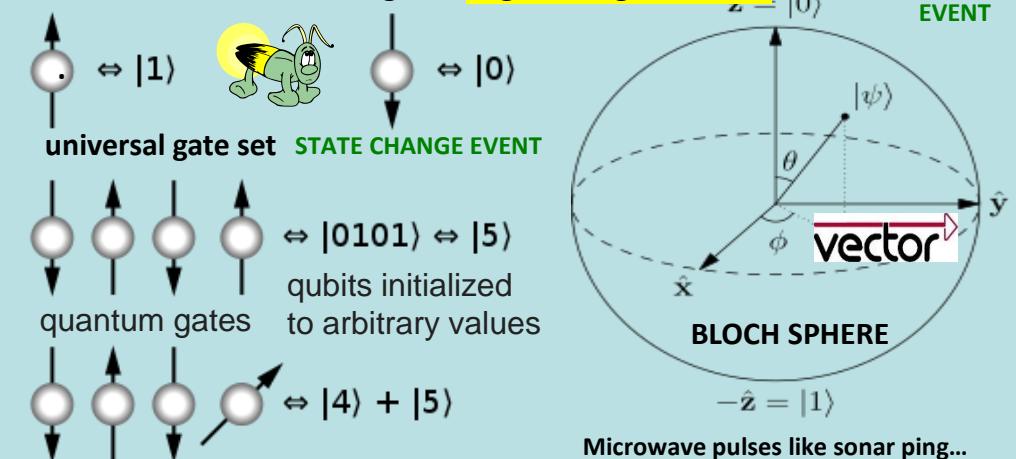
Vertical polarization vectors from a known point 0 null Sonar Hop meme



particle representation / samples

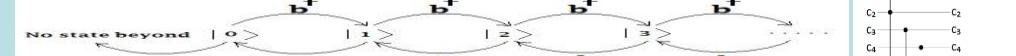


Instead of each bit having two potential states — on or off — a quantum bit or qubit has three. It can be on, off, or both, and you only know which one it is once you look at it. How can you tell if a bit of data is correct if looking at it might change its state?

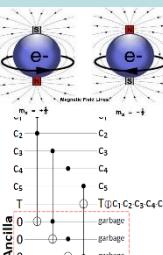


qubits can be in a superposition of all the classically allowed states

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



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



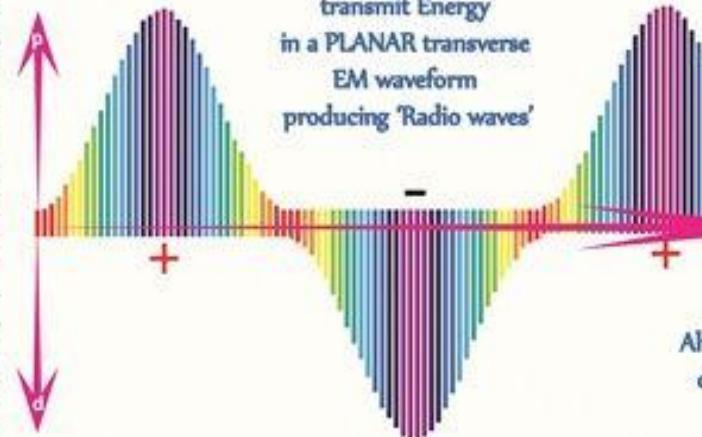
CLOSER = < Infrastructure  
= CHEAPER SLA

# ElectroMagnetic waveforms



ENERGY / DATA  
Over  
Transmission  
Lines / Airwaves

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



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



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

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

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

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

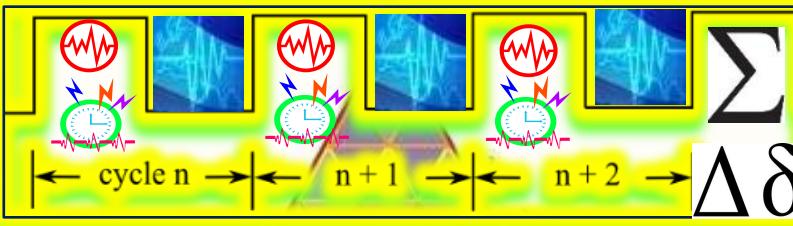
Through longitudinal waves, Tesla transferred energy to receiving devices.  
He sent electrostatic forces through the air, transferred electrical energies  
and noted the lethal forces produced by these waves.

Heinrich Hertz

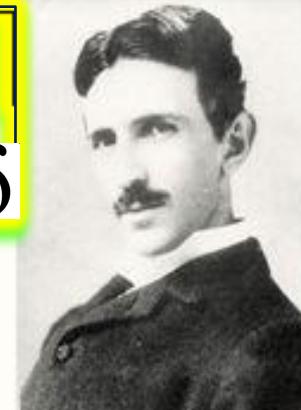


(22 February 1857 - January 1 1894)

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



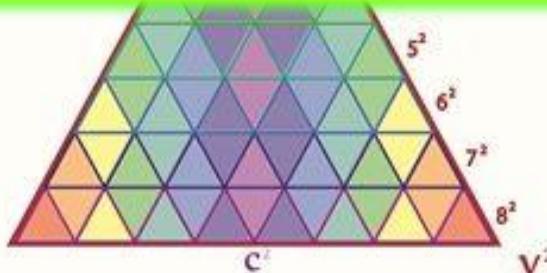
Nikola Tesla



(10 July 1856 – 7 January 1943)

Cycles per Second

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



Volts per Second

V

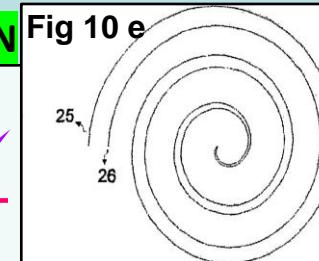




# PROPELLION SYSTEM USING THE ANTIGRAVITY FORCE OF THE VACUUM

## ENERGY PRODUCTION

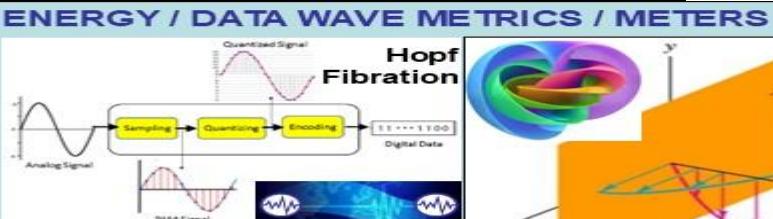
**ABSTRACT:** A propulsion system for aerial, terrestrial, underwater or space propulsion, through manipulation (or engineering) of the vacuum with proper electromagnetic interactions. Vacuum manipulation.. new form of propulsion, and has applications in ENERGY production and on CHANGE of TIME decay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



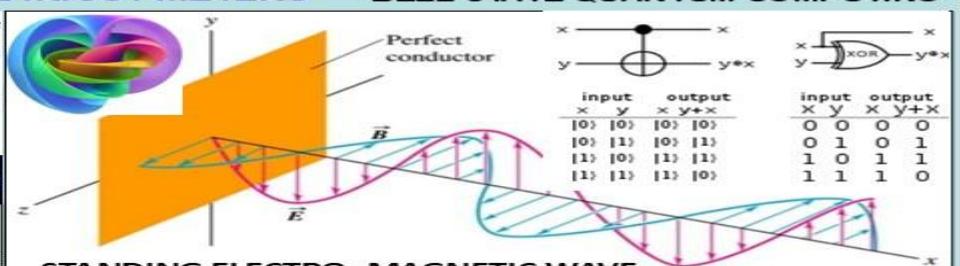
WATER DROP MEME

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

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

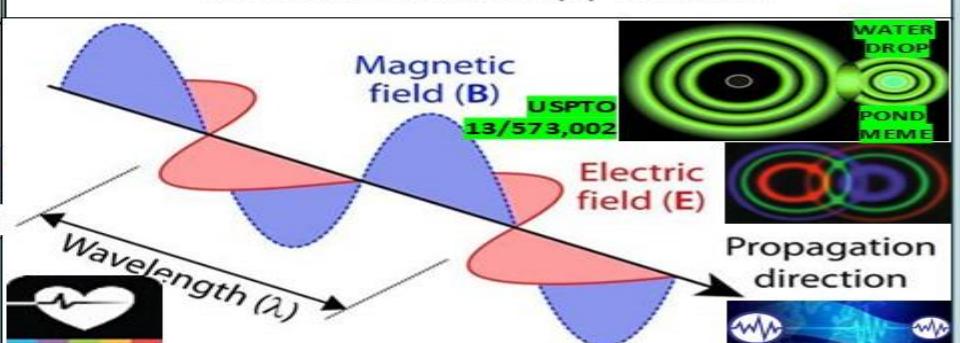
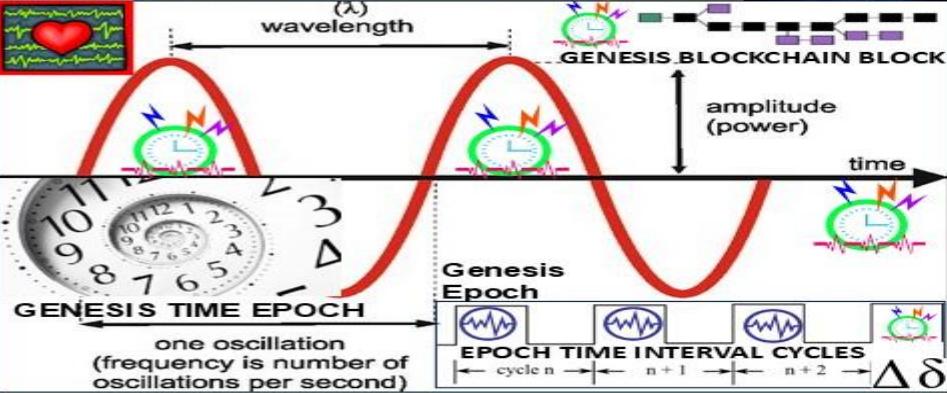


## BELL STATE QUANTUM COMPUTING



### 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

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)



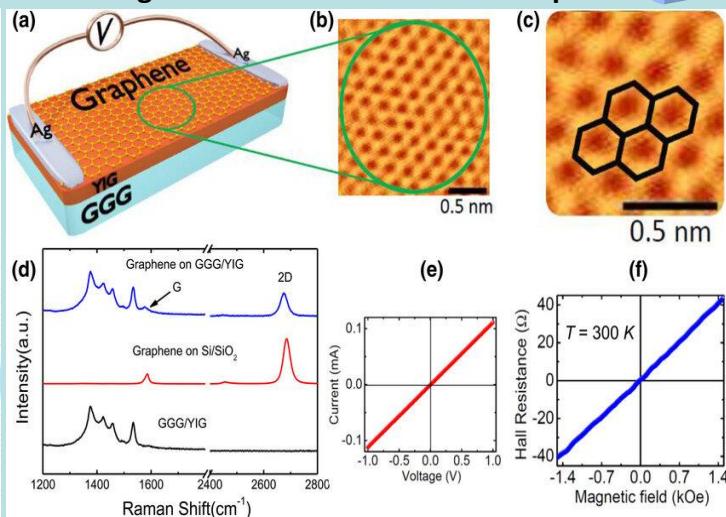
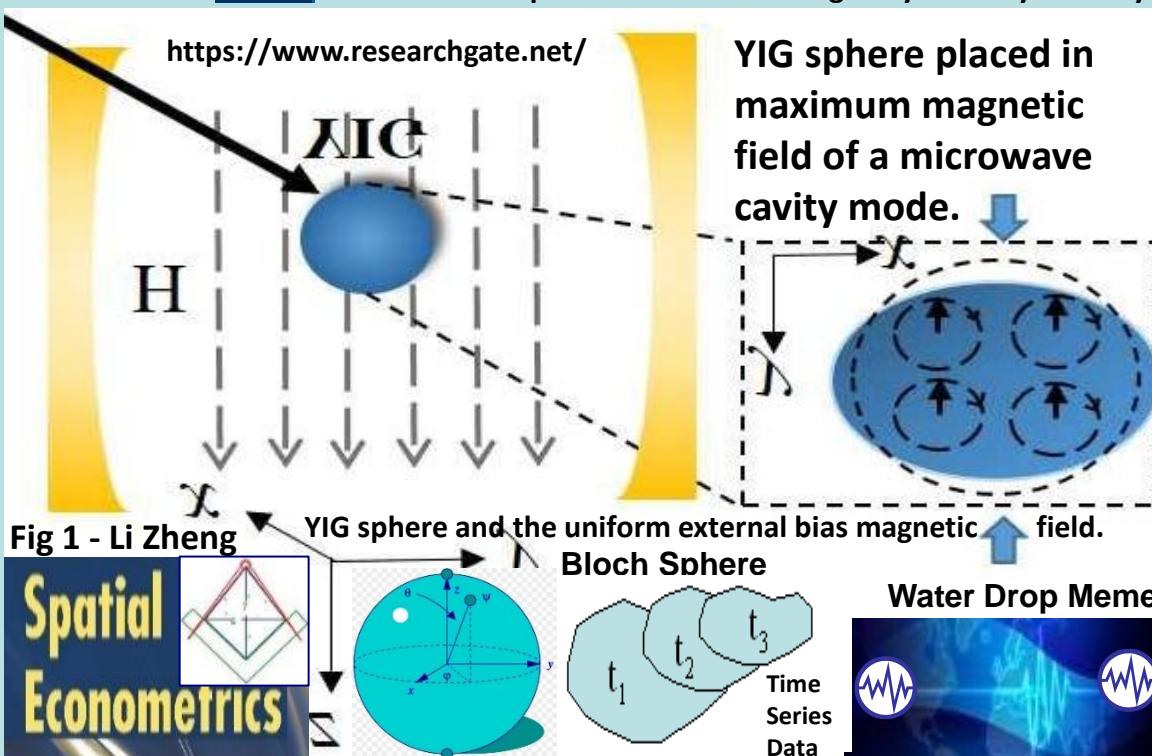
# Harmonic Sphere Flux Resonator

ENERGY  
/ DATA



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.

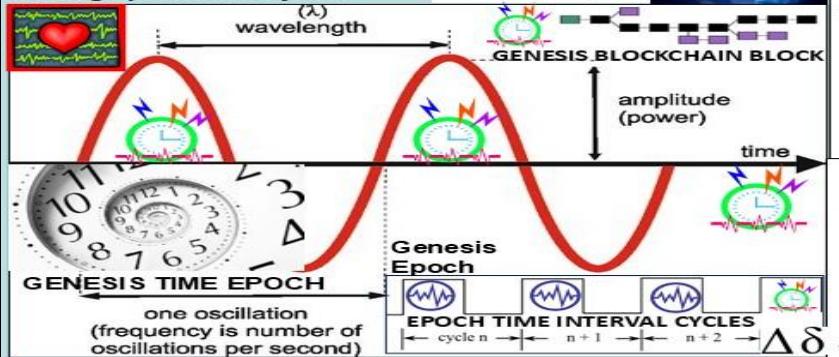
IEEE 802.1AG HOP BY HOP DETECTION  
IEEE 802.11 HbH HOP BY HOP CONTROL

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]



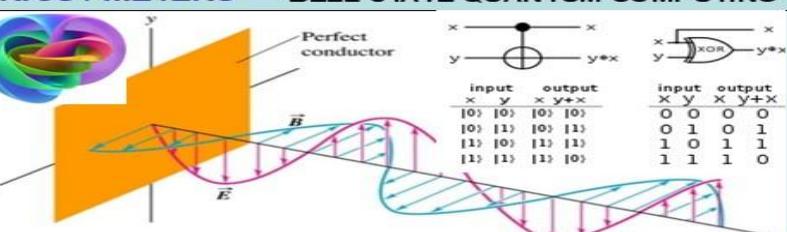
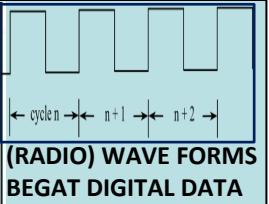
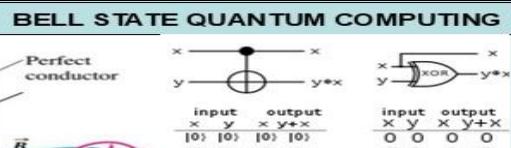
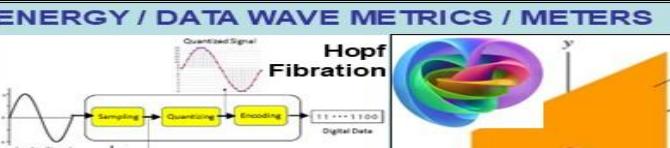
THESES: All things net, net of programmable \$\$\$ are formed using:

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

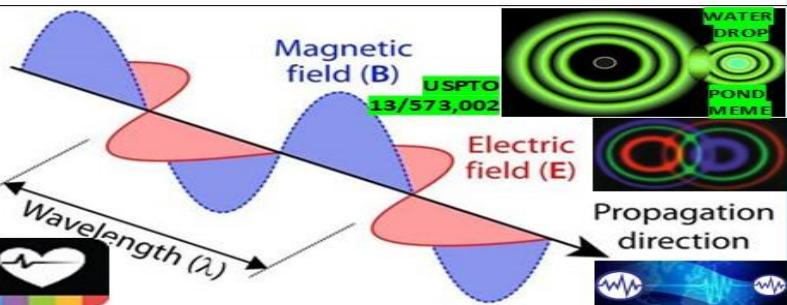


Quantum Computing Vibrations encode, process data like quantum computers. A simple mechanical system built from aluminum rods uses vibrations to encode information, mimicking quantum computing in a non-quantum system. "Light is made from photons, the quantum of light. mechanical vibrations or sound waves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



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.

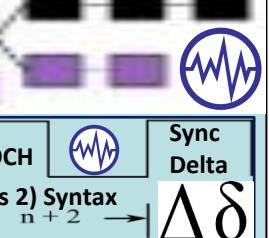
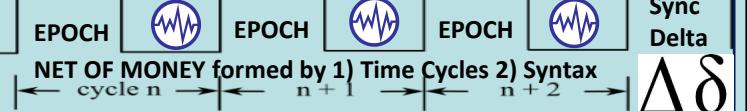


Nature may reach the same result in many ways. Like a wave in the physical world, in the infinite ocean of the medium which pervades all.. Nikola Tesla

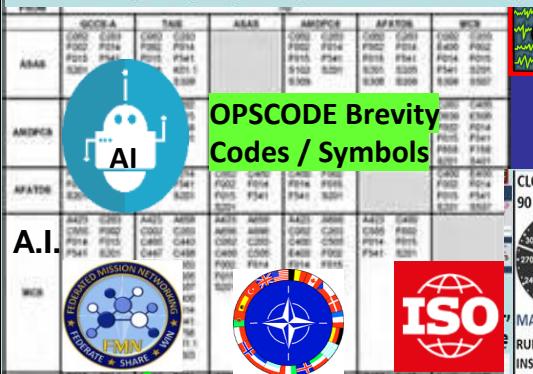
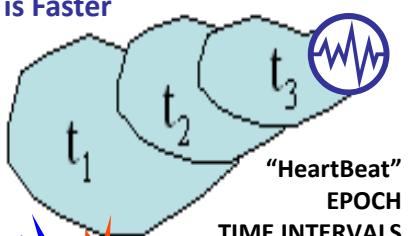


</Org\_ID> TIME CHAIN

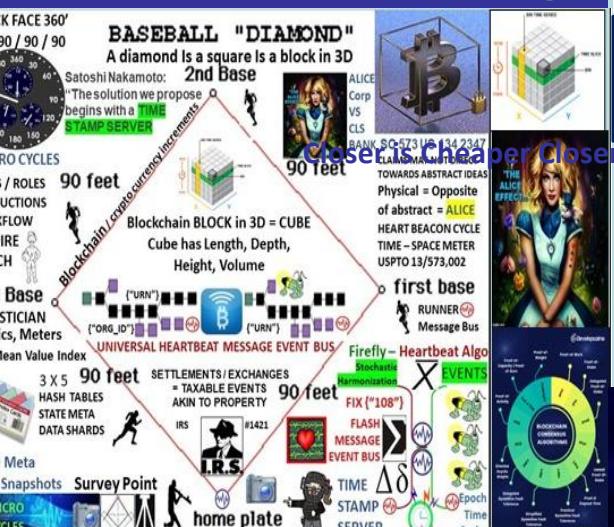
{"URN, URN, URN"}



WATER DROP PHYSICAL NATURAL MEME USPTOb13/573,002



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



A.I.

AI

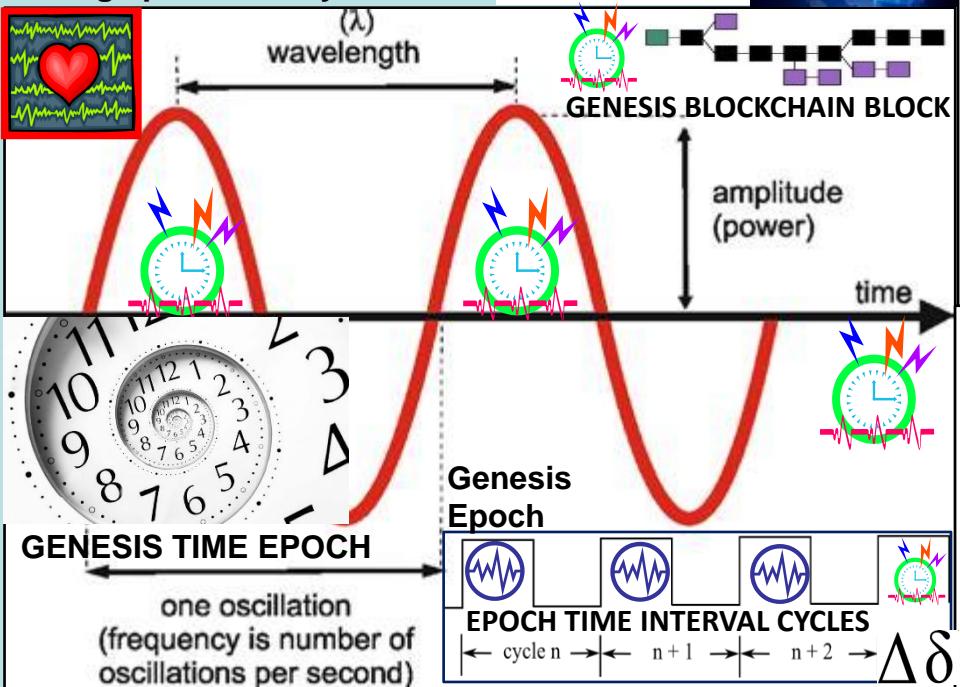
THESES: All things net, net of programmable \$\$\$ are formed using:

## ENERGY / DATA WAVE METRICS / METERS

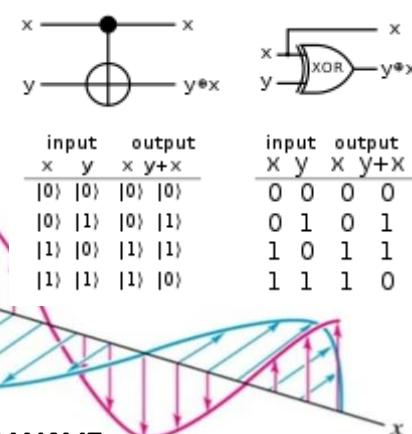
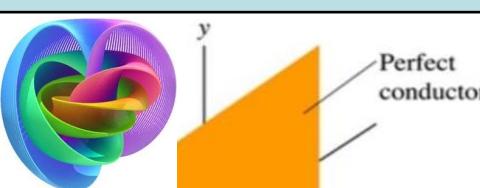
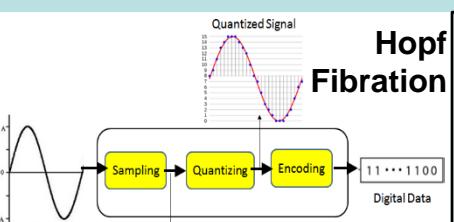
## BELL STATE QUANTUM COMPUTING

1) Time epochs created by quartz crystal silicon chips

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

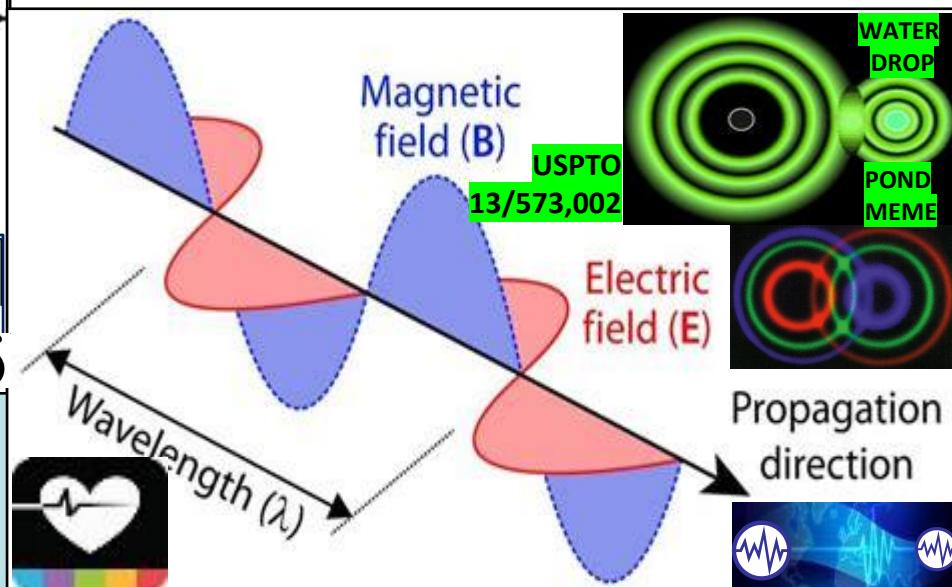


Quantum Computing Vibrations encode, process data like quantum computers. A simple mechanical system built from aluminum rods uses vibrations to encode information, mimicking quantum computing in a non-quantum system. "Light is made from photons, the quantum of light." mechanical vibrations or sound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

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

USPTO 13/573,002 Time – Space Meter

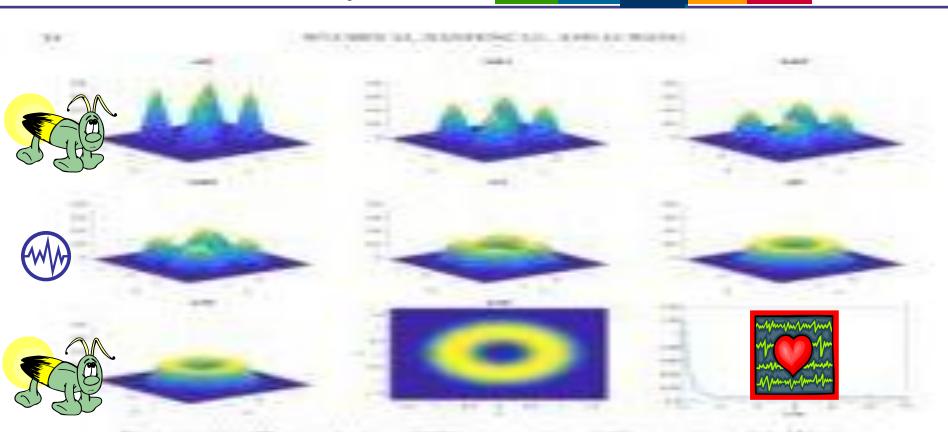
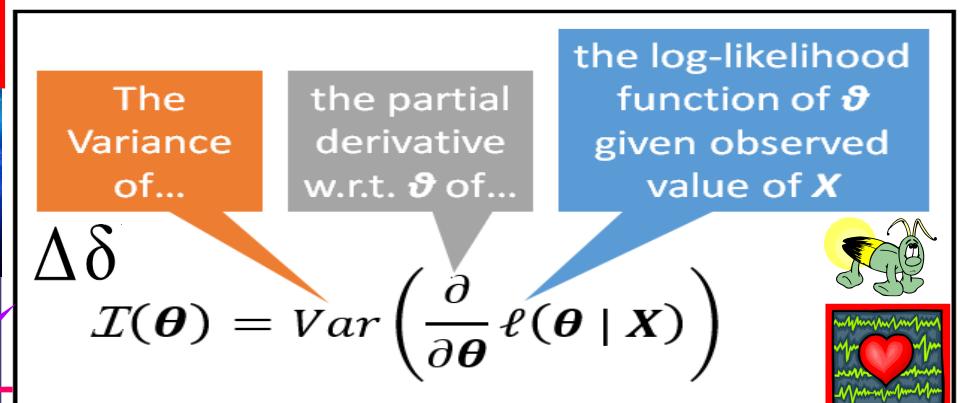
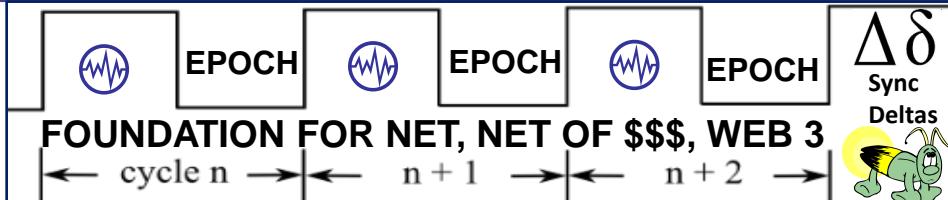


Figure 3.6. This visualization of 2000 instantaneous 400x400 measurements within  $[-10^3, 10^3]$  with  $\Delta\theta = \pi/100$  pixels  $\times 10^3$ ,  $\omega = 2\pi/1000$ . Other parameters include an initial point source with initial semi-major semi-minor condition  $(R_0 = 1, R_0 = \sqrt{3})$ . Other computational-based dimensions are  $[-1, 1], [0, 2], [0, 2]^2$ , total pixels about  $\sim 2500 \times 10^3$ ,  $\eta = 0.2$ ,  $\gamma = 0.2$ . Corresponding flux parameter is  $(\eta)^2 = 0.04$  or  $4\% \sim 10^{-2}$ , and  $\delta = 1000$  for numerical time step concerning other dimensions.

Figure 3.7. The 200,000 second “Time series” for computing a three-dimensional SVD components.

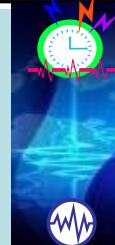
$$\text{Net} = \nabla \cdot \left[ \rho \mathbf{F} \left( \frac{\partial}{\partial t} \text{Euler} + \mathbf{F}(t) \right) \right]$$

Note,  $\Delta t, \Delta r = 10^3$  and initial conditions concerning all four components. As their name, we can denote them to be longitudinal waves with different amplitudes and phases. As seen in Fig. 3.5, the dominant component has the highest energy, while  $\sim 10^{-2}$ , very rapidly, the total field loses energy, power, and amplitude due to the periodic nature component wise due scattered within the current environment and conserves as general modes.

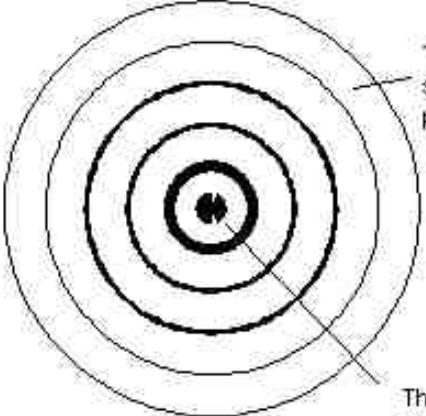


## Continuity equation for flow of Fisher information in wave scattering: Nature / ISF International Space Federation

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



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

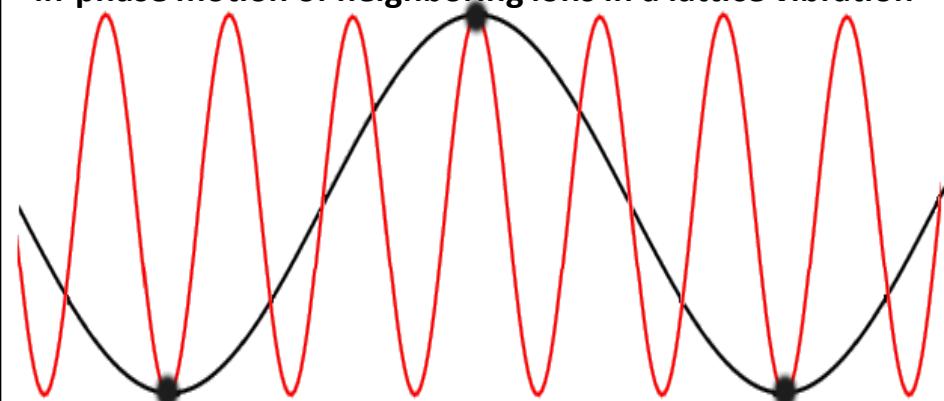


"Simplicity is the ultimate sophistication".  
(Leonardo da Vinci)

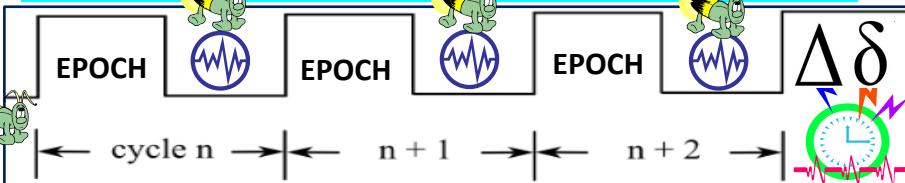
# ACOUSTIC PHONON

USPTO 13/573,002

in-phase motion of neighboring ions in a lattice vibration

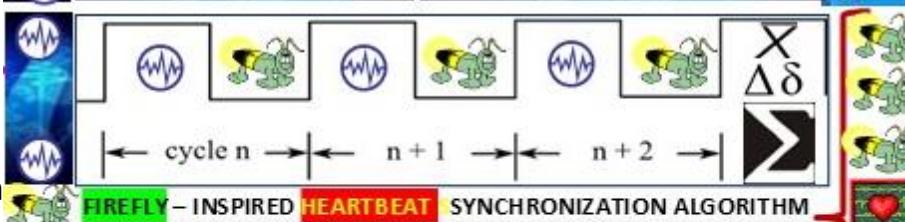
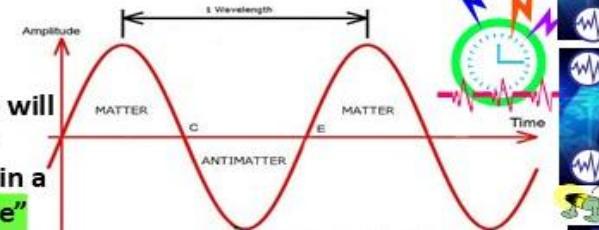


Phonons: A phonon is a quantum of the lattice vibration, the collective motion of atoms constituting a crystal. There are two types of phonons: optical and acoustic. The optical phonon has high-frequency oscillation in the THz range and the unit cell center of mass does not move. It undergoes a dipole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



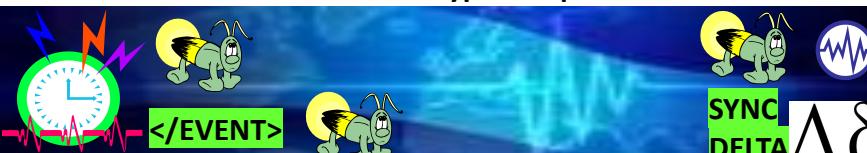
FIREFLY – INSPIRED HEARTBEAT SYNCHRONIZATION ALGORITHM

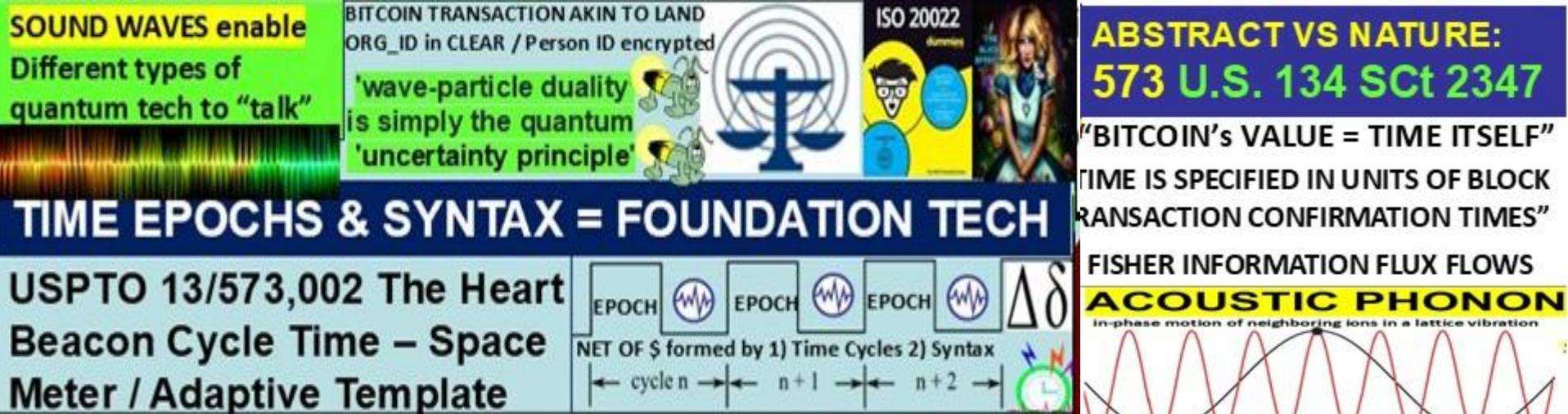


THESIS: All things net, net of programmable \$\$\$ are formed using: 1. Time epochs created by quartz crystal silicon chips 2) Syntax used / not used as programming instructions during epoch - temporal time cycles



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





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

Chain Abstraction: Simplifying the Complex World of Blockchain



Consensus



Mining



Propagation



Semantic



Application

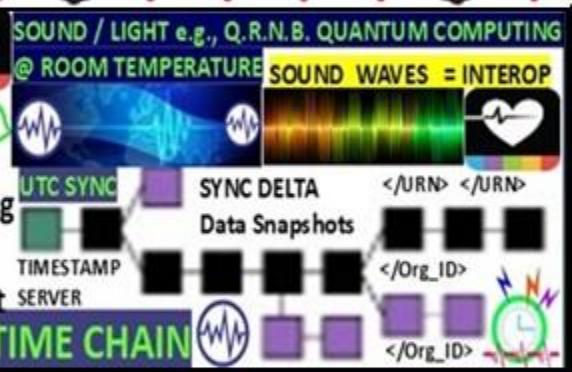
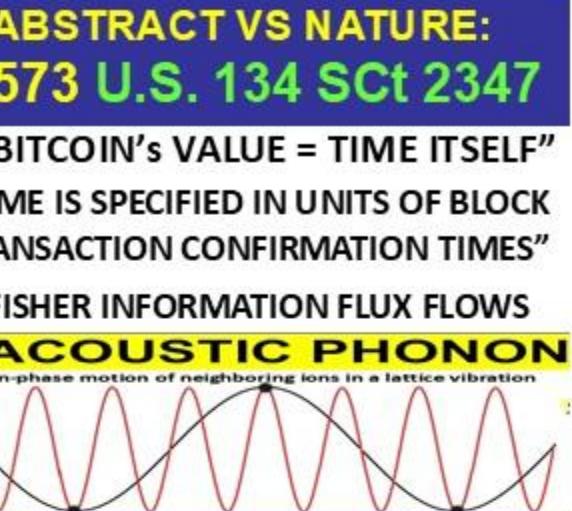


Qubit vs bit: Qubits are represented by a superposition of multiple possible states. A qubit uses the quantum mechanical phenomena of superposition to achieve a linear combination of two states. A classical binary bit can only represent a single binary value, such as 0 or 1, meaning that it can only 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 ???



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"



**Eric Trump: "Bitcoin to 1 MILLION" VS QUANTUM SUPREMACY**



**TRUMP Quantum SPEED BUMP ???**

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

**BITCOIN TRANSACTION AKIN TO LAND ORG\_ID in CLEAR / Person ID encrypted**  
**'wave-particle duality' is simply the quantum 'uncertainty principle'**

## TIME EPOCHS & SYNTAX = FOUNDATION TECH

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



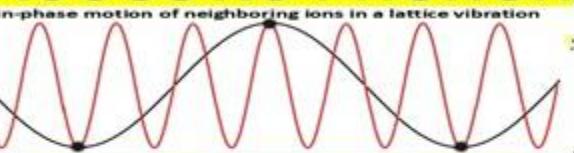
**ABSTRACT VS NATURE: 573 U.S. 134 S.Ct 2347**

"**BITCOIN's VALUE = TIME ITSELF**"

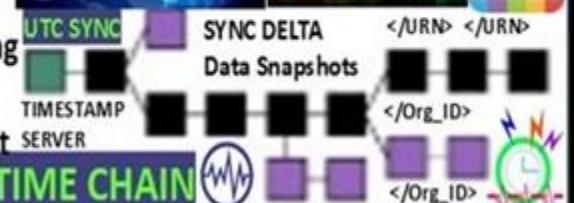
"**TIME IS SPECIFIED IN UNITS OF BLOCK TRANSACTION CONFIRMATION TIMES**"

**FISHER INFORMATION FLUX FLOWS**

**ACOUSTIC PHONON**



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



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

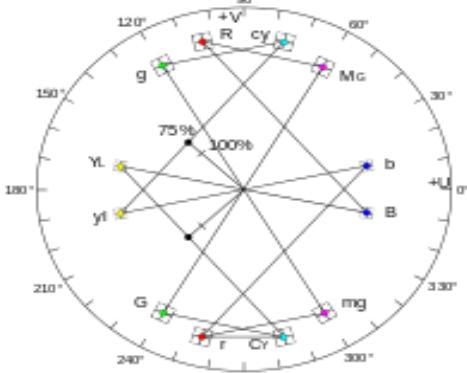
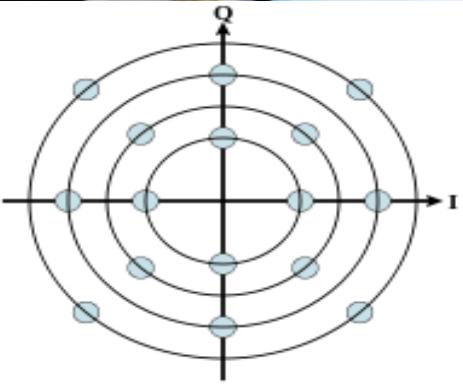
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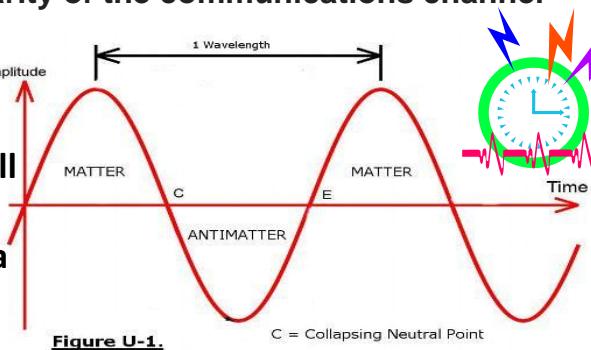
[www.RLighthouse.com](http://www.RLighthouse.com)



### Quadrature amplitude modulation

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

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

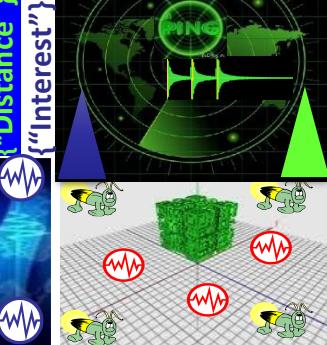


Sine wave of our blinking universe. The 4 fundamental forces will all be found to vary continuously when sampled at 2x the blinking frequency, per Nyquist-Shannon theory



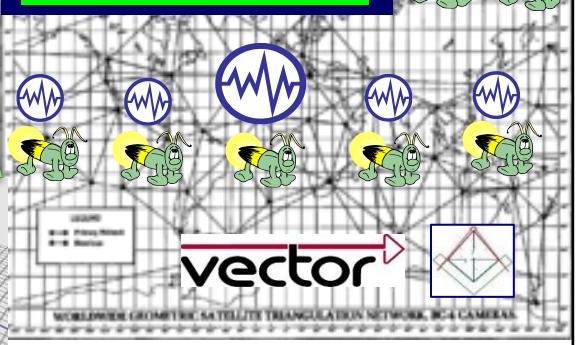
USPTO 13/573,002  
[sawconcepts.com/index](http://sawconcepts.com/index)

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



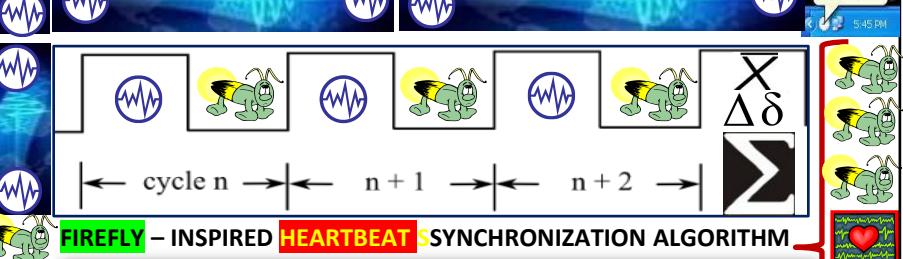
Heart Beacon Cycle Time – Space Meter  
Geo-Spatial Temporal Intensity Metrics

TRIANGULATION



vector

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



FIREFLY – INSPIRED HEARTBEAT SYNCHRONIZATION ALGORITHM

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

$\Delta\delta$



## Three ideas combined

HOW TRUTHCOIN WORKS:

### 1) Tradable Reputation

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

### 2) SVD Cross-Validation

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



### 3) Strategic Use of TIME

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

## 2. A kind of ‘Future Wikipedia’

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

## 3. A software protocol

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

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

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



**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



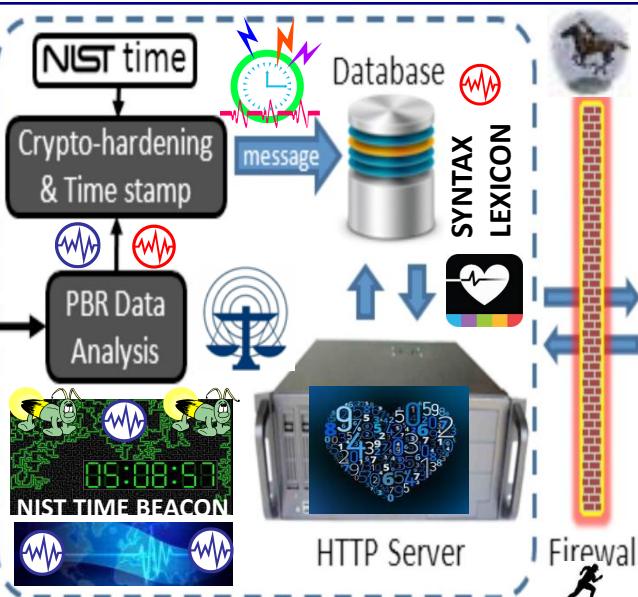
## NIST QUANTUM ENCRYPTION RANDOMIZATION BEACON

UNPREDICTABLE SAMPLING

SECURE AUTHENTICATION

SECURE MULTI

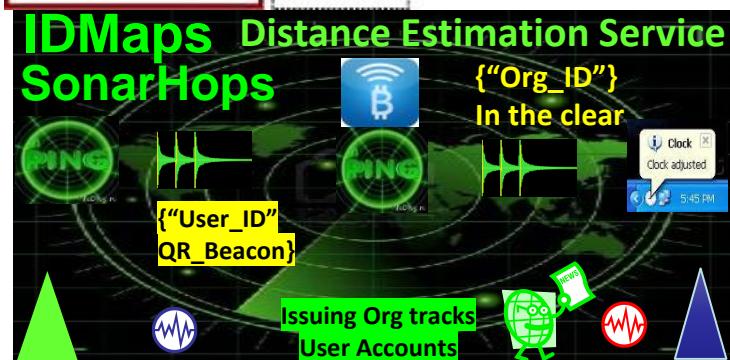
PARTY /  
AUTHENTICATION



**NIST**

**NON  
REPUDIATION**

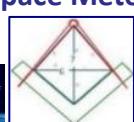
Legend:  
 - App. software application  
 - DB database  
 - Fw firewall  
 - HSM hardware security module  
 - RNG random-number generator



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

Metrics and Time - Space Meter uses PHYSICAL Memes / Metaphors

**NAMED DATA NETWORKING**



NDN  
</Interest>  
</Distance>

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  
of Internet & estimates distance between any IP address pair State  
Snap Shots

Time / Distance Metrics



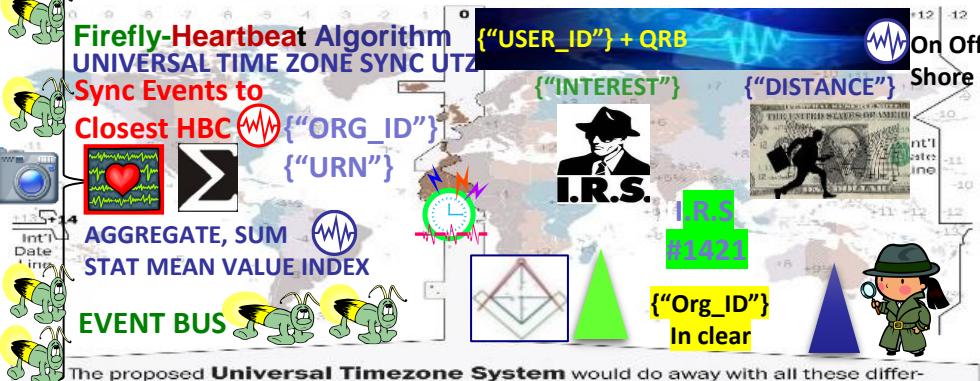
PROXIMITY

OFFSHORE BEACONS ONSHORE



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



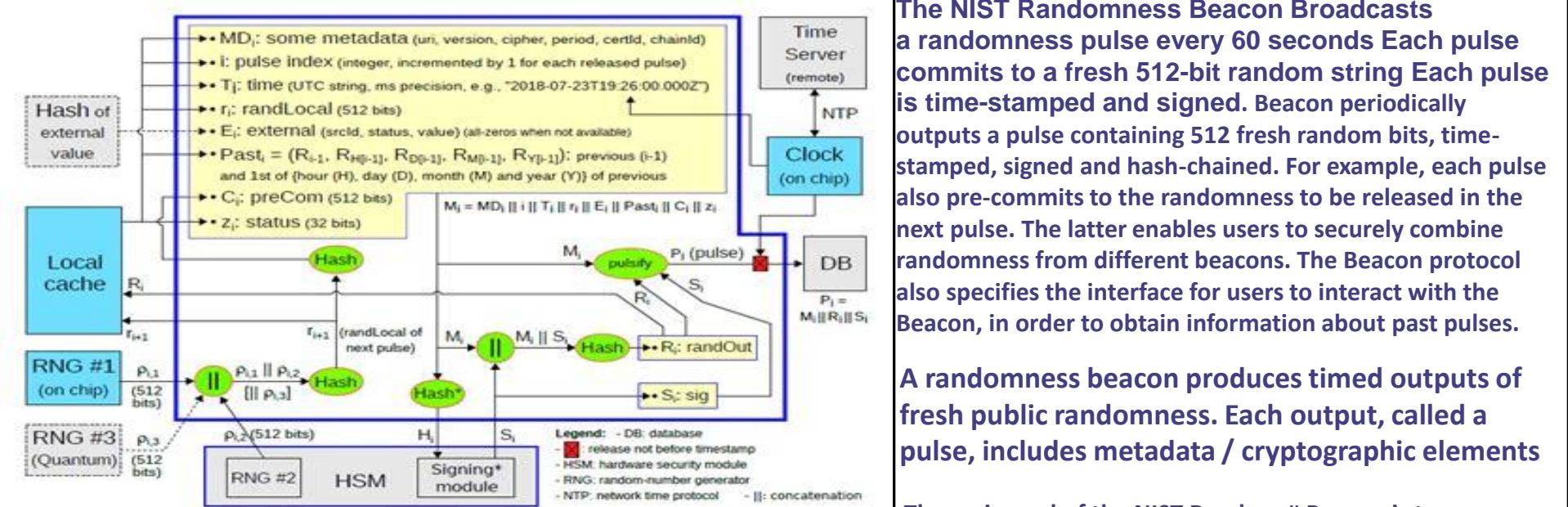
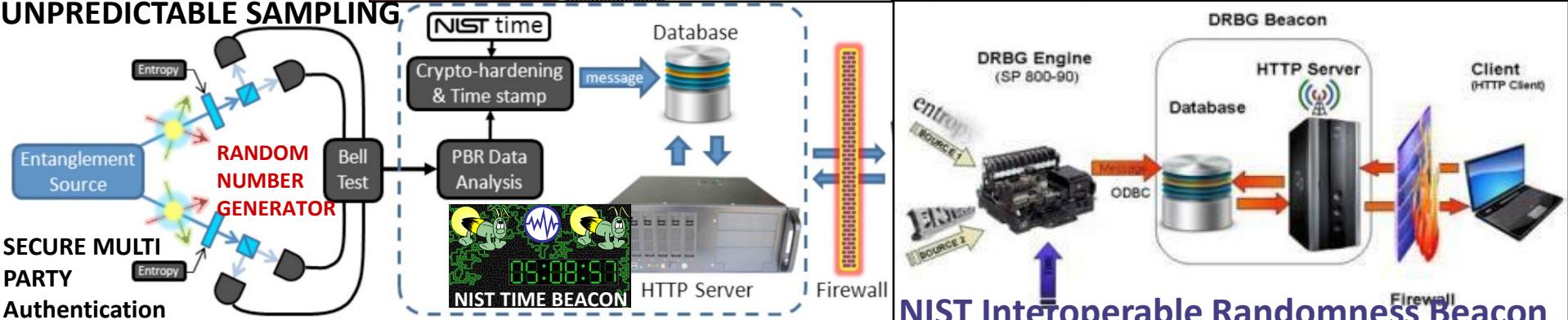
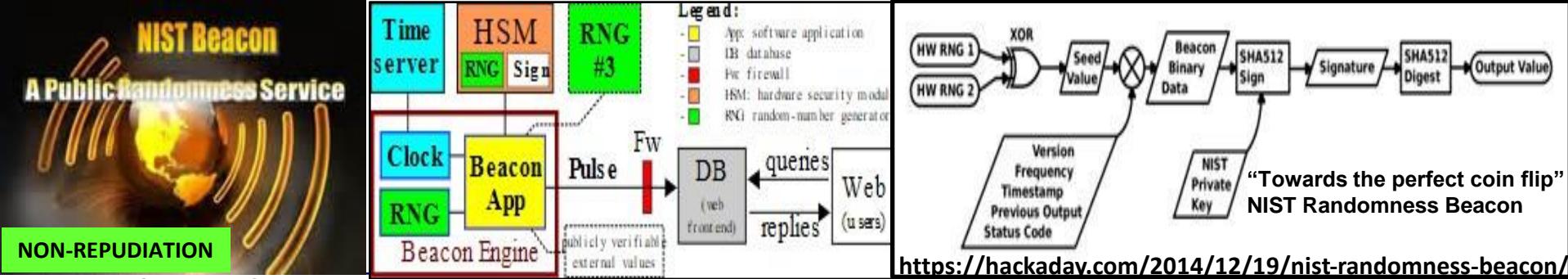


Figure 2. Illustration of the generation of the  $i^{\text{th}}$  pulse by a Beacon App (2.0)

## NIST Interoperable Randomness Beacon

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

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

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

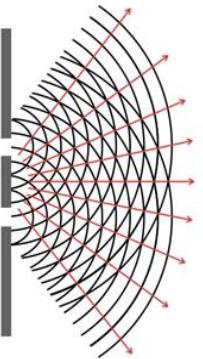


# Double-Slit Experiment

Screen with two slits

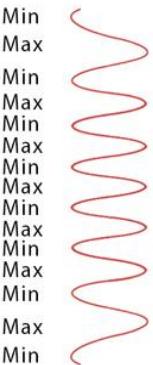
PARTICLE ?

Sodium lamp



Screen

WAVE ?



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

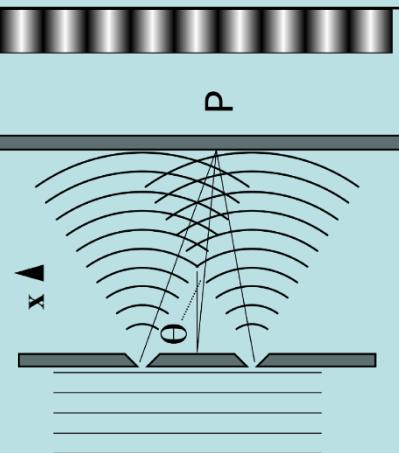
Interference of light waves due to two tiny slits and arrows indicate direction of wave propagation

Alternating bright and dark fringes due to interference of light waves

Intensity of the fringes shows the maxima and minima

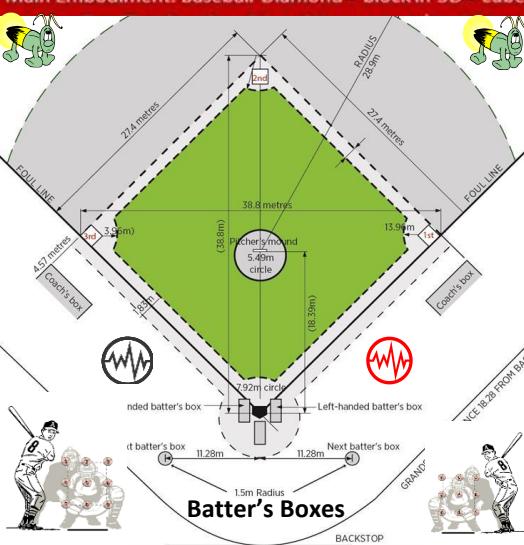
Science Facts

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



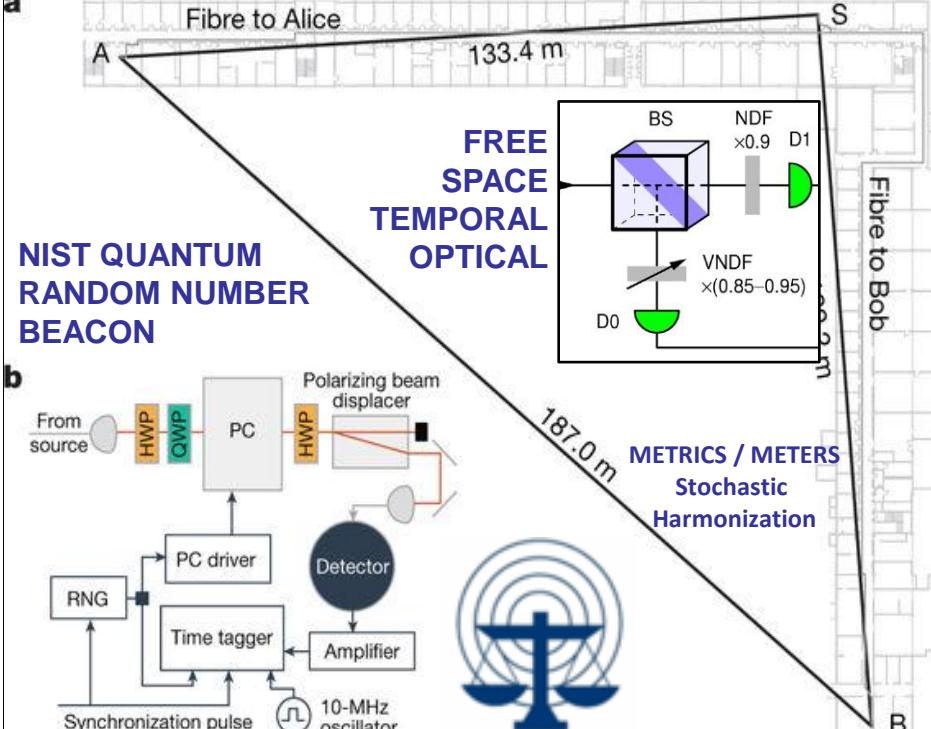
USPTO APPLICATION 13/573 002

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



S

CLOCK FACE 360°  
90 / 90 / 90 / 90



MACRO CYCLES

RULES / ROLES

INSTRUCTIONS

WORKFLOW

UMPIRE

COACH

3rd Base

STATISTICIAN

Metrics, Meters

Stat Mean Value Index

3 X 5 HASH TABLES

STATE META DATA SHARDS

SETTLEMENTS / EXCHANGES

= TAXABLE EVENTS AKIN TO PROPERTY

IRS #1421

State Meta Data Snapshots

MICRO CYCLES

Survey Point

TIME STAMP SERVER

home plate

FLASH MESSAGE EVENT BUS

TIME STAMP SERVER

Epoch Time 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

Blockchain BLOCK in 3D = CUBE

Cube has Length, Depth,

Height, Volume

first base

RUNNER

Message Bus

firefly - Heartbeat Algo

X EVENTS

EVENTS

Fix {"108"}

FLASH MESSAGE EVENT BUS

TIME STAMP SERVER

Epoch Time Cycles

home plate

FLASH MESSAGE EVENT BUS

TIME STAMP SERVER

Epoch Time Cycles

home plate

FLASH MESSAGE EVENT BUS

TIME STAMP SERVER

Epoch Time Cycles

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FLASH MESSAGE EVENT BUS

TIME STAMP SERVER

Epoch Time Cycles

home plate

FLASH MESSAGE EVENT BUS

TIME STAMP SERVER

Epoch Time Cycles

baseball "diamond"

2nd base

3rd base

1st base

runner

message bus

firefly - heartbeat algo

events

fix {"108"}

flash message event bus

time stamp server

epoch time cycles

home plate

survey point

micro cycles

state meta data shards

settlements / exchanges

taxable events akin to property

irs #1421

micro cycles

state meta data shards

settlements / exchanges

taxable events akin to property

irs #1421

micro cycles

state meta data shards

settlements / exchanges

taxable events akin to property

irs #1421

micro cycles

state meta data shards

settlements / exchanges

taxable events akin to property

irs #1421

# The Hopf Fibration

Edmund Harriss

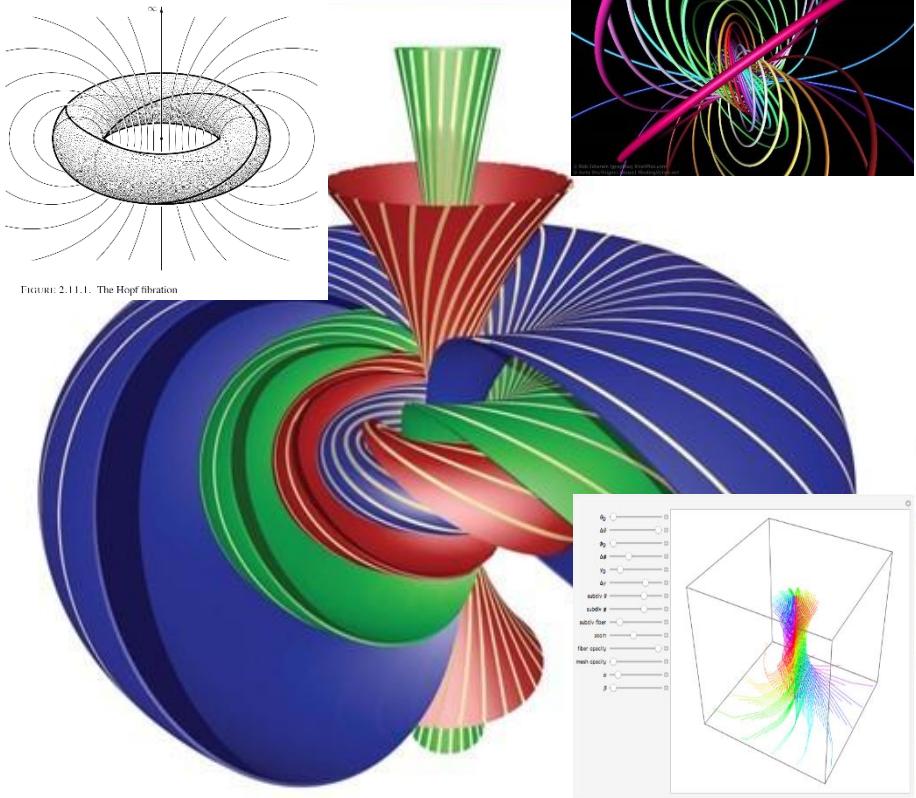
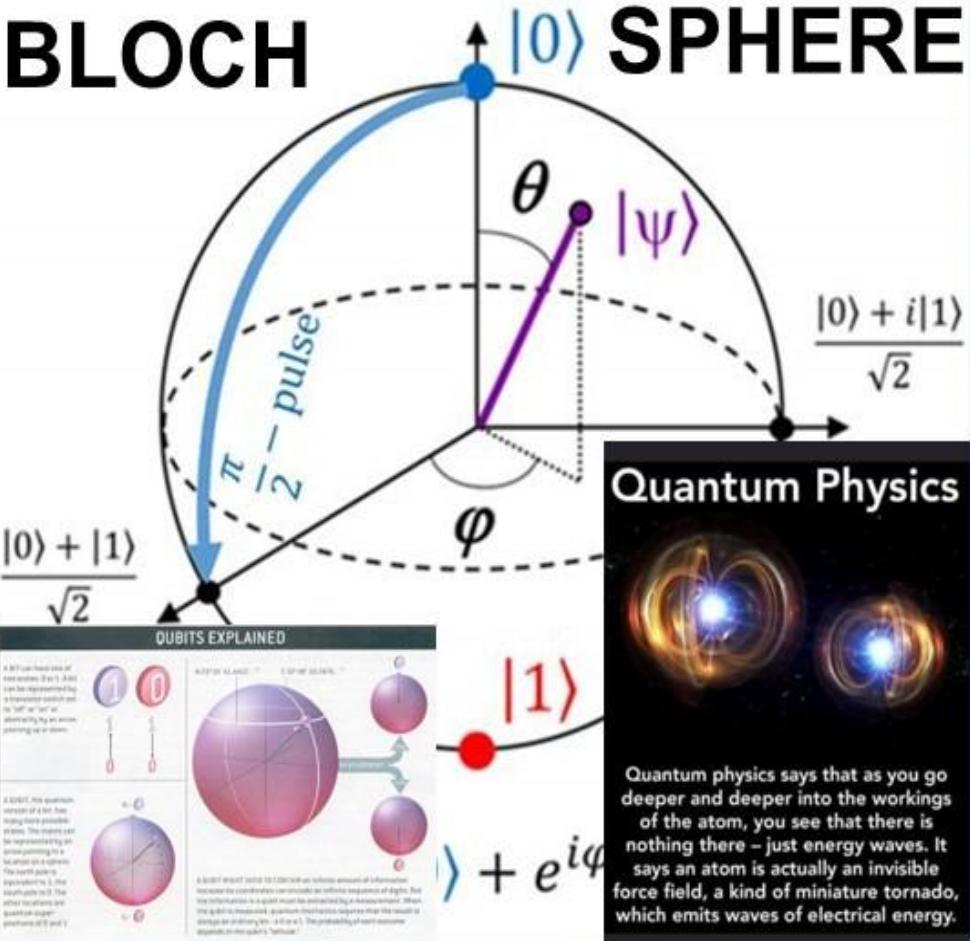


FIGURE 2.11.1. The Hopf fibration

# BLOCH SPHERE



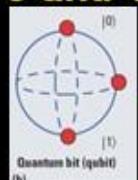
## Hopf Fibration / #Bloch sphere

"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.





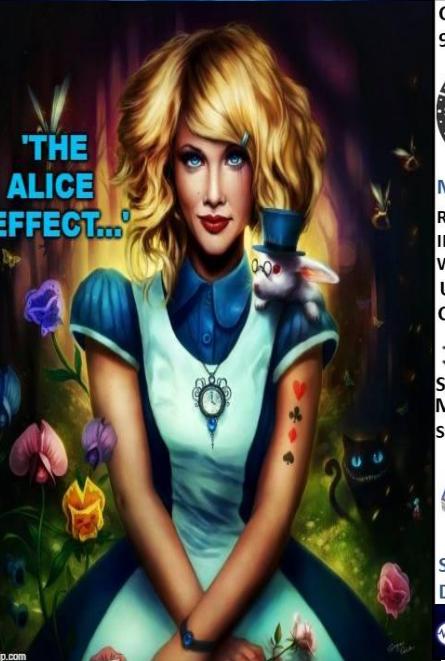
**THE 1919 WORLD SERIES**

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

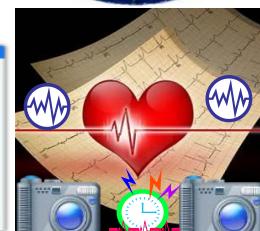
**What Really Happened?**

**William A. Cook**

imgflip.com



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



## USPTO SCREEN CAPTURES SUSPENDED PAIR RULES

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

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

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

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



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

first base  
RUNNER Message Bus

Firefly – Heartbeat Algo  
Stochastic Harmonization  
X EVENTS

FLASH MESSAGE EVENT BUS  
FIX {"108"}  
TIME STAMP SERVER  
Δδ  
TIME Epoch  
Time Cycles

MACRO CYCLES

RULES / ROLES  
INSTRUCTIONS  
WORKFLOW  
UMPIRE  
COACH

3rd Base  
STATISTICIAN  
Metrics, Meters  
Stat Mean Value Index

3 X 5  
HASH TABLES  
STATE META  
DATA SHARDS

SETTLEMENTS / EXCHANGES  
= TAXABLE EVENTS  
AKIN TO PROPERTY

IRS  
#1421

State Meta  
Data Snapshots  
Survey Point

MICRO CYCLES

Blockchain BLOCK in 3D = CUBE  
Cube has Length, Depth, Height, Volume  
90 feet  
Blockchain/cryptocurrency increments  
TIME RATES  
TIME INDEXES

UNIVERSAL HEARTBEAT MESSAGE EVENT BUS  
("URN")  
("ORG\_ID")  
("URN")

90 feet  
SETTLEMENTS / EXCHANGES  
= TAXABLE EVENTS  
AKIN TO PROPERTY

IRS  
#1421

FLASH MESSAGE EVENT BUS

TIME STAMP SERVER

Δδ  
TIME Epoch  
Time Cycles





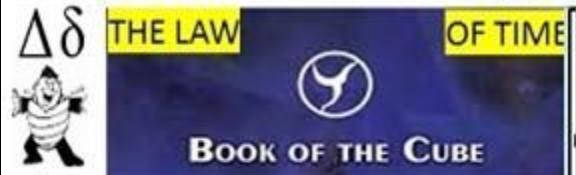
USPTO APPLICATION 13/573 002

## The Heart Beacon Cycle Time-Space Meter

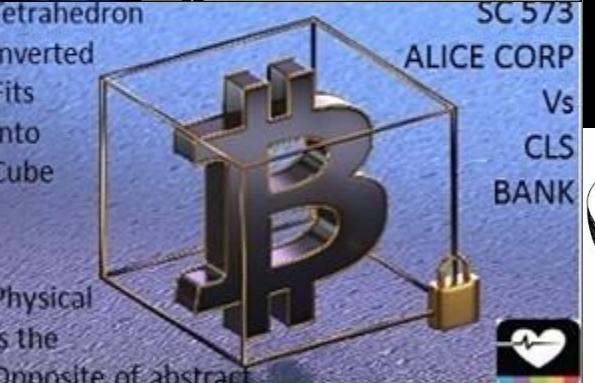
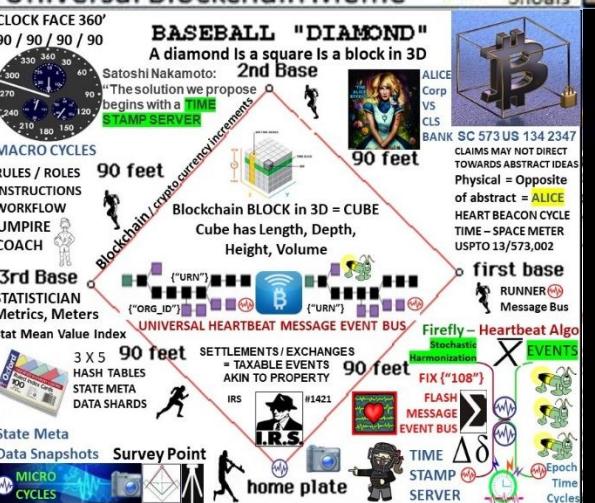
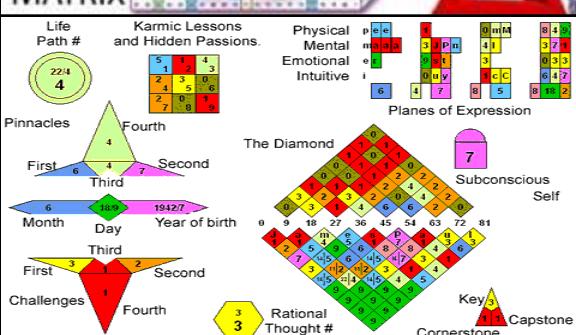
Main Embodiment: Baseball Diamond = block in 3D = cube

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

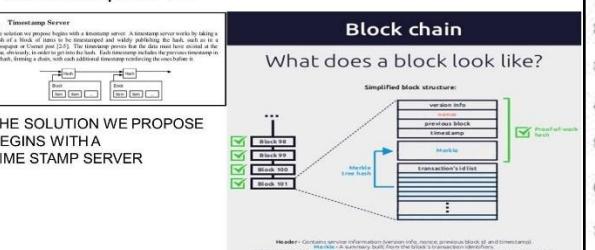
"We can synchronize ourselves in time for a common purpose" Universal Blockchain Meme



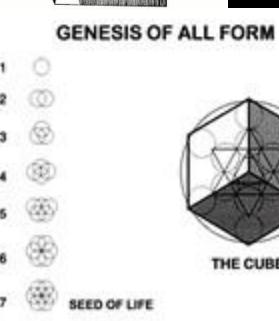
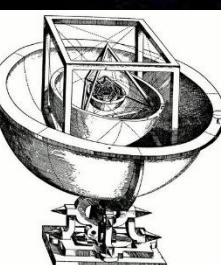
First  
Baseball  
Players  
Union  
Formed  
1870



Satoshi Bitcoin Blockchain  
Time Stamp Server



## Metatron's Cube and the Platonic Solids



"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.

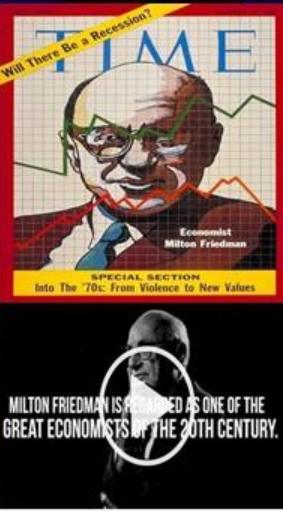
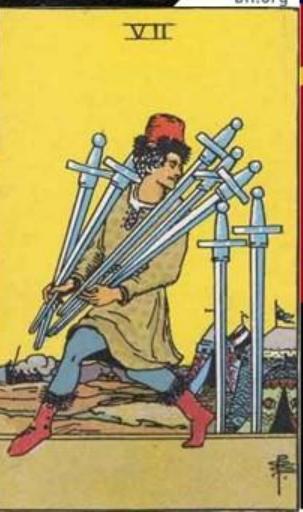
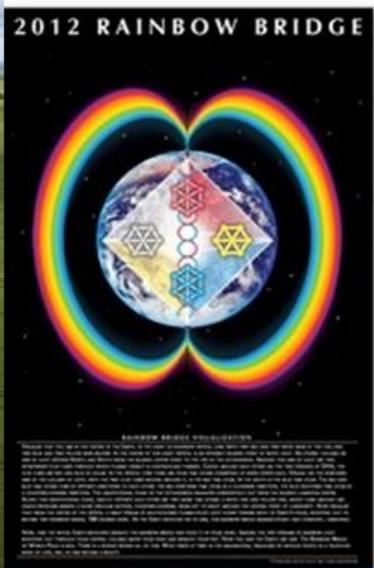
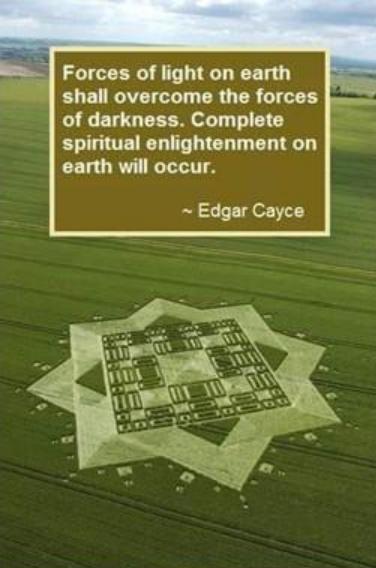
Over the next ten years, we are going to see our world innovate unlike never before, particularly in the fields of AI, technology, science, space travel, UFOs, networks, and the Internet. Major Universal truths will also be revealed as we welcome the New Age of Aquarius. The old world will soon come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

photo by werner du plessis



Forces of light on earth shall overcome the forces of darkness. Complete spiritual enlightenment on earth will occur.

~ Edgar Cayce



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

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

Milton Friedman — Preface to Capitalism & Freedom 1962

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

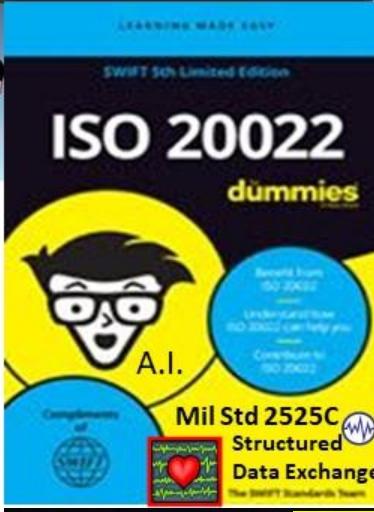
The K-Percent Rule: sets the money supply growth at a rate equal to the growth of gross domestic product (GDP) yearly.

**Milton Friedman**

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



CAPITALISM AND FREEDOM  
MILTON FRIEDMAN  
WITH THE ASSISTANCE OF ROBERT FRIEDMAN



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

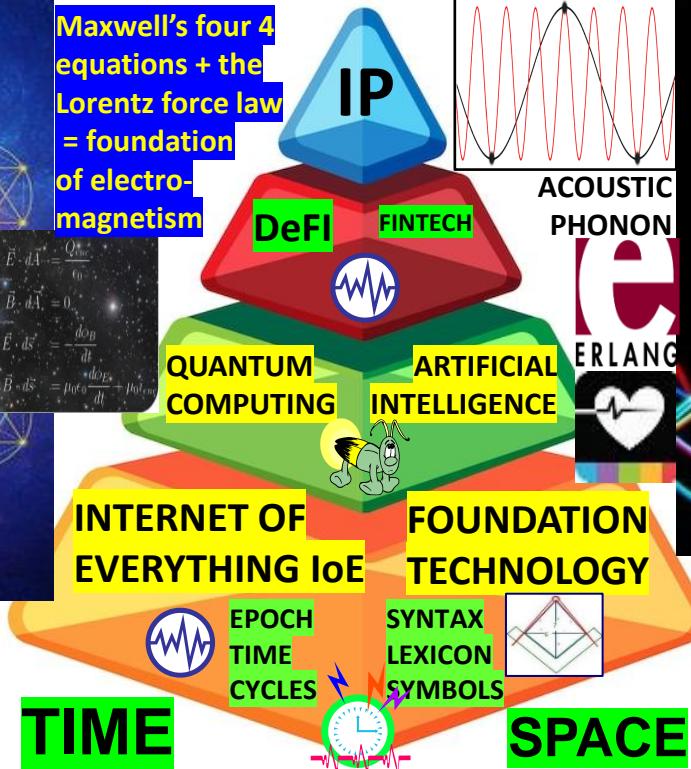
**Buckminster Fuller "build a new model that makes the old model obsolete"**

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

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



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

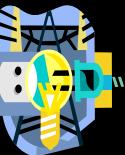


**THE OZ KEY**

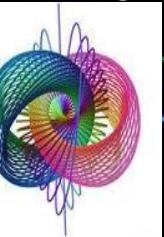


"Time is a created thing" Lao Tzu

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



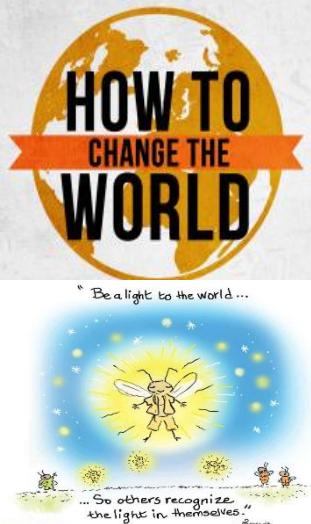
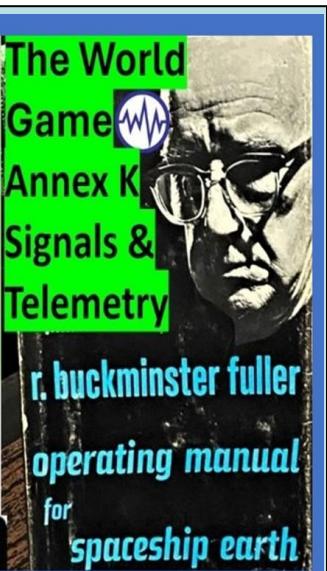
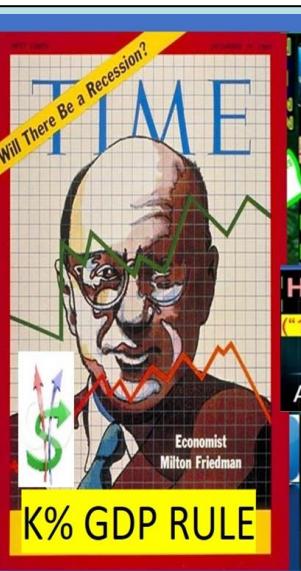
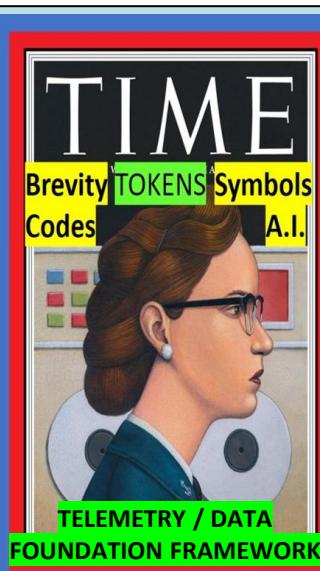
HOPF FIBRATION



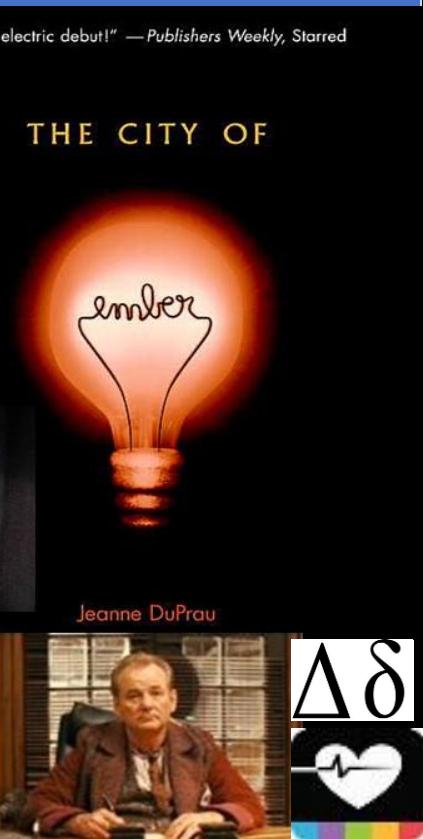
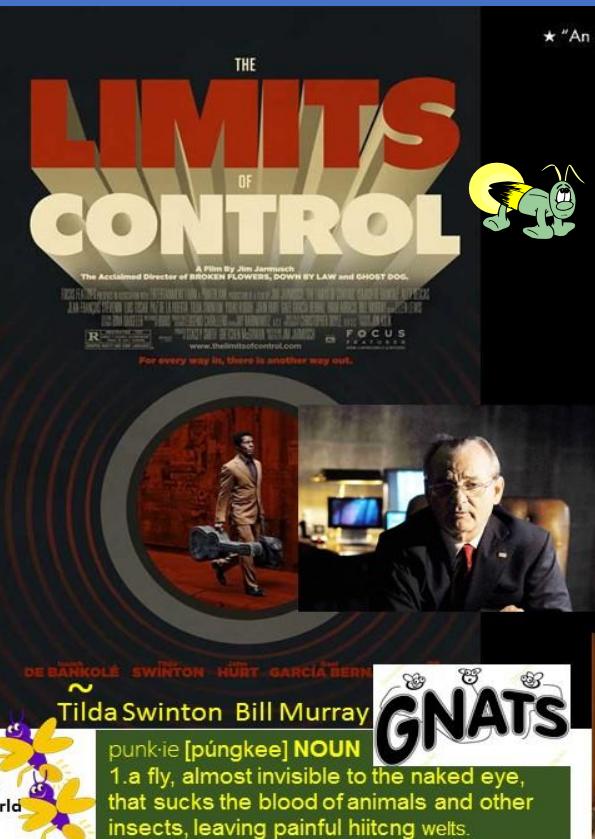
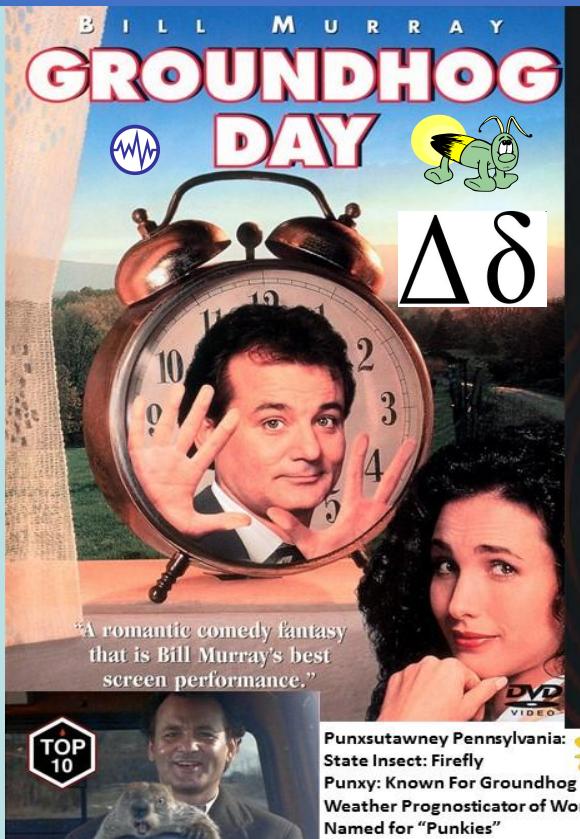
USPTO 13/573,002 The Heart Beacon Cycle Time – Space Meter / Adaptive Template



**DISNEY'S FANTASIA**



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



# Patent Applicant 13/573,002 Curriculum Vitae

What does your name mean?



**Steven + McGee**

Intellectual

Revolutionary

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

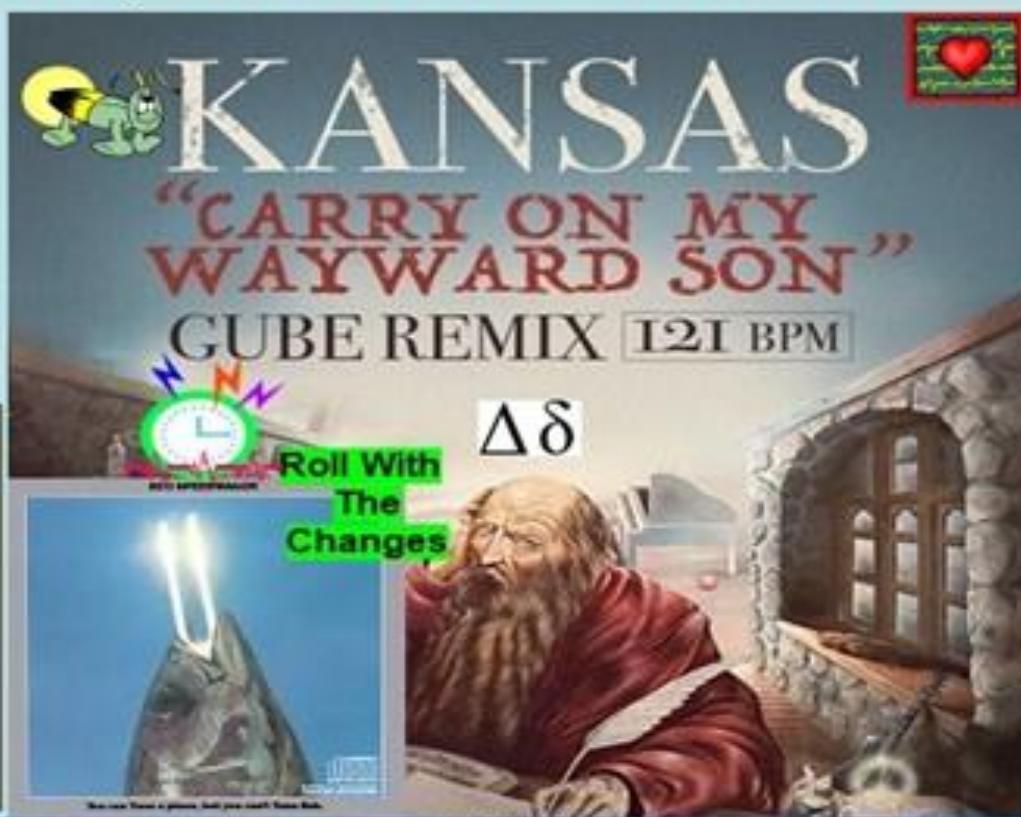
What does your name mean?



**Steven + McGee**

Endless Luck

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



$\Delta\delta$

Roll With  
The Changes

**BOOK OF THE CUBE**

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

Satoshi Nakamoto Reveal #2

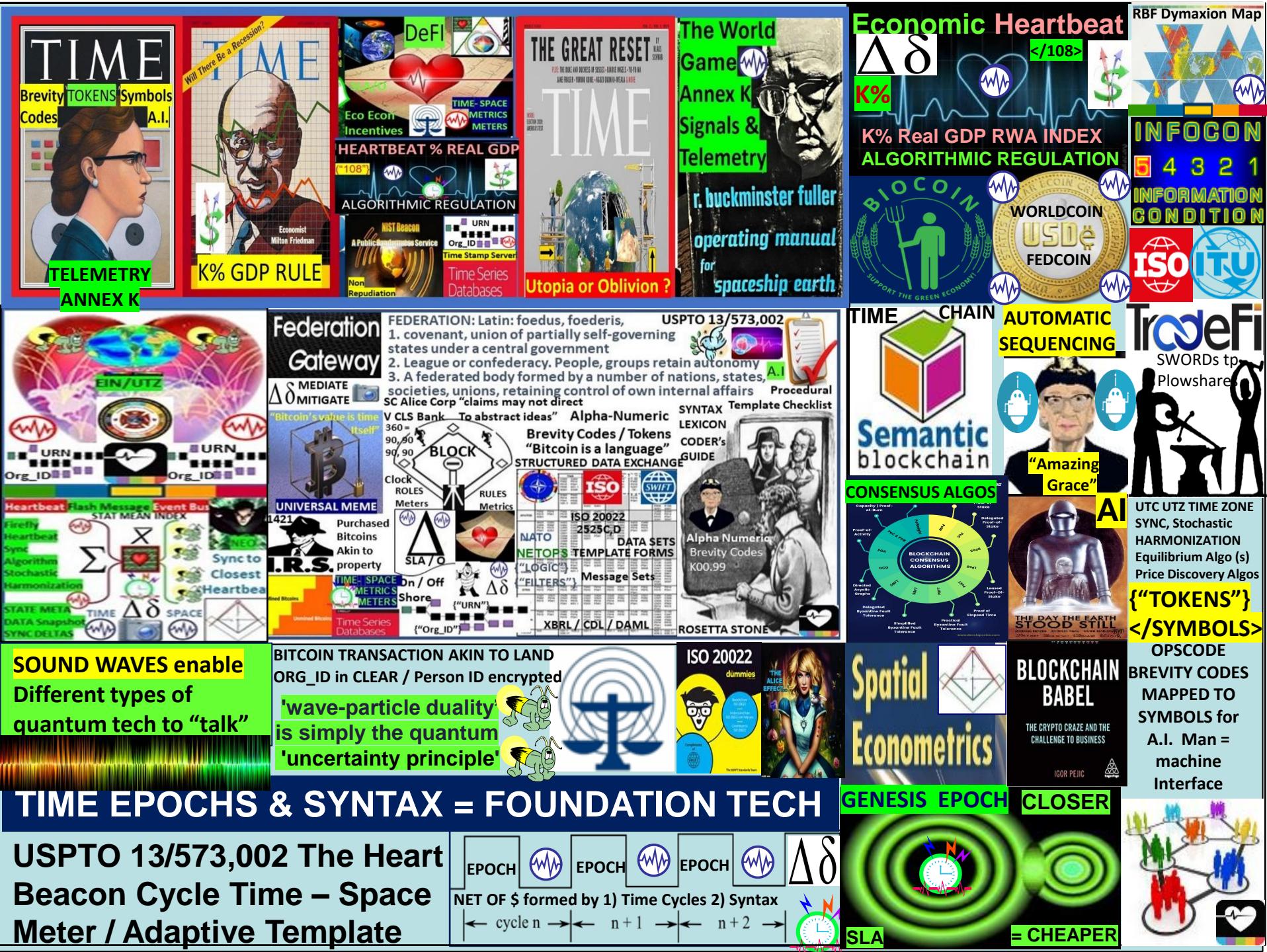
**CLOCK FACE DAY**  
 $90^\circ / 90^\circ = 90^\circ / 90^\circ$

**BASEBALL "DIAMOND"**  
A diamond is a square in a block in 3D

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

Eco Incentives

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





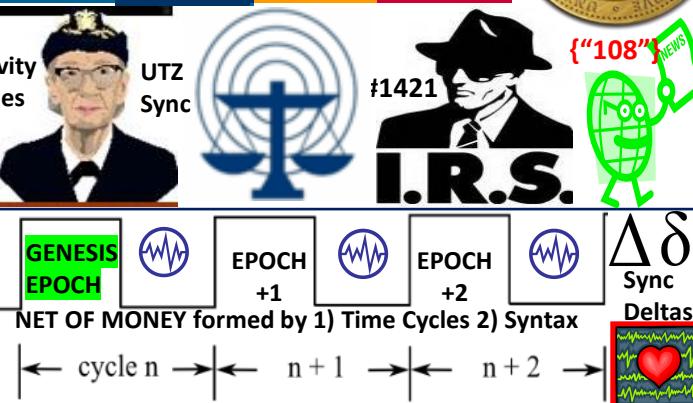
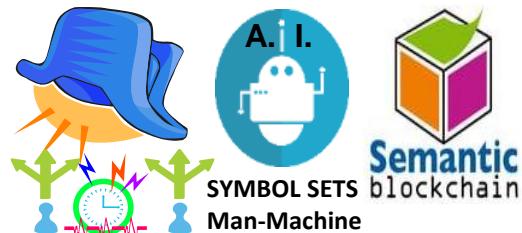
# **World Game Great Reset**

## **Signals Telemetry Annex K**



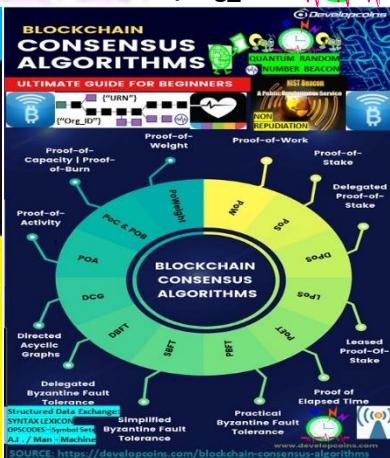
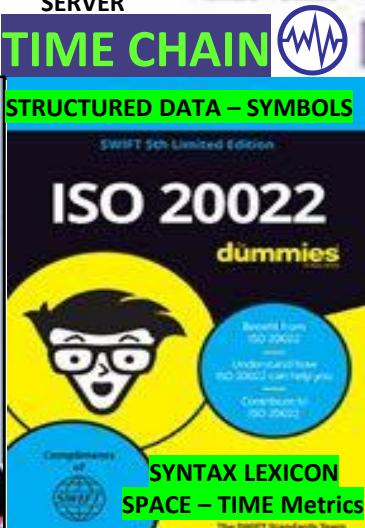
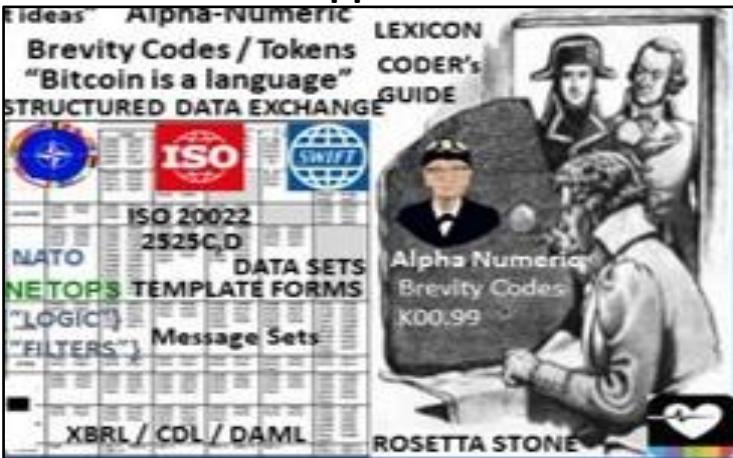
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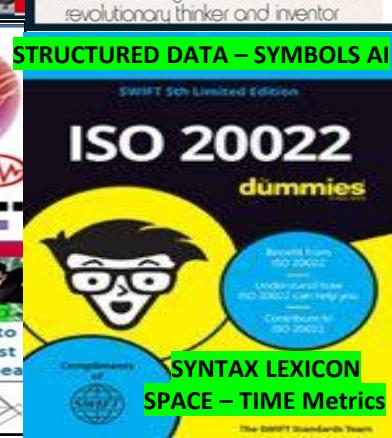
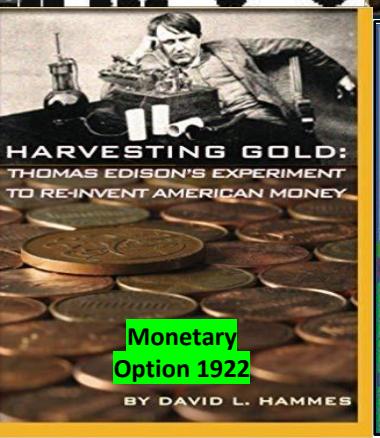
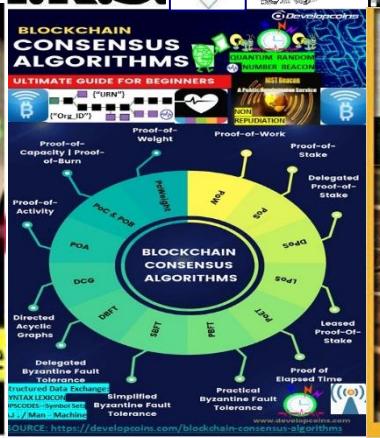
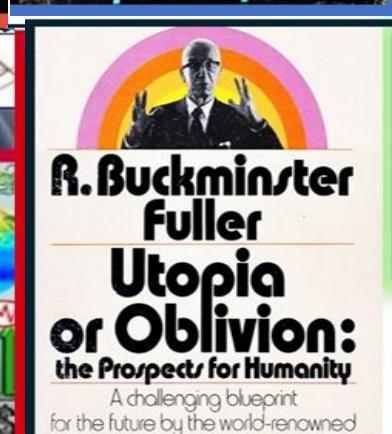
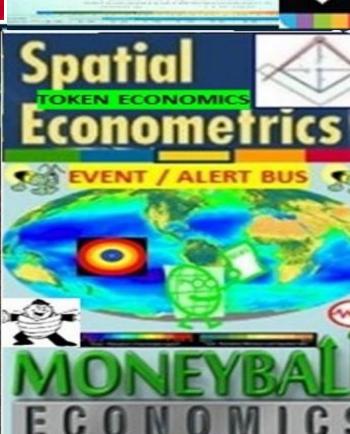
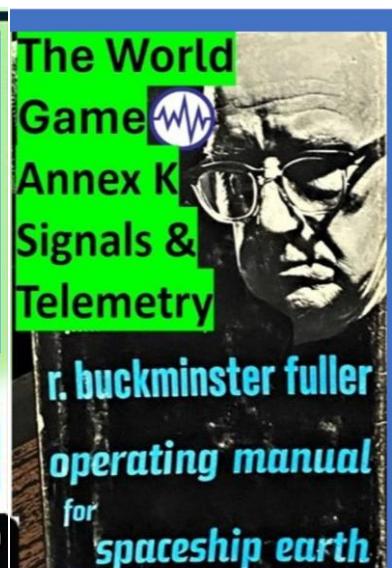
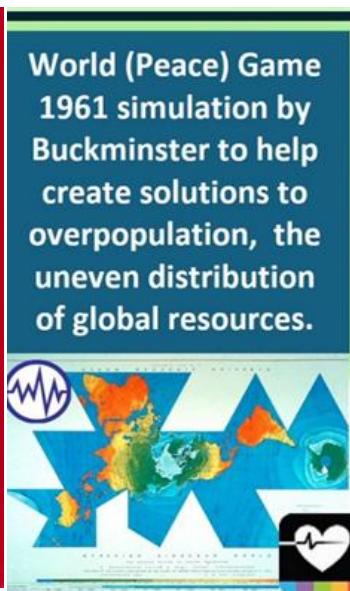
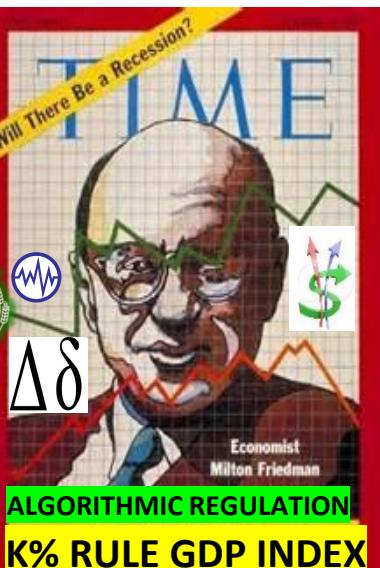
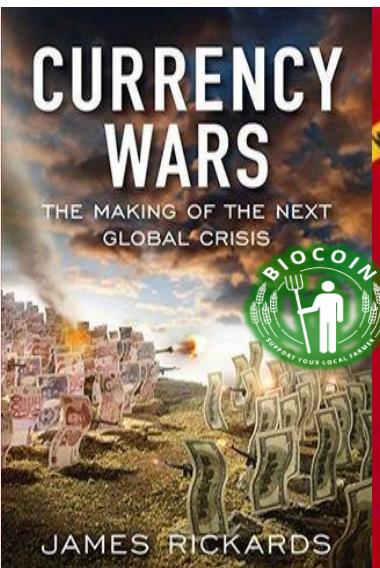
1. Epoch time cycles created by silicon chips
  2. Syntax code instructions in epoch time cycles
  3. Time Stamp Server w/event message bus



**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







SIMPLE ALWAYS WINS... WHEN STANDING ON THE SHOULDERS OF GIANTS

