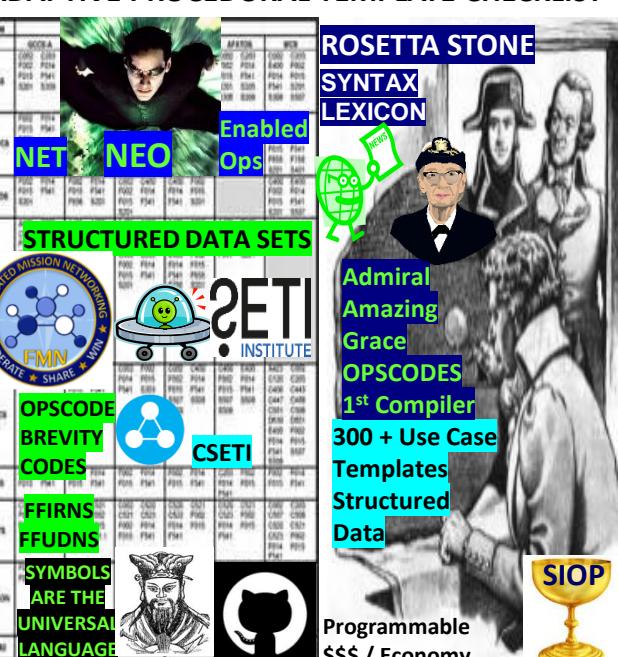


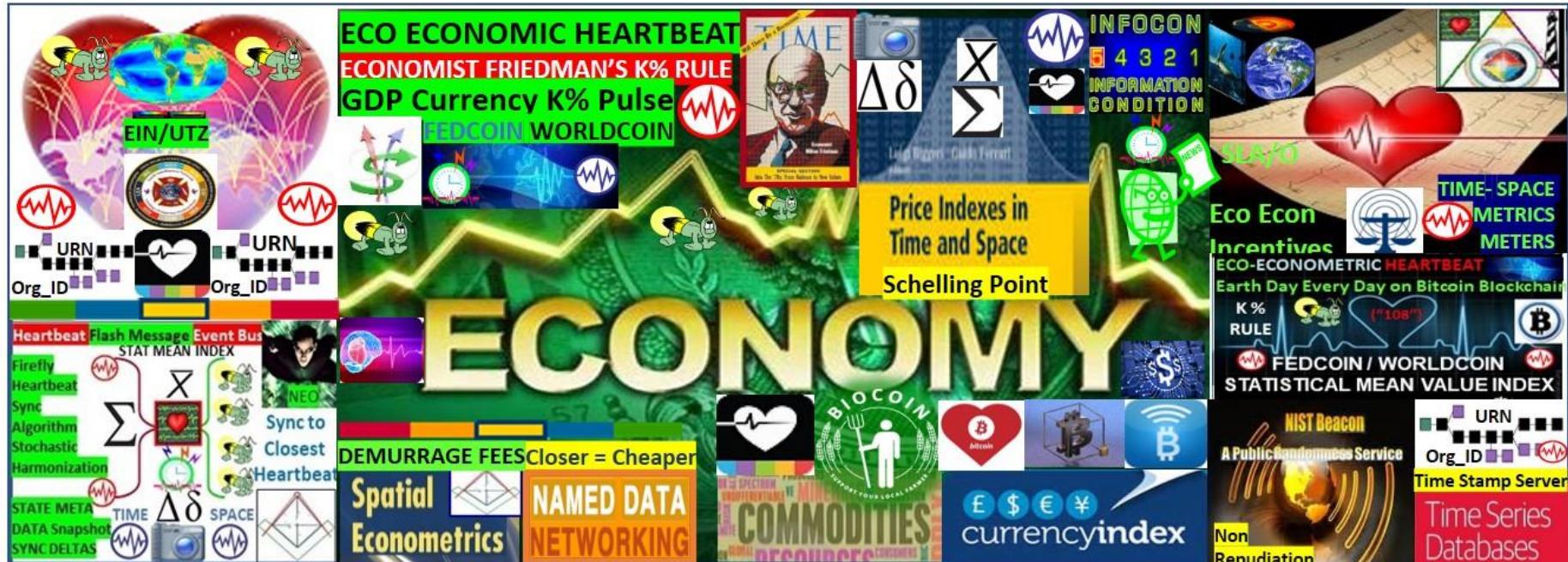
TIME – SPACE METER



ADAPTIVE PROCEDURAL TEMPLATE CHECKLIST



The Heart Beacon Cycle Time — Space Meter USPTO 13/573,002 : Adaptive Procedural Template (checklist)



Use Case: Eco Economic Epoch Heartbeats for programmable money for the programmable economy – it's TIME.





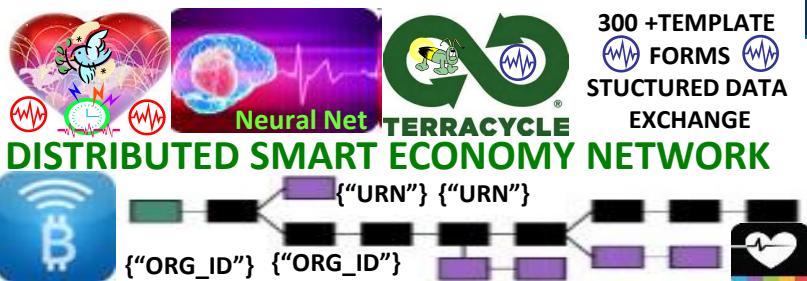


Humanitarian Assistance Networked Donor System

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 : concepts of "Network Centric Warfare" in the United States of America, "Network Enabled Operations" in Great Britain or "Vernetzte Operationsführung" in Germany



<https://neo.org>



Reuse best practice procedural template guides from Battlefield Digitization describing when, where, how, how often systemically among a systems of systems improving synergy and synchronicity



Federation Gateway



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

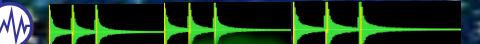


DOD SITUATION AWARENESS PROGRAM
SWORDS TO PLOWSHARES OOTW IDEA
BY GERMAN MILITARY CIRCA 2003

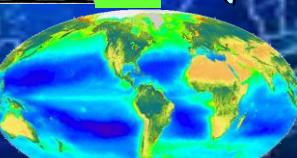


Beacon Communities

Vernetzte Operationsführung



Closer < \$\$\$ < FUEL



Proximity Beacons

JAEGERS



FIREFLY
HEARTBEAT
EVENT / ALERT Flash Heartbeat Message Bus
ALGORITHM

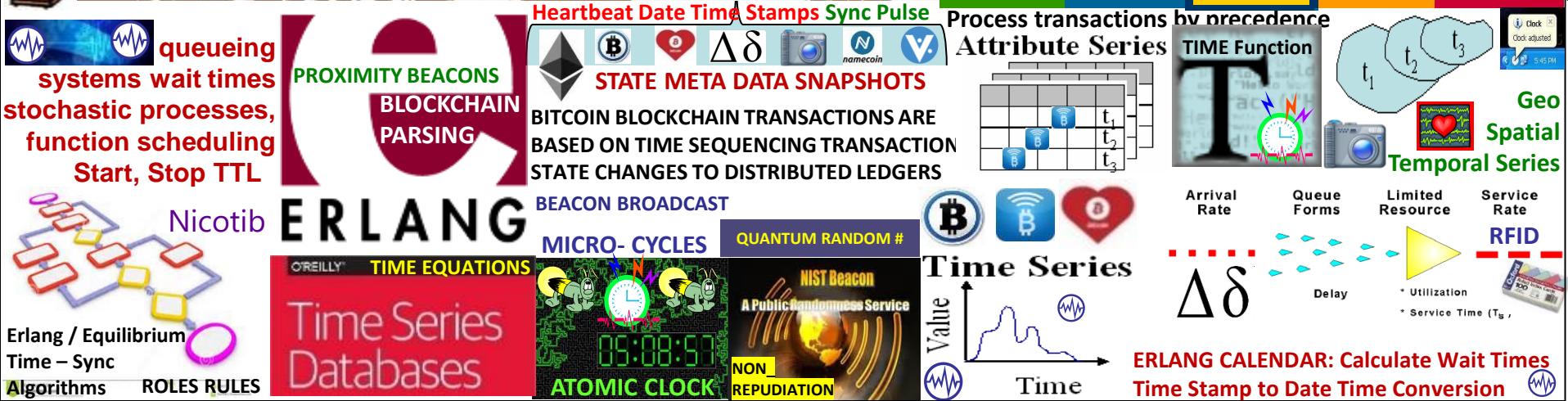


KAIJU

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.



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

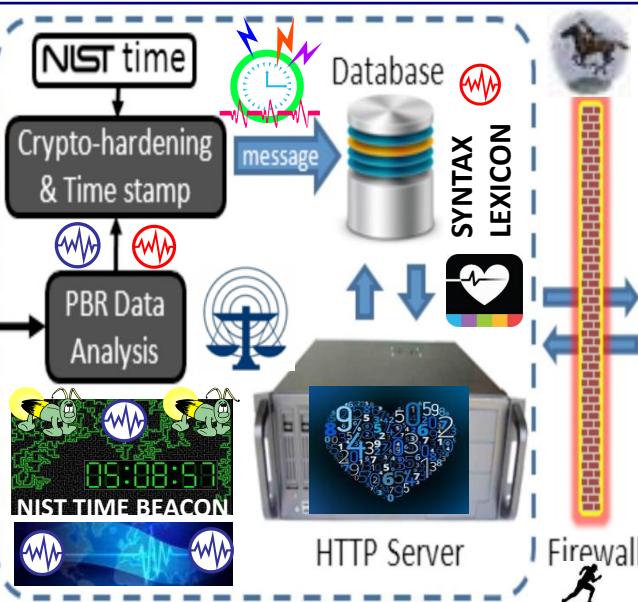
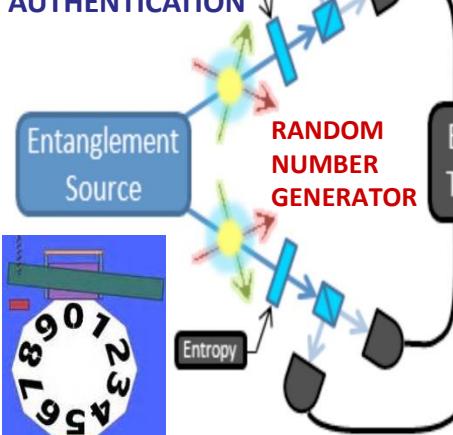
UNPREDICTABLE SAMPLING

SECURE AUTHENTICATION

SECURE MULTI

PARTY /

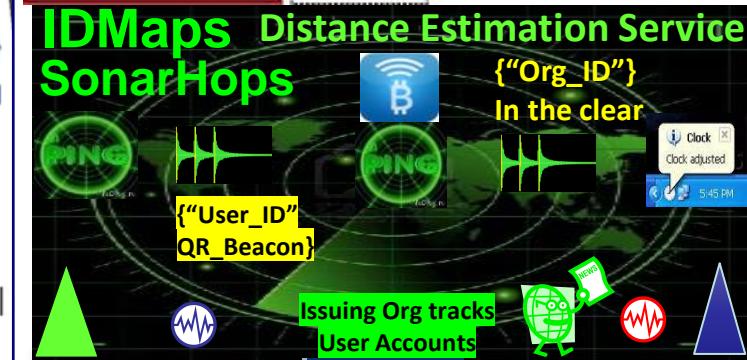
AUTHENTICATION



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

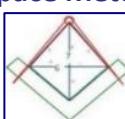
Metrics and Time - Space Meter uses PHYSICAL Memes / Metaphors

NAMED DATA NETWORKING

Time / Distance Metrics



PROXIMITY



OFFSHORE BEACONS ONSHORE

NDN
</Interest>
</Distance>

NDN
SURVEY METHODS + TRIANGULATION
Euclidian Geometry

Geodesic System Routing Info Base RIB

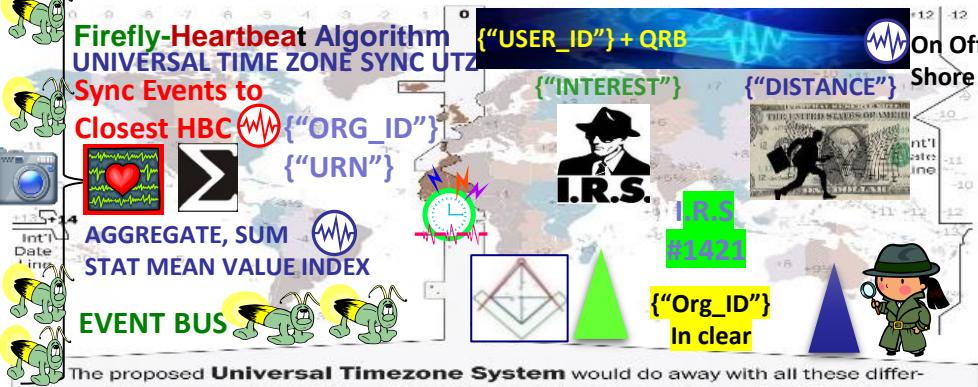
ACCOUNT BELONGS TO </Org_ID>

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

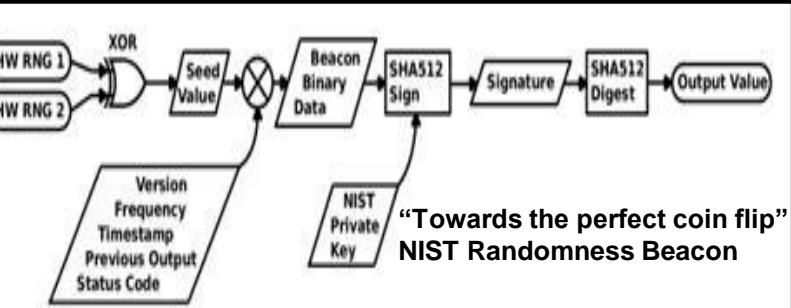
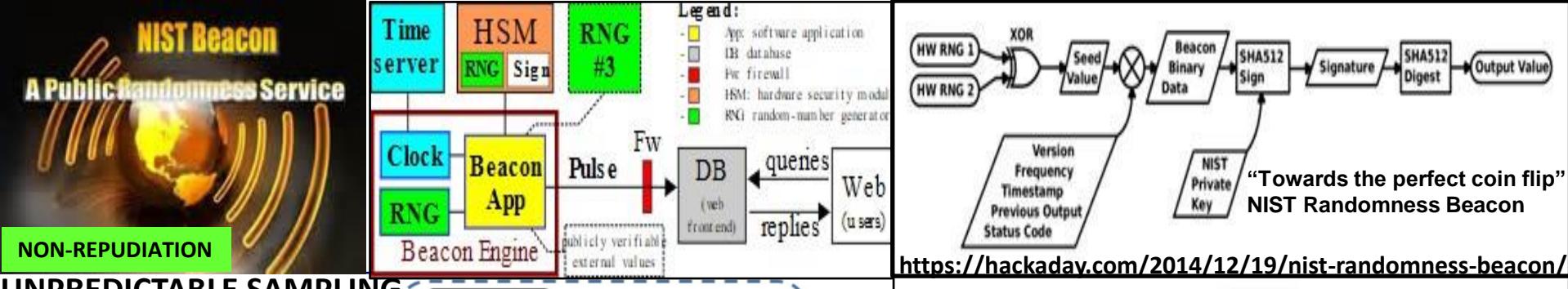
DEVICE / SENSORS <UUID><UUID>

Higher-level services collect distance data to build virtual distance map State of Internet & estimates distance between any IP address pair State Snap Shots

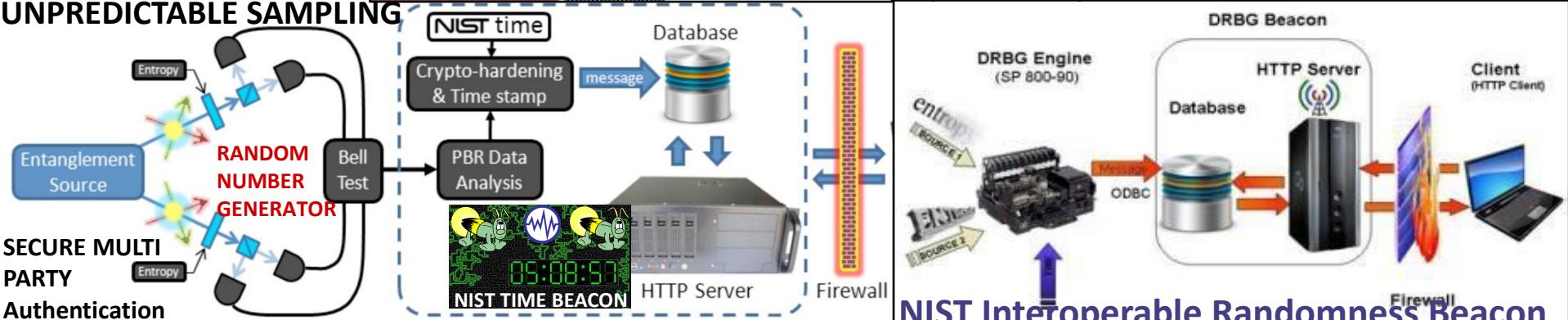
The current standard time common throughout the world is based on a 24-hour clock, with zones that are either 12 hours ahead or behind Coordinated Universal Time (UTC). However, these time zones are decided upon by individual governments, without overall coordination and can even extend fourteen hours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



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



<https://hackaday.com/2014/12/19/nist-randomness-beacon/>



NIST Interoperable Randomness Beacon

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

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

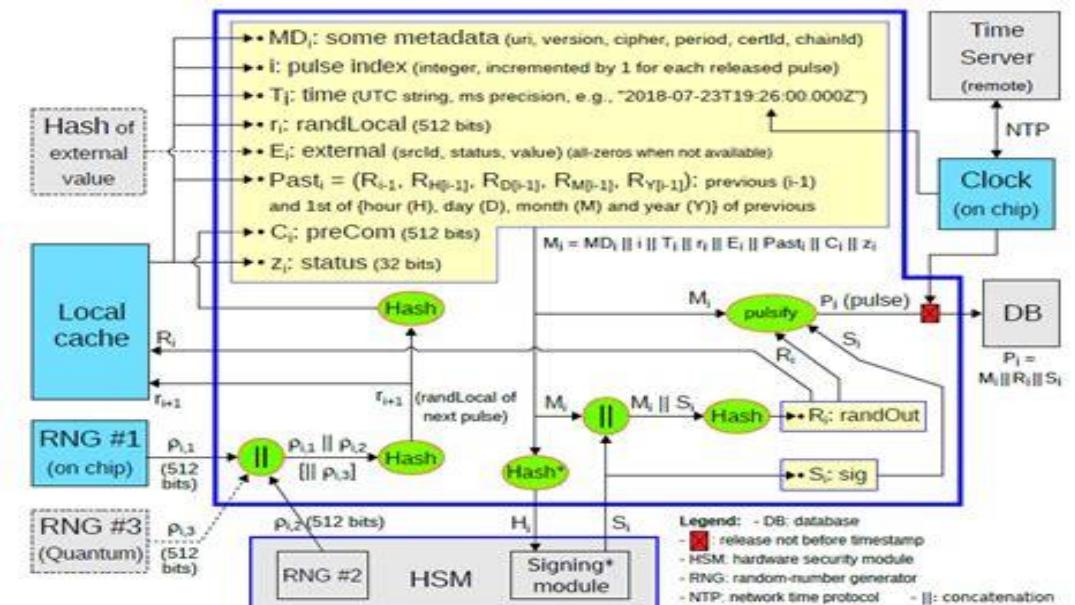


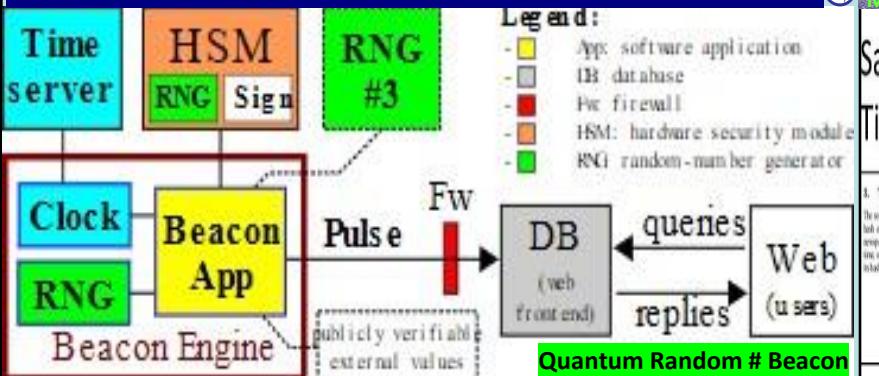
Figure 2. Illustration of the generation of the i^{th} pulse by a Beacon App (2.0)

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

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

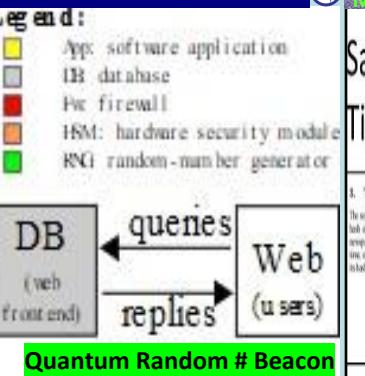
Programmable Economy / \$\$\$

NIST Quantum Random Number Beacon



"The external environment could update resources at random..."

One solution is a **heartbeat**: defining a default lease duration delaying updates until the next **cycle**"



Quantum Random # Beacon



PROCEDURAL TEMPLATE
Checklist Items refers to detailed treatises



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) Organize by assigning Organization Identifiers {"Org_ID"}
- 2) Track Resources by Uniform Resource Name </URN>
- 3) Take State Meta Data heartbeat snapshots @ 15 / N min
- 4) Honor Satoshi's intent for Bitcoin to be paired w markets
- 5) Use NIST Quantum Random Non-Repudiation Beacon
- 6) Earth Day Everyday / Spaceship Earth's Signals & Telemetry Annex



Interface Name	HEARTBEAT Administration Interface [SCOP]				
Documentation URL	http://scop.sourceforge.net/ http://linuxvirtualserver.org/software/index.html				
API Information 	#Big_Data 	Functionality Areas 	Cloud Interface Management configuration, start, stop cloud services, edit configuration (heartbeat messages)		
Programmable Money World Computer / Blockchain 	API Operation Count 	LOCATE <CONTENT> IDMAPS / SonarHOPS 			
Web service access type Network Effects / A.I.		Web application, front end to [network, device, system, blockchain] heartbeat			
LANGUAGE / PLATFORM BINDINGS	PHP Java Erlang...				
Interface Characteristics 	<p>SCOP is a web application, PHP based front-end to heartbeat, IP Virtual Server ipvs and ldirectord [e.g., check interval @ 5 seconds]</p> <p>SCOP can start/stop services, view/ edit configuration files e.g., heartbeat message state management snapshots, backups, take a service online/offline, add/ remove virtual/real servers, services etc.</p>				
"The external environment could update resources at random... One solution is a heartbeat: defining a default lease duration delaying updates until the next cycle" 	 <p>Epoch Time Cycles E0 E1 E2 E3...</p>				
QubitCoin Interval: Every 30 Seconds		 <p>MICRO CYCLES MACRO CYCLES </p>			

DAO: Distributed Autonomous Organization

RAND term circa 2000 / The TAO OF THE DAO

SWARMING AND THE FUTURE OF CONFLICT



RAND
Monograph Report

THE
ADVENT
Of NETWAR



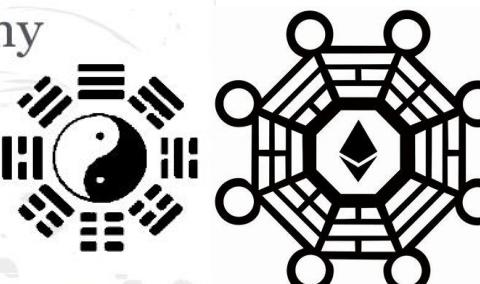
<http://cointelegraph.com/news/112077/the-new-frontier-after-cryptocurrency-cryptoequity>

Taoism Philosophy

Taoism represents:

- Contraction of the past to the future.
- The transcendence of time and place.
- The balance of the old and the new.
- The balance between opposing forces and desires.

Overall the Taoism Philosophy represents "The Way" in which to live.



(An ancient philosophy tradition. This article involves the yin-yang or principle of harmony and change.)

Eris, The Dawn of Distributed Autonomous Organizations and The Future of Governance

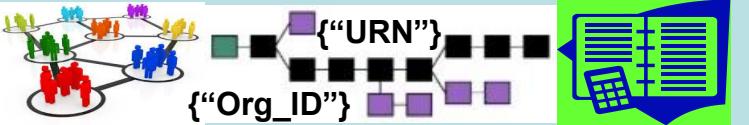
@TheBitcoinArmy

DAO



Heart Beacon Cycle

FEDERATE / TRADE FEDERATIONS



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

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

Federation
Gateway



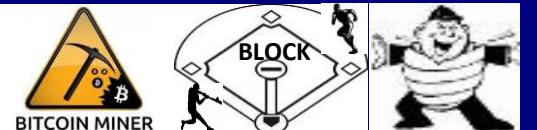
{"GLOBAL"}
{"SHARED"}
{"DOMAIN"}
{"COMMUNITY"}
{"PRIVATE"}
{"GROUP ID"}



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



Bitcoin Mining Pools
MEME / METAPHOR MEDIATION



DISTRIBUTED AUTONOMOUS ORGANIZATION = DAO RAND Corp

term coined circa 1991 now in use by Blockchain tech corporations

Uniform_Resource_Name



IeT DEVICE / PLATFORM
IoT SENSOR DEVICE



</RESOURCE> {"URN"}
{"Asset_Class"} </URN>

Office 365 Groups



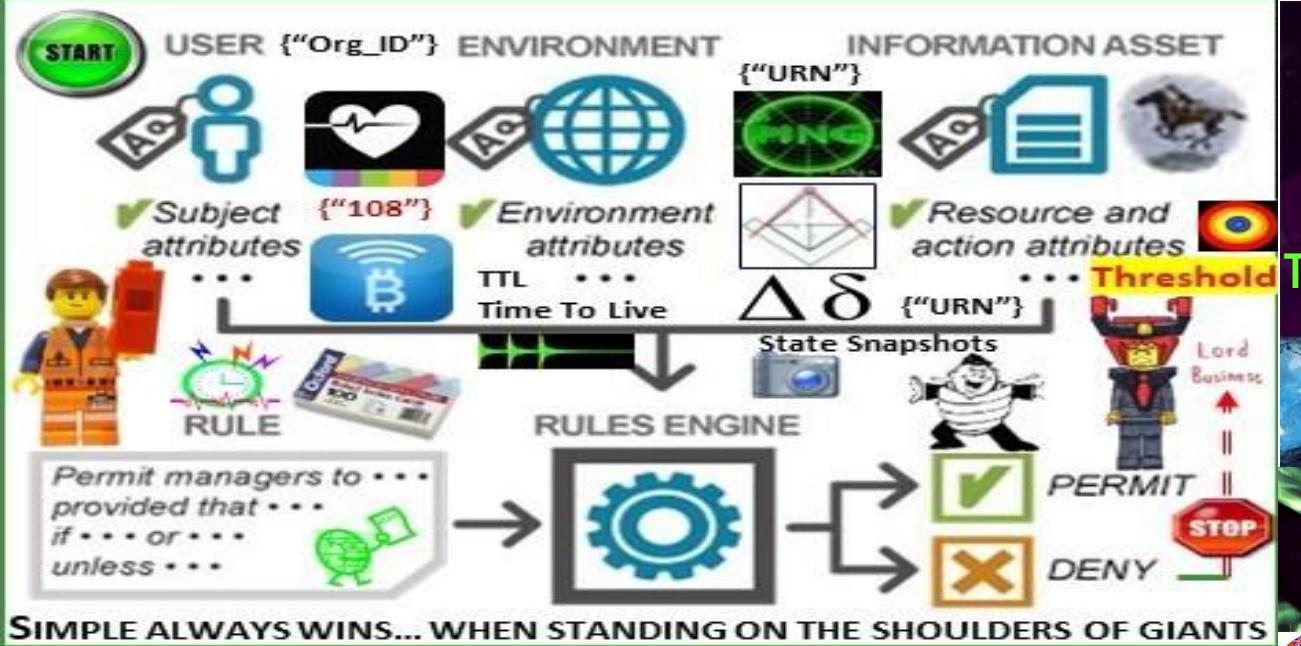
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123e4567-e89b-12d3-a456-426655440001
123e4567-e89b-12d3-a456-426655440002

STOCK EXCHANGE
MIC MARKET IDENTIFIER
CODES / BREVITY CODES



{"DUNS #"} {"Org_ID"} Heartbeat Snaps
QR CODE MICRO-CYCLES
{"URN"} {"URN"} {"URN"}





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

DAO TRADE FEDERATIONS USE COMMON COMPONENTS,
PROCESSES, METHODS, METRICS, METERS SIGNALING
TELEMETRY SCHEDULE IN SMART CONTRACTS,
SERVICE LEVEL AGREEMENTS / OPERATIONS SLA/O



Vernetzte Operationsführung

OOTW: Operations Other Than War



NEO smart economy

DISTRIBUTED SMART ECONOMY NETWORK

PROXIMITY BEACONS

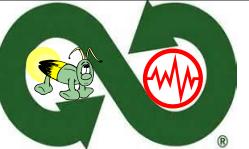
BFI THE WORLD GAME ANNEX SIGNALS & TELEMETRY

r. buckminster fuller
"Build a new model operating manual for spaceship earth"



Firefly - Heartbeat Algo

University of Bologna Italy / Hungary



ECO ECONOMIC HEARTBEAT

{"108"}



K%



ECONOMIC MACRO CYCLES

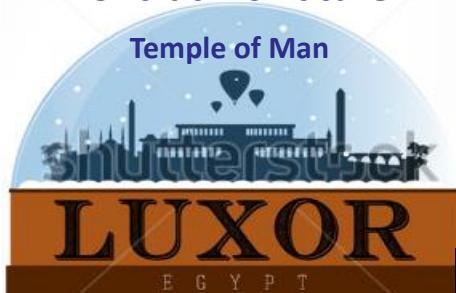
TIME-SPACE SYNC

K% GDP ECONOMIC PULSE FEDCOIN WORLDCOIN

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



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



FIREFLY inspired Heartbeat Sync Algo

PRECEDENCE UTZ SYNC SYNC
PROCESSING PULSE DELTAS



NEURAL NET
EMULATION



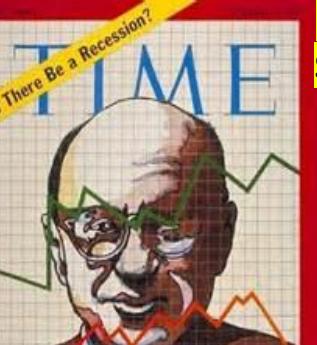
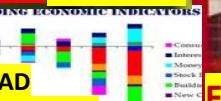
BLOCKCHAIN
PARSING Erlang
TIME EQUATIONS



TERRA
TRC



COMMODITY
PRICE INDEX



Economist
Milton Friedman

FRIEDMAN's K% RULE

STAT MEAN VALUE INDEX
SCHELLING POINT TRUTH



Price Indexes in
Time and Space

Methods and Practice



ALGORITHMIC REGULATION
TOKEN ECONOMICS

UTZ TIME ZONE SYNC



A Public Randomness Service



Crypto Currency
TIME STAMP
SERVER / SERVICE

LEAD
ECONOMIC
INDICATORS



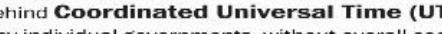
ETF



COMMODITIES
GLOBAL PRODUCERS
CONSUMERS

SYNC TO CLOSEST HEARTBEAT

{"URN"} {"URN"} {"URN"}



HEARTBEAT EVENT FLASH MESSAGE BUS

DEMURRAGE
PARKING

MICRO Logistic Fee
Payments Incentives

UTZ STOCHASTIC HARMONIZATION

Universal
Metrics
/ Meters



Geo-spatial
Temporal

SYNTAX
NONCE HASH

LOGISTIC
FEES
INCENTIVES

FIX ("108")

{"Org_ID"}

MFID EVENTS

Universal
Metrics
/ Meters

Syntax-Semantic
Sync & Consensus

EVENT
STATE SNAP

LOGISTIC
FEES
INCENTIVES

\$\$\$ CURRENCY PAIR

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SYNC DELTA STATE META DATA SNAPSHOT

SYNC DELTA STATE
META DATA SNAPSHOT

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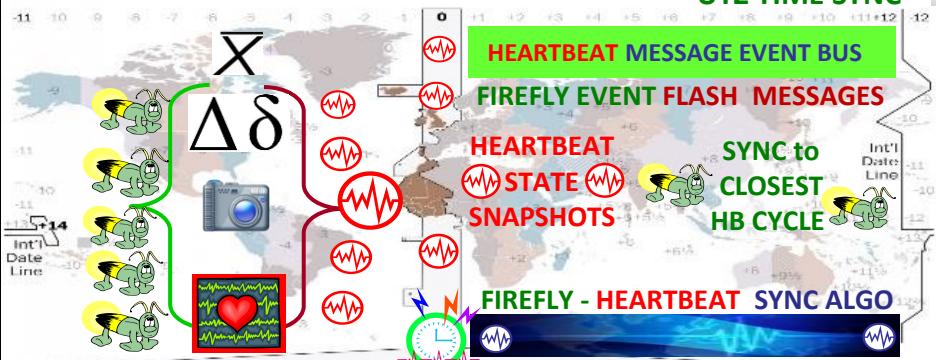
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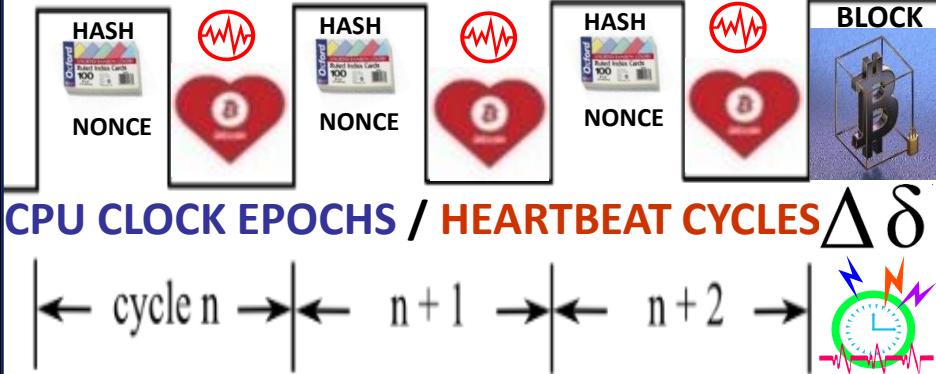


ALGORITHMIC REGULATION

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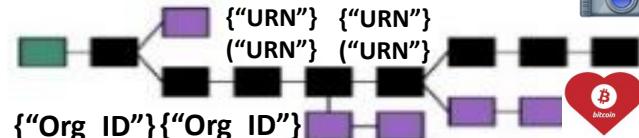
ECONOMIC HEARTBEAT



MACRO ECONOMIC VALUE STAT MEAN \$ TIME ZONE / PRICE / SPEED MATCH

K% RULE ECONOMIC HEARTBEAT

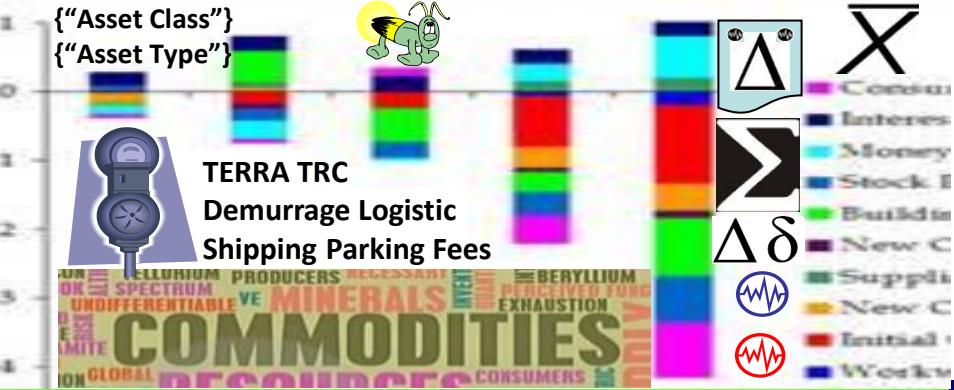
10% VARIABLE YEARLY GDP SNAPSHOT



K-Percent Rule Macro economic
money-supply heartbeat
automatically adjusts \$ supply
by a set amount "K" variable
regardless of cyclical state of the
economy e.g., set growth rate
variable to real yearly % GDP



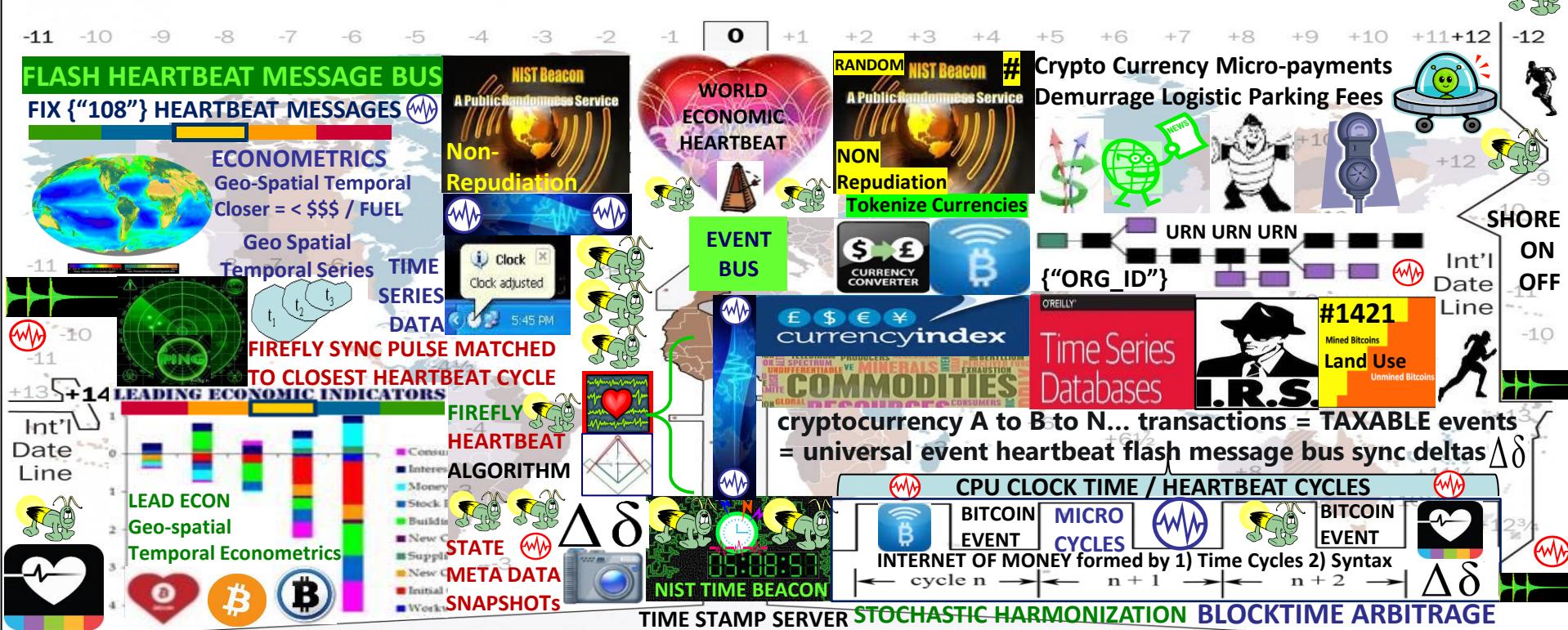
LEADING ECONOMIC INDICATORS



"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"



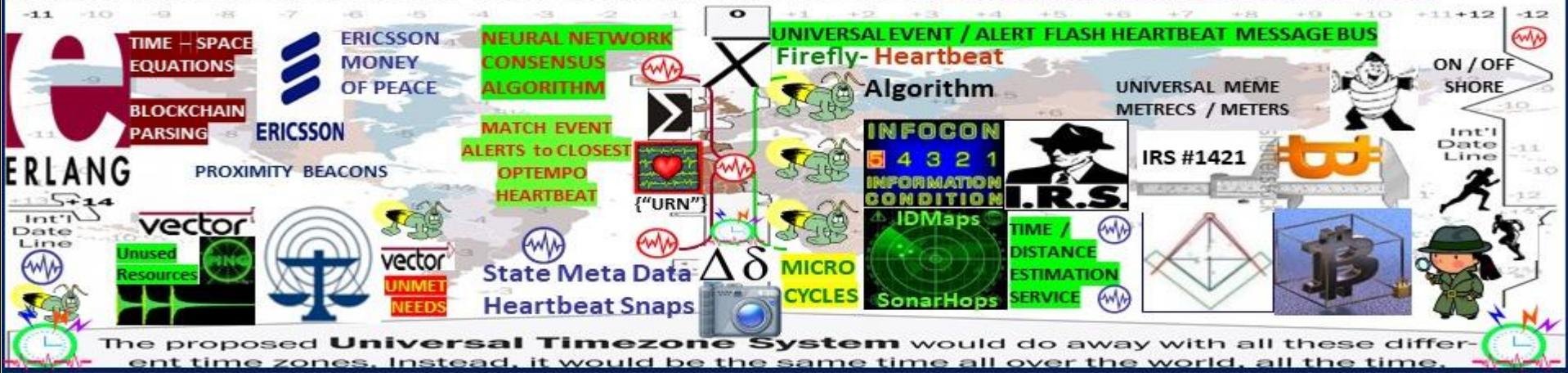
The current standard time common throughout the world is based on a 24-hour clock, with zones that are either 12 hours ahead or behind **Coordinated Universal Time (UTC)**. However, these time zones are decided upon by individual governments, without overall coordination and can even extend fourteen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



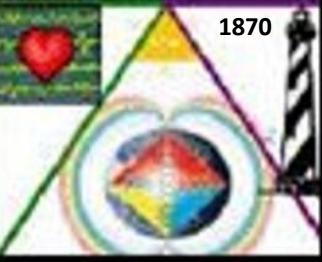
The proposed **Universal Timezone System** would do away with all these different time zones. Instead, it would be the same time all over the world, all the time.



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. **UTZ TIME ZONE STOCHASTIC HARMONIZATION**



THE BITCOIN BLOCKCHAIN FOR DUMMIES



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

Satoshi Nakamoto Bitcoin Paper

Craig WRIGHT
a.k.a.
Satoshi Nakamoto

“THE VALUE OF
BITCOIN IS
TIME ITSELF”

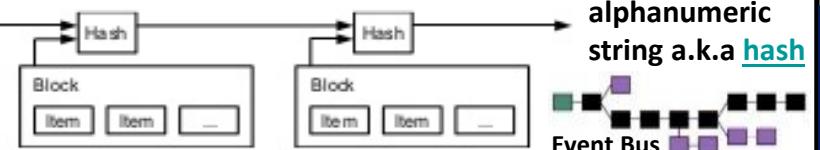
Wright Brother's 1st Flight
Cape Hatteras Outer Banks

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

3. Timestamp Server

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

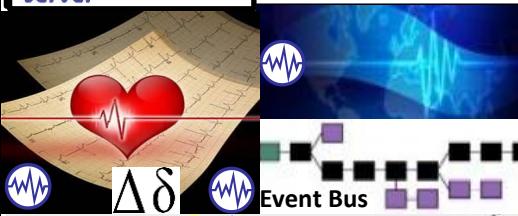
**Bitcoin Protocol
for Dummies**
Part 4 Timestamp
Server



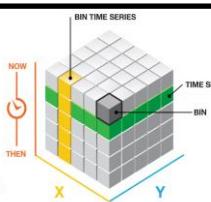
“All things net, net of money are formed with 1) epoch time cycles 2) Syntax parsed as instructions



“THE VALUE OF BITCOIN IS TIME ITSELF”



JapanNet Crypto Time Authentication Service (Timestamp Service)



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

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”



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

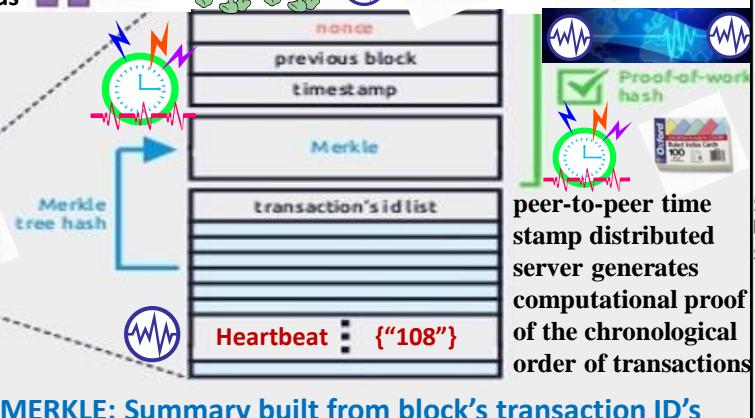
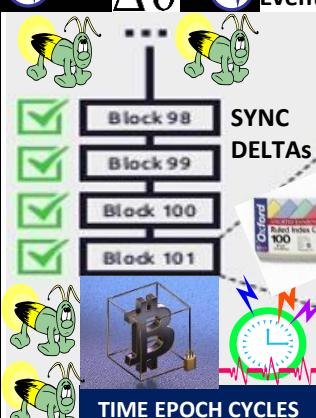
EVENTS

Fix "108"

FLASH MESSAGE EVENT BUS

TIME $\Delta \delta$

Epoch Time Cycles



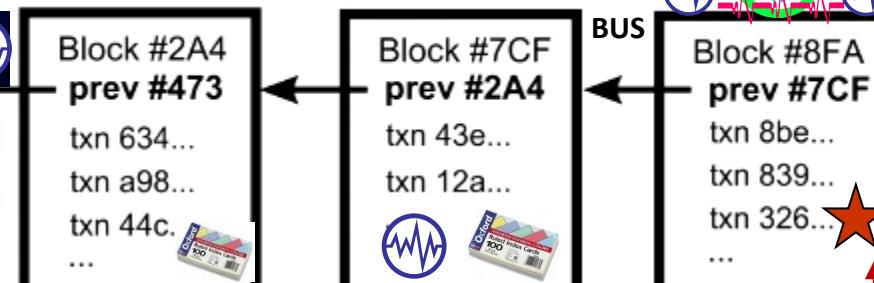
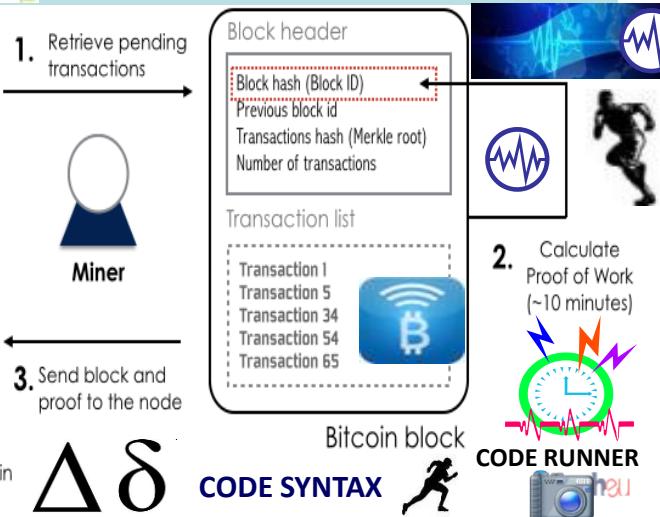
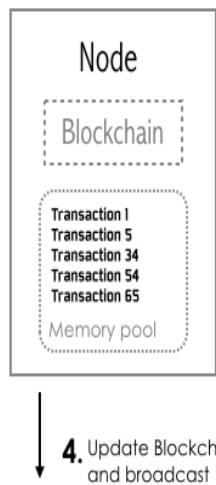
MERKLE: Summary built from block's transaction ID's

Header - Contains service information (version info, nonce, previous block id and timestamp). {"Org_ID"}

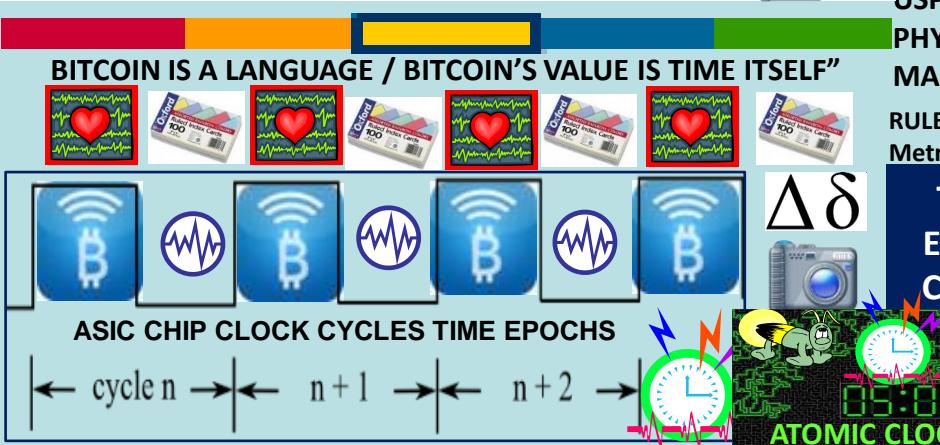
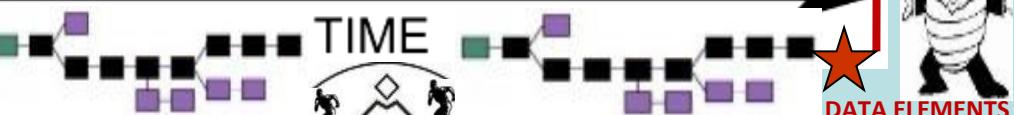
Transaction's id list - list of transaction's identification hashes that was included into the block's merkle tree.



Alice Corp. v. CLS Bank International, 573 U.S. 134 SCt 2347 (2014) is a 2014 decision of the United States Supreme Court about patentable subject matter (patent eligibility).^[2] 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.

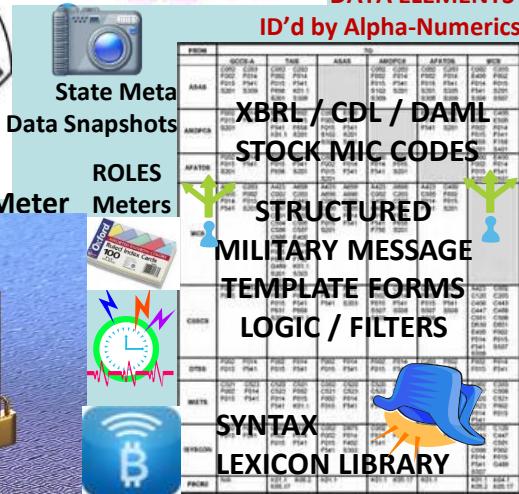
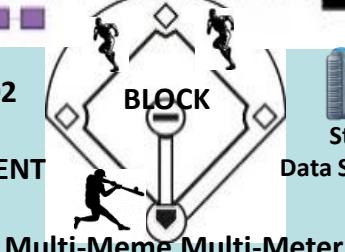


BLOCKCHAIN = TIME / SYNTAX

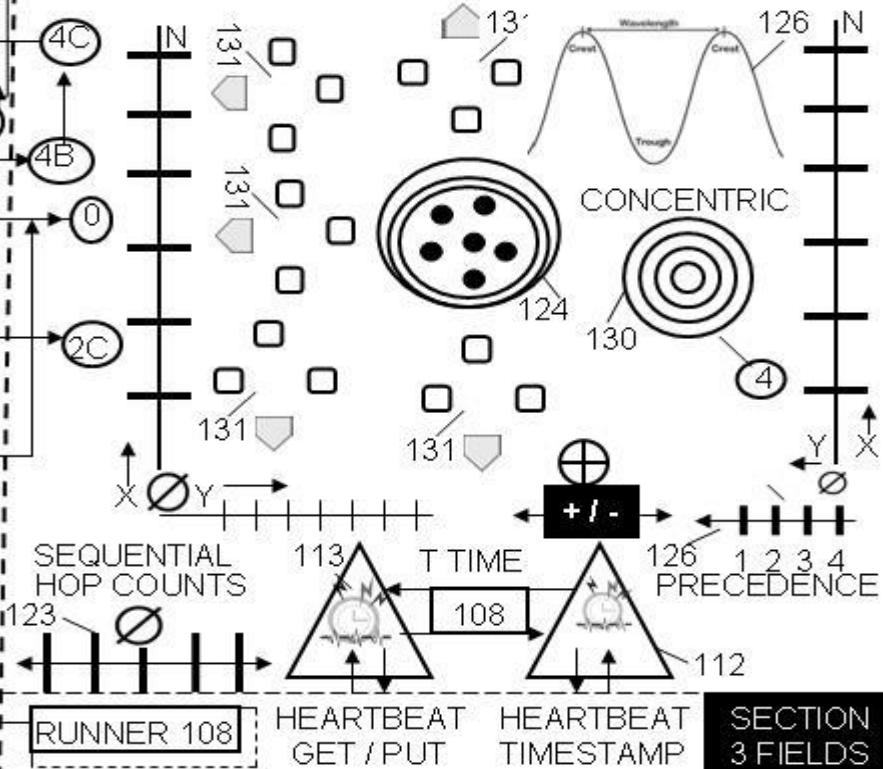
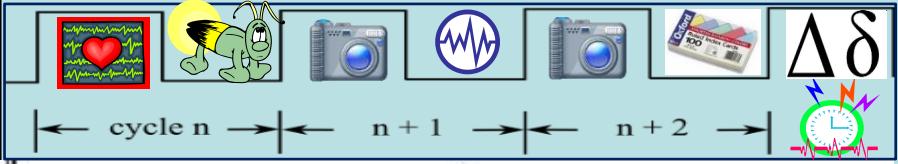
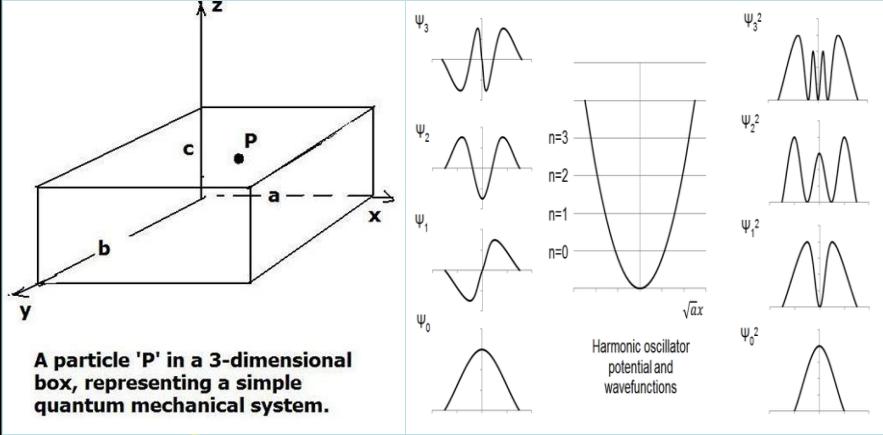


USPTO 13/573,002
PHYSICAL MEME
MAIN EMBODIMENT

RULES
Metrics



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

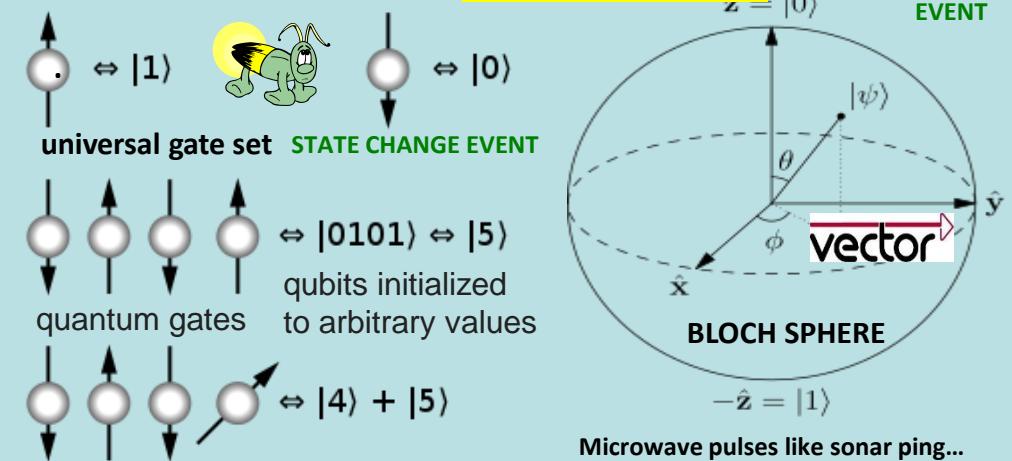
Vertical polarization vectors from a known point 0 null Sonar Hop meme



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?

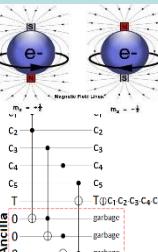


qubits can be in a superposition of all the classically allowed states

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.

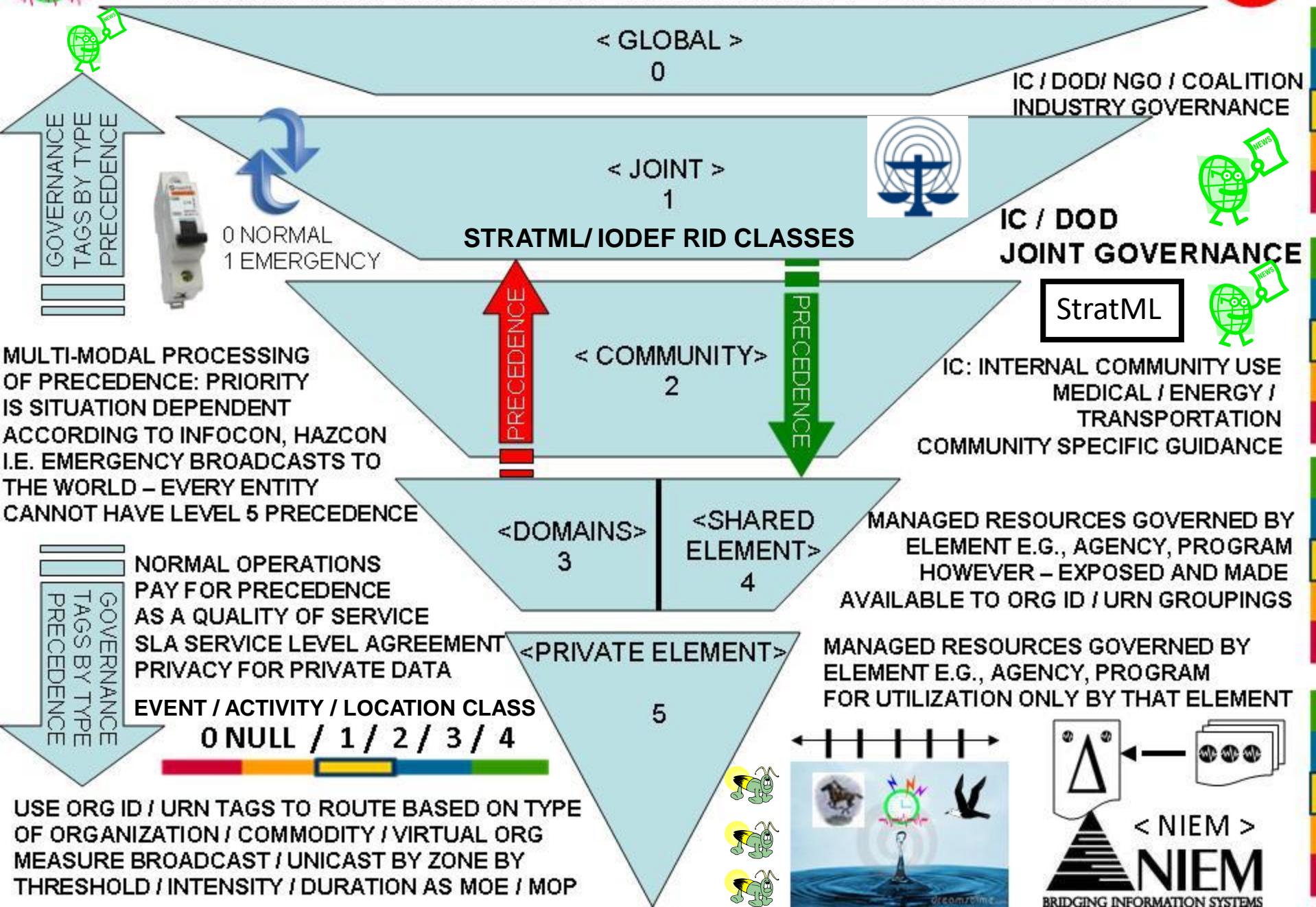


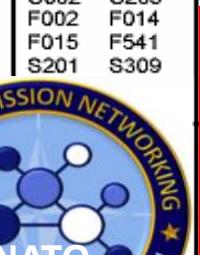
Fock state number state quantum state that is an element of a Fock space with a well-defined number of particles (or quanta)





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



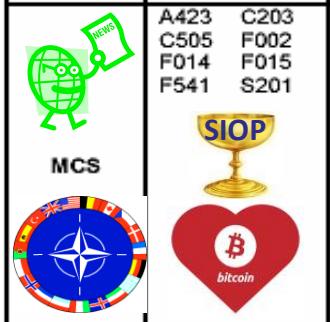
FROM		ALPHA-NUMERIC BREVITY CODES										CODE GUIDE			
	GCCS-A											ATDS	MCS		
ASAS	C002 C203 F002 F014 F015 F541 S201 S309	C002	C203				C002	C203				C203	C202 F014 F541 S305 S309	S309	
		USMTF / XML MTF FORMATTED MESSAGE CATALOG = 300 + messages info exchange sets using common, CONSENSUS Message Text Formats MTFs. MTFs specify </CONTENT> / info agreed by group consensus presenting information in a logical, well specified unambiguous layout resulting in a highly efficient info payload to overhead ratio										F002	C203 F015 S201	C400 E500 F014	
		A423 C203 C505 F002 F014 F015 F541 S201											 Rosetta Stone M2M Coder's Guide	A423 C400 C505 F002 F014 S201	C400 E500 F014
														"SYMBOLS RULE THE WORLD"	

ALPHA-NUMERIC BREVITY CODES

USMTF / XML MTF FORMATTED MESSAGE CATALOG = 300 + messages
info exchange sets using common,
CONSENSUS Message Text Formats
MTFs. MTFs specify </CONTENT> / info
agreed by group consensus presenting
information in a logical, well specified
unambiguous layout resulting in a **highly**
efficient info payload to overhead ratio



The image is divided into two main sections. On the left, a graphic titled "BLOCKCHAIN STANDARDIZATION" features four stylized human figures holding large interlocking puzzle pieces. The pieces are colored blue, green, red, and yellow, representing different blockchain technologies: Ethereum, Ripple, Bitcoin, and another unnamed technology. The background is a light blue with a subtle grid pattern. On the right, a black and white illustration titled "Rosetta Stone" depicts a group of people gathered around a large, rectangular stone tablet. One person is pointing at the tablet, which has the letters "M2M" inscribed on it. Another person is looking up at the tablet. The scene is set outdoors with trees in the background.



G Data Elements: entity, attribute, relationship equivalents

Information Categories and Examples						
Location	Movement	Identify	Status	Activity	Intent	
lat/long	spd/hdg	country / alliance, type/class	readiness	targeting, reconitering	COA {"Java JS"}	
Machine Trust Language	MTL		CDL	Contract Description Language		
network, grid	throughput, flow rates,	name, part-of relationships	BDA, op levels	repair, broadcasts	YAML expansion plans	
temples, historic structures	E-R Model	Class Diagram	Relational Database	Object DBMS	XML DTD / Schema	
	Entity	Class	Table	Class	Element	TADILs
feature lat/long, alt/dpth	Attribute	Attribute	Field / Column	Attribute	Child Element or Element Attribute	DFI
	Domain Value	PURCHASE CODES	Instance, Value	FEDERATE	DUI	FUD

Information Elements Roles

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

(‘Org_ID’} {"URN”}



FILTERS



FILTERS

FFUDN: Field Format Unit Designator

EFFIRN Field Format Index Reference #

Structured military messaging ID's messages, message sets, data element, symbol fields

BY Form Field Position & NUMBER



The logo for Firefly-Heartbeat consists of several elements: a cartoon ant on the left, a red circular icon with a white heart rate monitor line in the center, a green rectangular box containing the letters "NDN" in white, and a blue circular icon with a white heart rate monitor line to the right. Below these icons, the words "Firefly-Heartbeat" and "Flash Messages" are written in a stylized font.

PROCESS MESSAGE BY PRECEDENCE UNIVERSAL EVENT / ALERT MESSAGE BUS

OPERATIONAL NODES / ACTIVITIES

DATA SYSTEM FUNCTIONS		PERFORMANCE	
11.4 - Classification		11.8 - Kinematics	
11.4.1 - Category		11.8.1 - Pos / Vel / Acc (PVA)	
11.4.1.1 - Confidence Level		11.8.1.1 - Acceleration	
11.4.1.2 - Estimate Type		11.8.1.1.1 - Angular	
11.4.1.2.1 - Alternative		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	
		1.2.4 - Smoothed Data	
		PURCHASE CODES	
SYMBOL	Friend	Neutral	Hostile
2525C	Partner		
11.4.1.3.4 - Subsurface			Competitor
11.4.1.3.5 - Surface			
11.4.2 - Platform / Point / Feature Type			
11.4.3 - Specific Type			
11.4.4 - Type Modifier			
11.4.5 - Unit			
			4 - Velocity
			1.4.1 - Horizontal
			1.4.2 - Vertical
			V/A Confidence
			1 - Bearing Angle
			2 - Bearing Angle Rate
			3 - Covariance Matrix

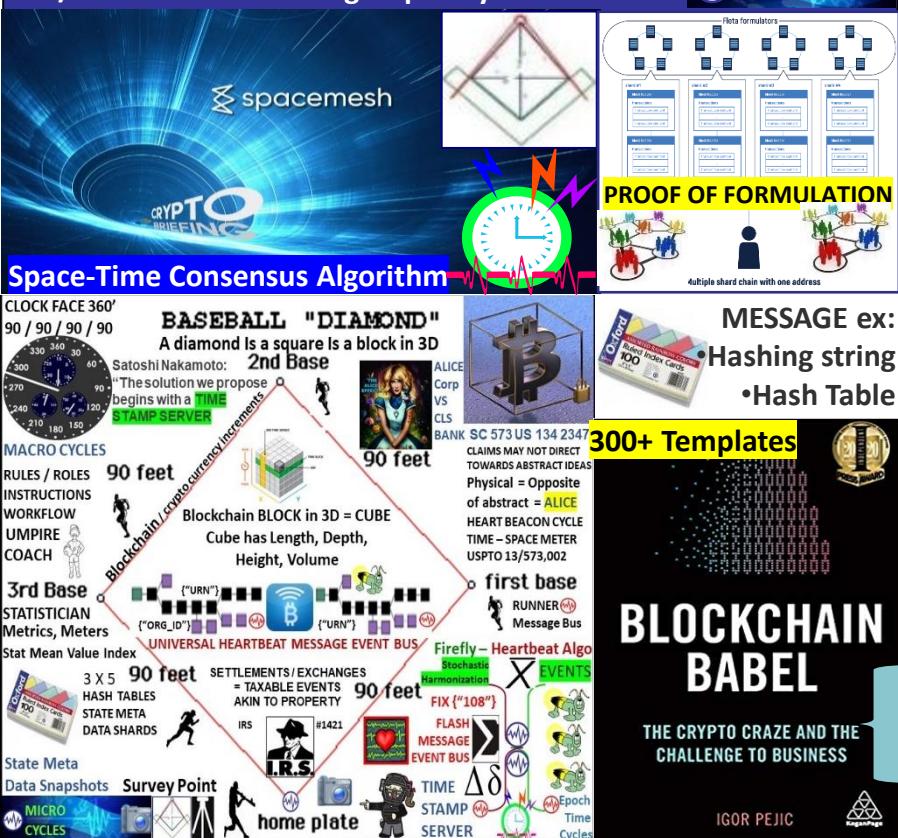
Q: Which meme describes the myriad blockchain consensus algorithms the most comprehensively that uses an algorithm (based on nature = “shortest path to the knowledge of truth Luxor Temple) enabling distributed system of systems geo-spatial, UTZ Universal Time Zone temporal, semantic - syntactic sync,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

Blockchain Consensus Algorithms & Mechanisms



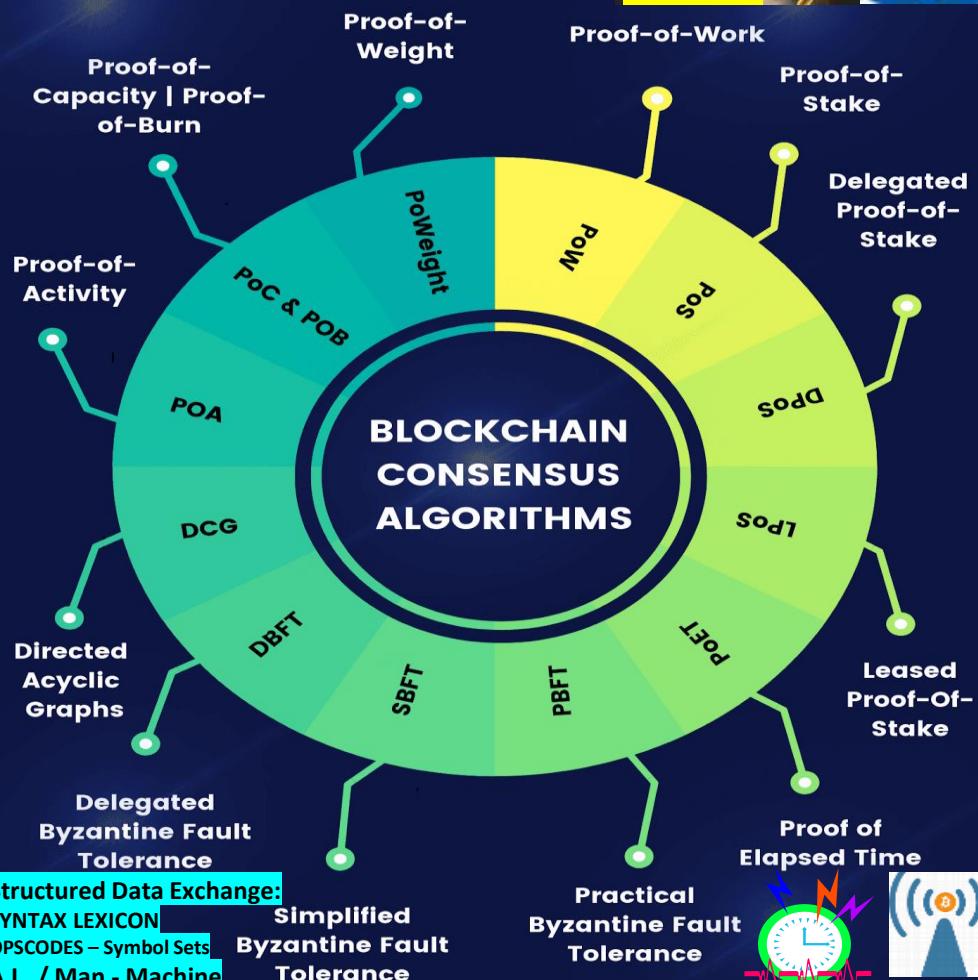
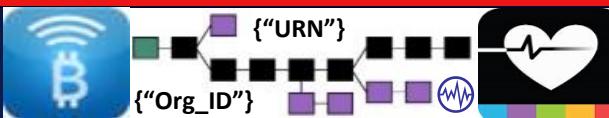
In the world of blockchain consensus algorithms, consensus is the **HEART OF THE BLOCKCHAIN NETWORK**. Its main purpose is to achieve agreement on transactions among a distributed system (s)

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

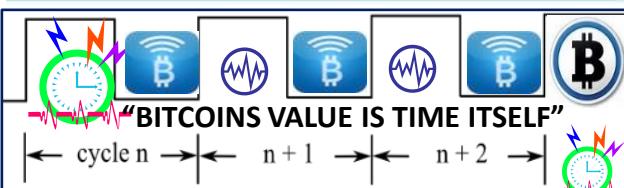


www.developcoins.com

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

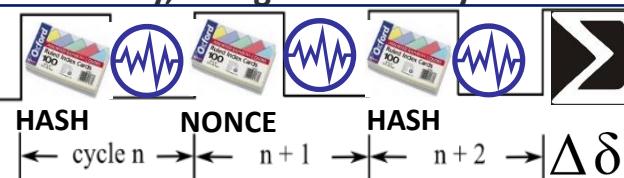


THROTTLE equivalent to difficulty. State
•target = maximum value of 8 bytes Snap
Shots

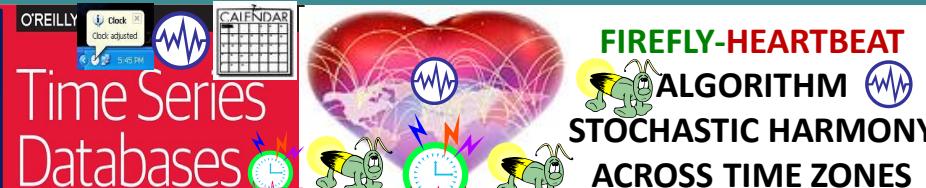
NONCE increments from 0..N until the target is met.



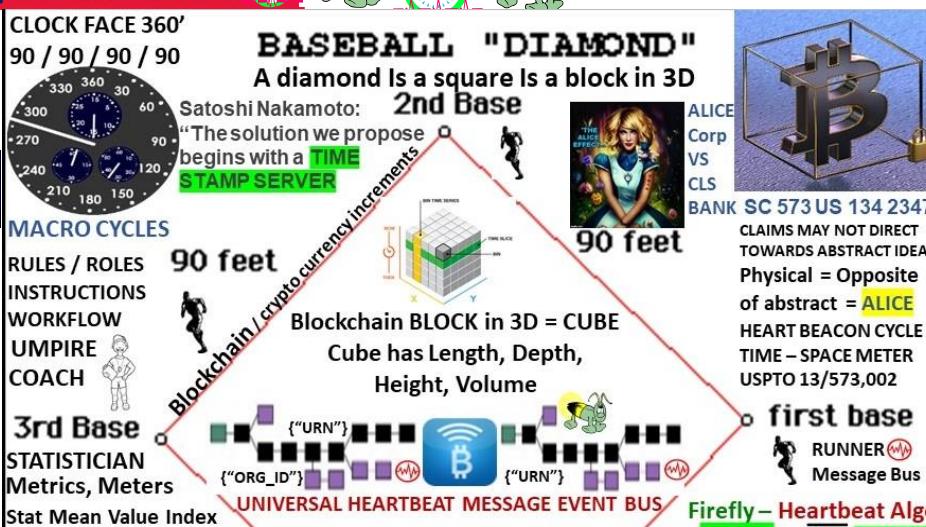
GUESS stores the guess
Effectively, it begins at infinity.



Proof-of-Work: users perform some form of work to participate. Work must be difficult for the client but easy for the server/network to verify. POW determines the approximate time between blocks = rate that new bitcoins are created. Work is submitted as a message/timestamp payload with a nonce value. Payloads are made unique through use of public key encryption or address.Nonce allows checking the work without retracing all the procedural steps.

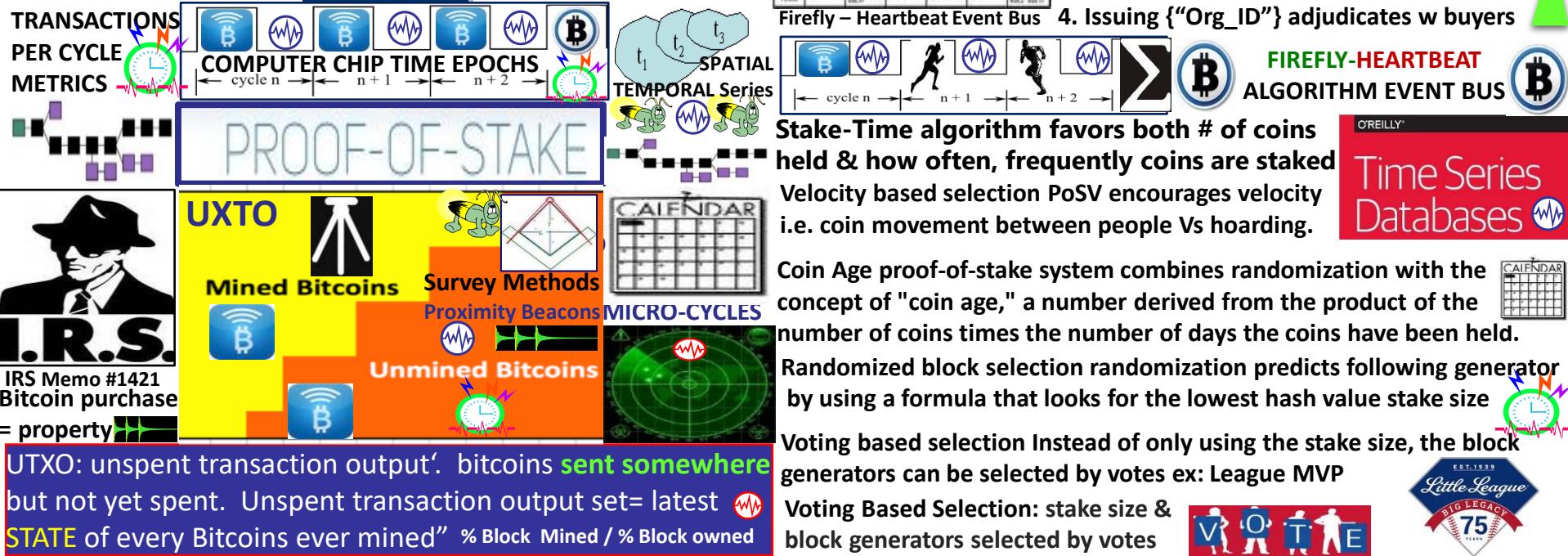
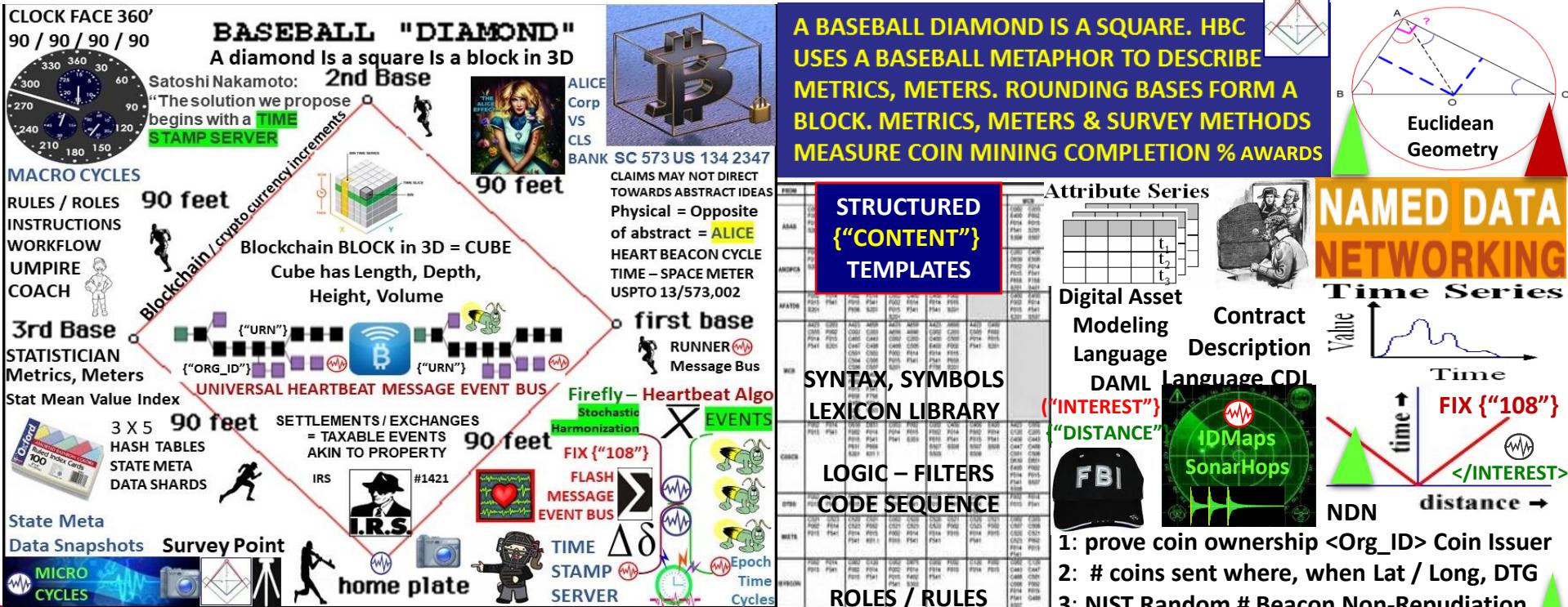


- MESSAGE ex:
 - Hashing string
 - Hash Table



300+Message Templates

FORM	00001	00002	00003	00004	00005	00006	00007	00008	00009	00010	00011	00012	00013	00014	00015	00016	00017	00018	00019	00020	00021	00022	00023	00024	00025	00026	00027	00028	00029	00030	00031	00032	00033	00034	00035	00036	00037	00038	00039	00040	00041	00042	00043	00044	00045	00046	00047	00048	00049	00050	00051	00052	00053	00054	00055	00056	00057	00058	00059	00060	00061	00062	00063	00064	00065	00066	00067	00068	00069	00070	00071	00072	00073	00074	00075	00076	00077	00078	00079	00080	00081	00082	00083	00084	00085	00086	00087	00088	00089	00090	00091	00092	00093	00094	00095	00096	00097	00098	00099	000100	000101	000102	000103	000104	000105	000106	000107	000108	000109	000110	000111	000112	000113	000114	000115	000116	000117	000118	000119	000120	000121	000122	000123	000124	000125	000126	000127	000128	000129	000130	000131	000132	000133	000134	000135	000136	000137	000138	000139	000140	000141	000142	000143	000144	000145	000146	000147	000148	000149	000150	000151	000152	000153	000154	000155	000156	000157	000158	000159	000160	000161	000162	000163	000164	000165	000166	000167	000168	000169	000170	000171	000172	000173	000174	000175	000176	000177	000178	000179	000180	000181	000182	000183	000184	000185	000186	000187	000188	000189	000190	000191	000192	000193	000194	000195	000196	000197	000198	000199	000200	000201	000202	000203	000204	000205	000206	000207	000208	000209	000210	000211	000212	000213	000214	000215	000216	000217	000218	000219	000220	000221	000222	000223	000224	000225	000226	000227	000228	000229	000230	000231	000232	000233	000234	000235	000236	000237	000238	000239	000240	000241	000242	000243	000244	000245	000246	000247	000248	000249	000250	000251	000252	000253	000254	000255	000256	000257	000258	000259	000260	000261	000262	000263	000264	000265	000266	000267	000268	000269	000270	000271	000272	000273	000274	000275	000276	000277	000278	000279	000280	000281	000282	000283	000284	000285	000286	000287	000288	000289	000290	000291	000292	000293	000294	000295	000296	000297	000298	000299	000300	000301	000302	000303	000304	000305	000306	000307	000308	000309	000310	000311	000312	000313	000314	000315	000316	000317	000318	000319	000320	000321	000322	000323	000324	000325	000326	000327	000328	000329	000330	000331	000332	000333	000334	000335	000336	000337	000338	000339	000340	000341	000342	000343	000344	000345	000346	000347	000348	000349	000350	000351	000352	000353	000354	000355	000356	000357	000358	000359	000360	000361	000362	000363	000364	000365	000366	000367	000368	000369	000370	000371	000372	000373	000374	000375	000376	000377	000378	000379	000380	000381	000382	000383	000384	000385	000386	000387	000388	000389	000390	000391	000392	000393	000394	000395	000396	000397	000398	000399	000400	000401	000402	000403	000404	000405	000406	000407	000408	000409	000410	000411	000412	000413	000414	000415	000416	000417	000418	000419	000420	000421	000422	000423	000424	000425	000426	000427	000428	000429	000430	000431	000432	000433	000434	000435	000436	000437	000438	000439	000440	000441	000442	000443	000444	000445	000446	000447	000448	000449	000450	000451	000452	000453	000454	000455	000456	000457	000458	000459	000460	000461	000462	000463	000464	000465	000466	000467	000468	000469	000470	000471	000472	000473	000474	000475	000476	000477	000478	000479	000480	000481	000482	000483	000484	000485	000486	000487	000488	000489	000490	000491	000492	000493	000494	000495	000496	000497	000498	000499	000500	000501	000502	000503	000504	000505	000506	000507	000508	000509	000510	000511	000512	000513	000514	000515	000516	000517	000518	000519	000520	000521	000522	000523	000524	000525	000526	000527	000528	000529	000530	000531	000532	000533	000534	000535	000536	000537	000538	000539	000540	000541	000542	000543	000544	000545	000546	000547	000548	000549	000550	000551	000552	000553	000554	000555	000556	000557	000558	000559	000560	000561	000562	000563	000564	000565	000566	000567	000568	000569	000570	000571	000572	000573	000574	000575	000576	000577	000578	000579	000580	000581	000582	000583	000584	000585	000586	000587	000588	000589	000590	000591	000592	000593	000594	000595	000596	000597	000598	000599	000600	000601	000602	000603	000604	000605	000606	000607	000608	000609	000610	000611	000612	000613	000614	000615	000616	000617	000618	000619	000620	000621	000622	000623	000624	000625	000626	000627	000628	000629	000630	000631	000632	000633	000634	000635	000636	000637	000638	000639	000640	000641	000642	000643	000644	000645	000646	000647	000648	000649	000650	000651	000652	000653	000654	000655	000656	000657	000658	000659	000660	000661	000662	000663	000664	000665	000666	000667	000668	000669	000670	000671	000672	000673	000674	000675	000676	000677	000678	000679	000680	000681	000682	000683	000684	000685	000686	000687	000688	000689	000690	000691	000692	000693	000694	000695	000696	000697	000698	000699	000700	000701	000702	000703	000704	000705	000706	000707	000708	000709	000710	000711	000712	000713	000714	000715	000716	000717	000718	000719	000720	000721	000722	000723	000724	000725	000726	000727	00072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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.

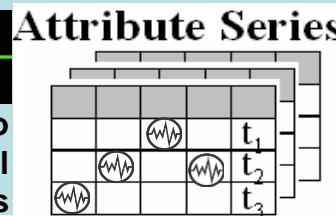
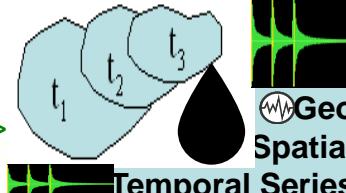
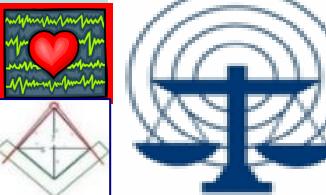


TIME – SPACE MEASUREMENTS OF TOKENIZED COMMODITIES, SECURITIES... STOCHASTICALLY HARMONIZED ACROSS UTZ Universal Time Zone

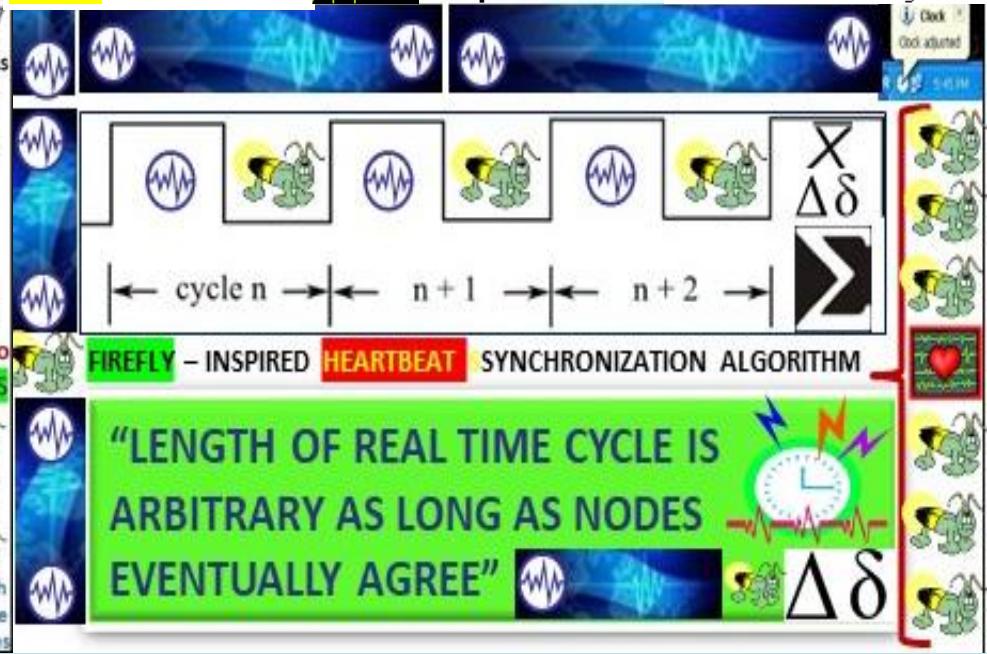


The Volumetric Weight is often referred to as dimensional weight

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



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



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.



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.



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 individuals 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.

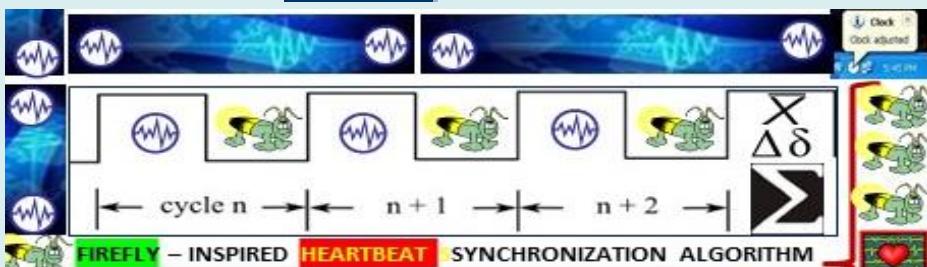


DISTRIBUTED AUTONOMOUS ORGANIZATIONS DAO

Heart Beacon Cycle

FEDERATE / TRADE FEDERATIONS

Linear Sequential Meme



The current standard time common throughout the world is based on a 24-hour clock, with zones that are one 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.





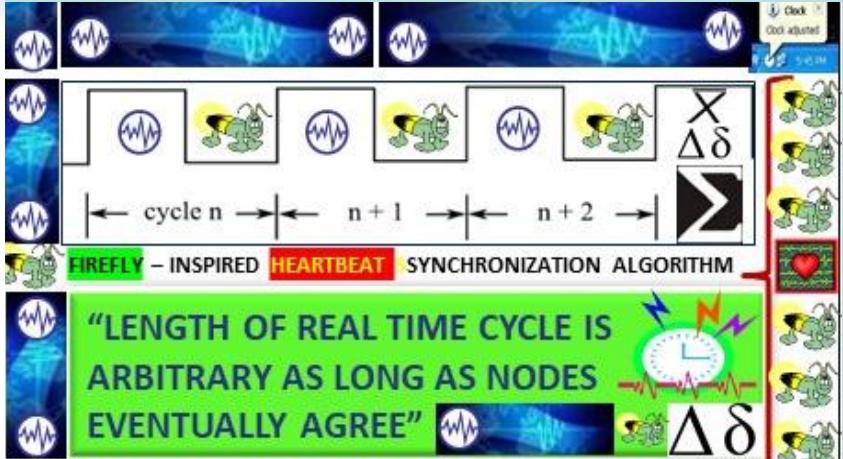
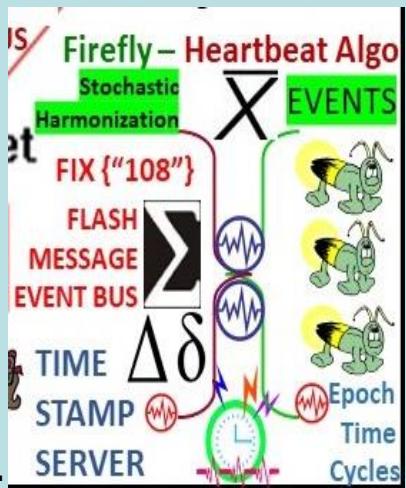
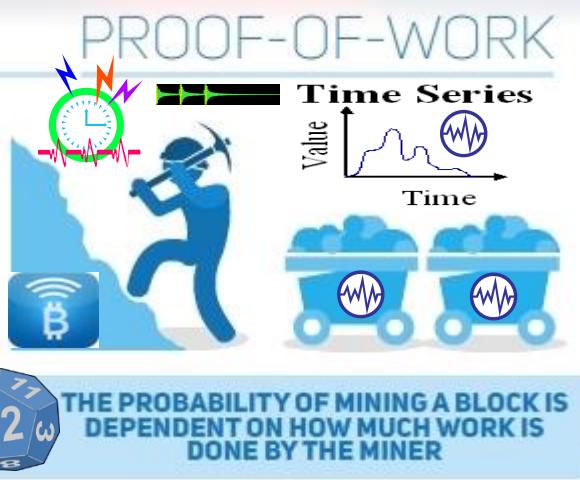
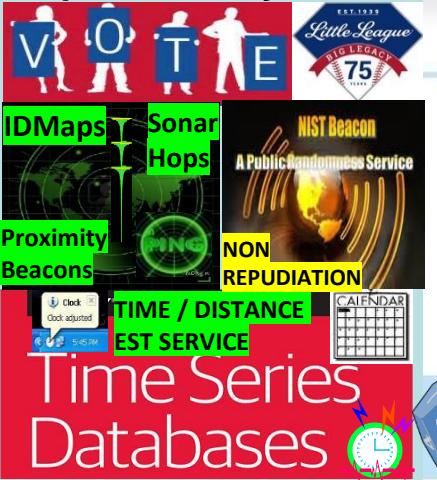
Adaptive
Procedural
Checklist

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

Example of Proof-of-Activity (PoA)

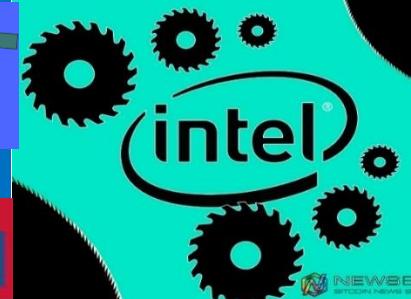
HEART BEACON CYCLE 13/573,002

Decred (DCR) is the most well-known cryptocurrency that uses the PoA consensus mechanism. With Decred, blocks are created about every five minutes.² 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.

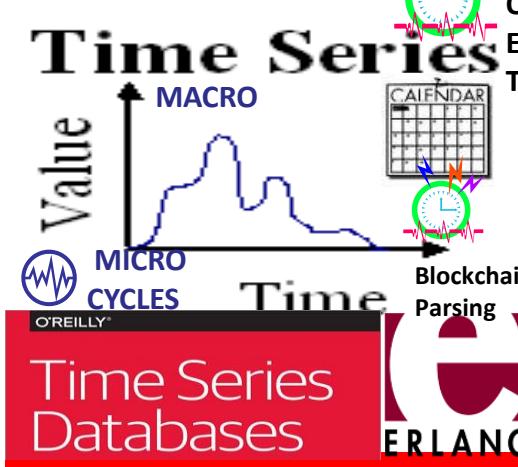


SAWTOOTH LAKE POETIC CONSENSUS PROOF OF ELAPSED TIME: POET

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



PROOF OF ELAPSED TIME



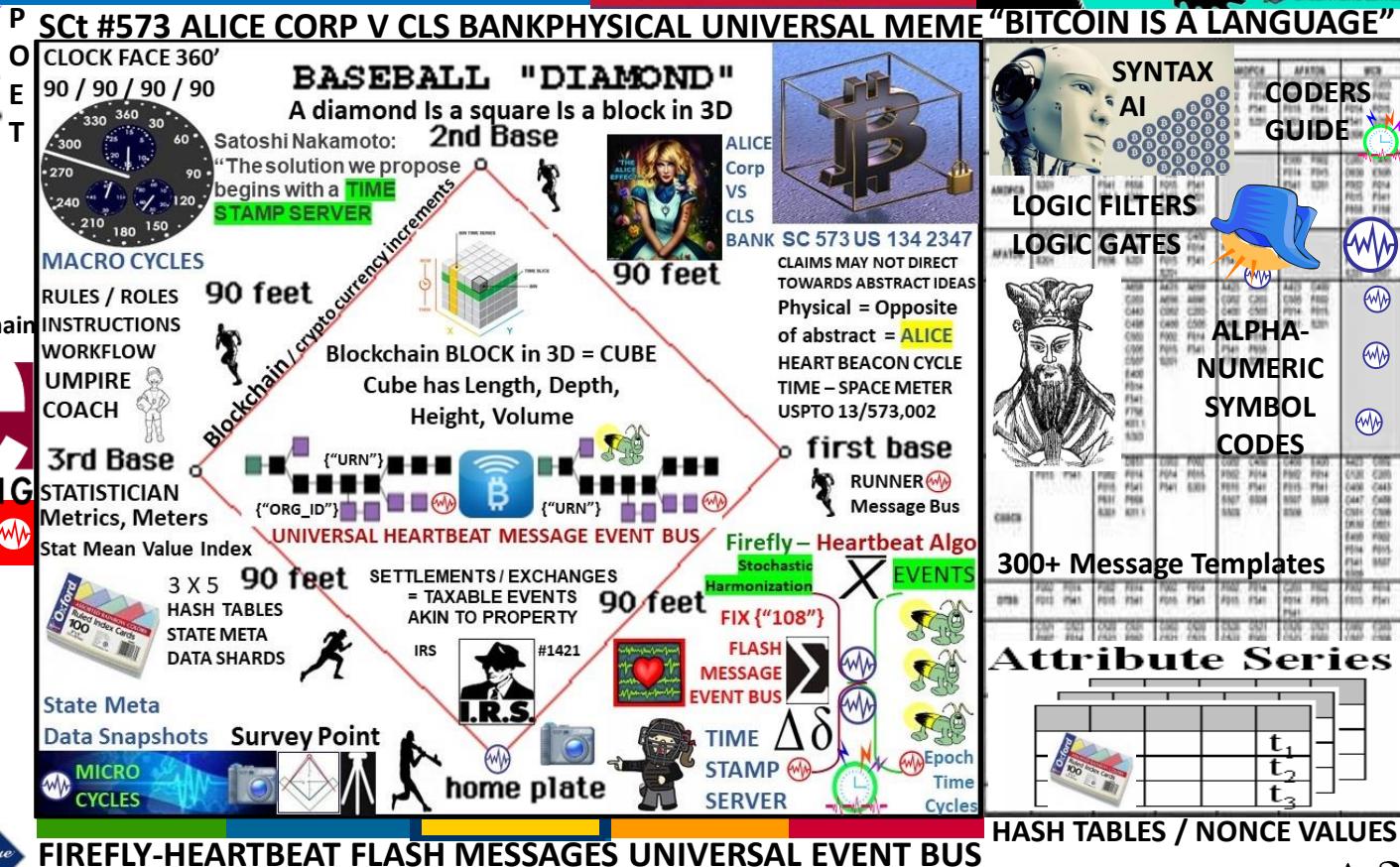
Voting Based Selection: stake size & block generators selected by votes

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



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

TOURNAMENT LEAGUE BOARD



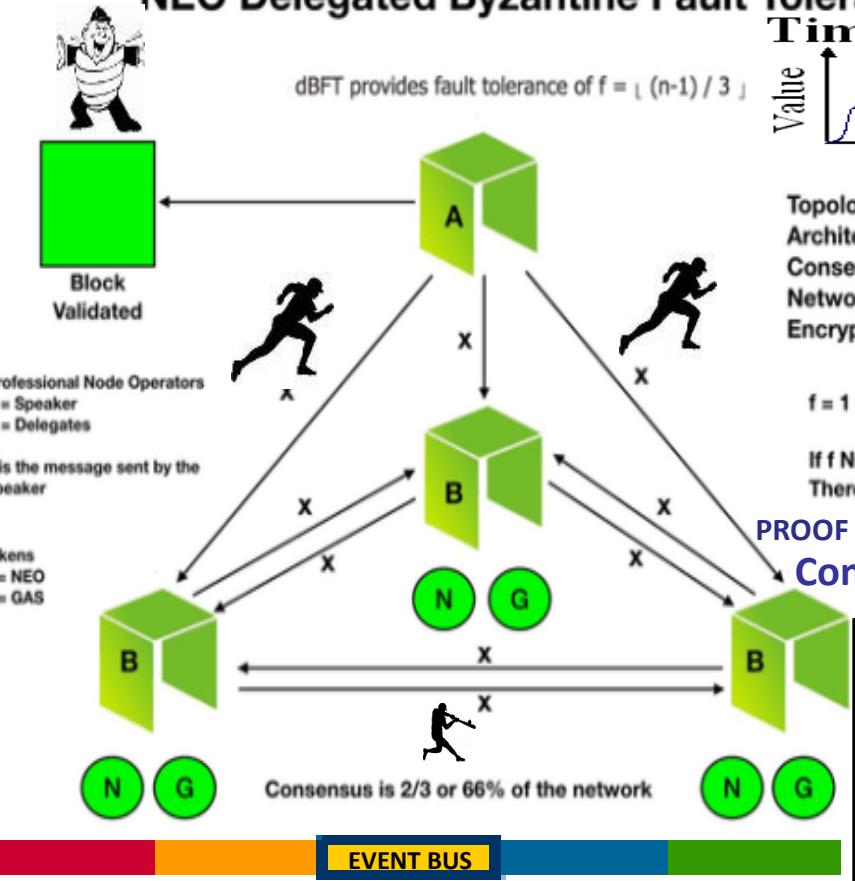
FIREFLY-HEARTBEAT FLASH MESSAGES UNIVERSAL EVENT BUS



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

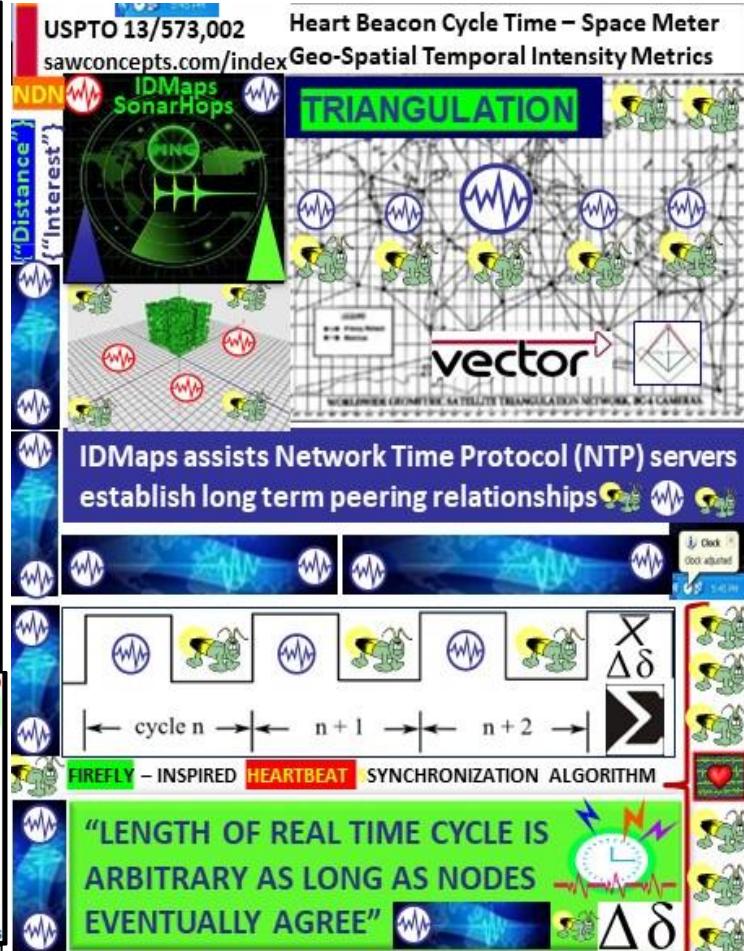


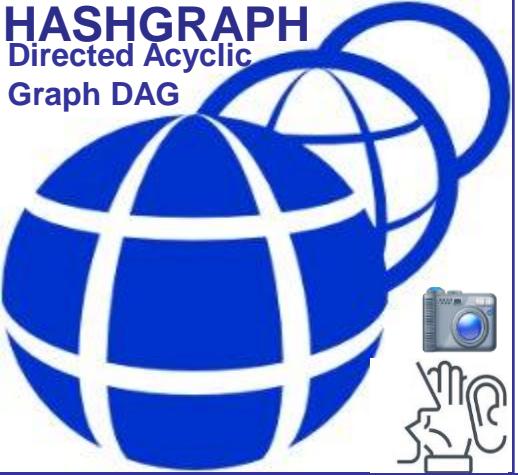
NEO Delegated Byzantine Fault Tolerance (dBFT)



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

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





HASHGRAPH
Directed Acyclic
Graph DAG

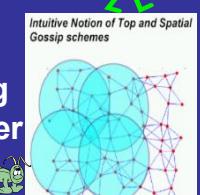
Hashgraph consensus algorithm
for replicated state machines

- 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

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

Consensus Order

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

Round created Witness

Famous witness Election

Vote See

Strongly see Supermajority

Decide

Round created Round received

Consensus timestamp Consensus order

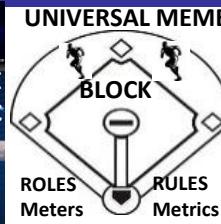
Synchronous



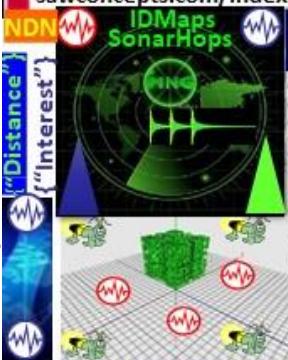
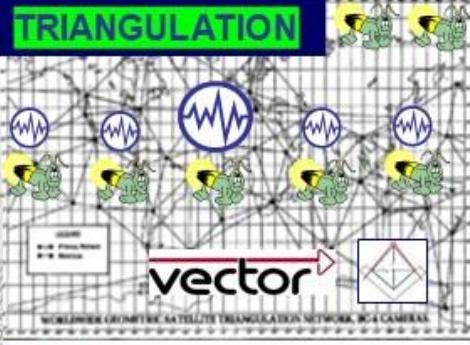
Micro-Cycle State Meta Data Snapshots

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"



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.

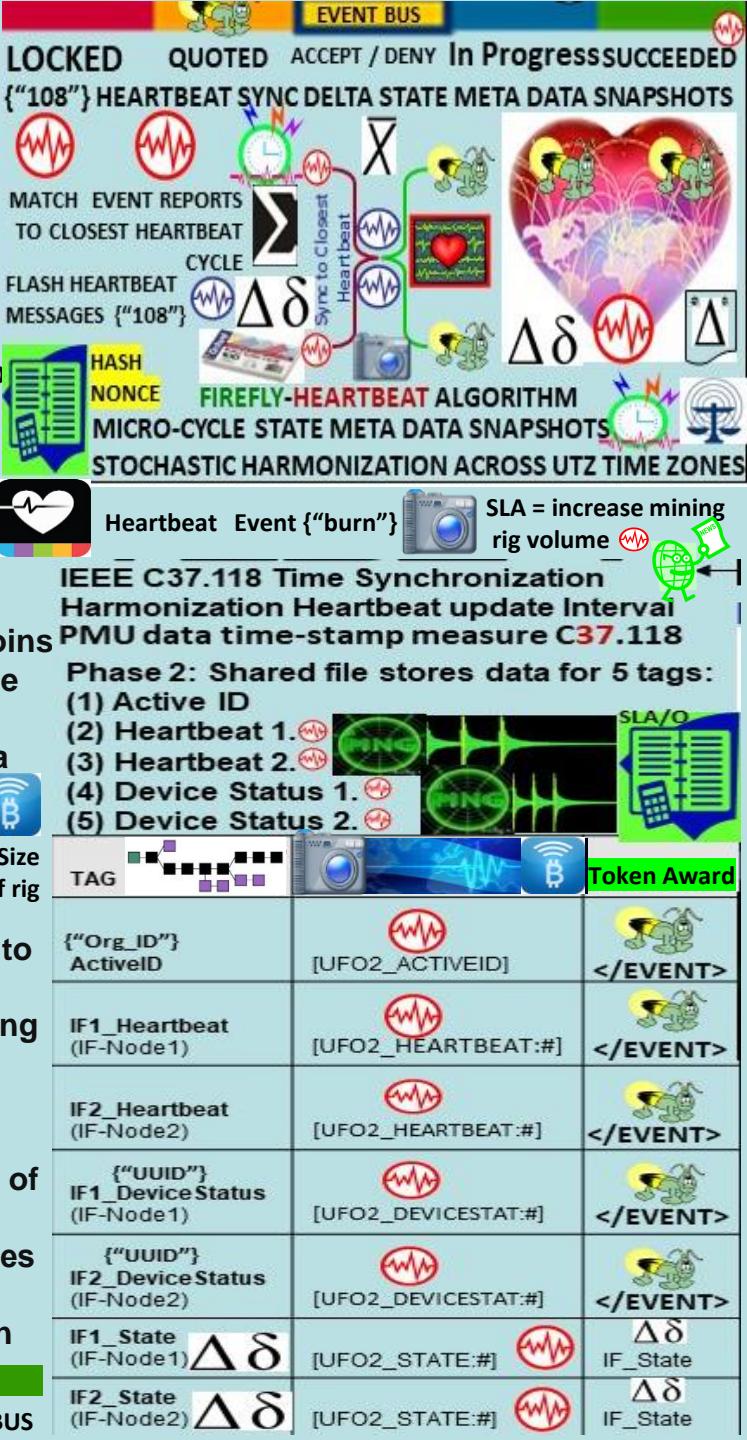
Iain Stewart, the inventor of the POB algorithm, uses an analogy to describe the algorithm: burnt coins are like mining rigs. In this analogy, a miner burns their coins to buy a virtual mining rig that gives them the power to mine blocks. The more coins burned by the miner, the bigger their virtual mining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

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.

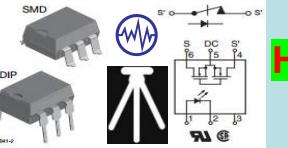


You can send out transactions to the network that will burn your own cryptocurrency coins. Other participants can mine/burn on top of your block, and you can also take the transactions of other participants to add them to your block. Essentially, all of this burning activity keeps the network agile, 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.



Proof of Capacity PoC



HEART BEACON CYCLE TIME – SPACE METER



Adaptive Procedural Checklist

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

Proof of capacity allows the mining devices, also known as nodes, on the blockchain network to use empty space on their hard drive to mine the available cryptocurrencies.



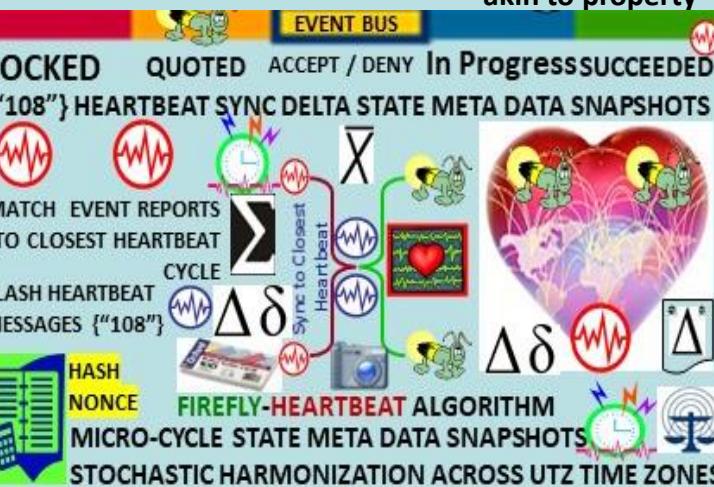
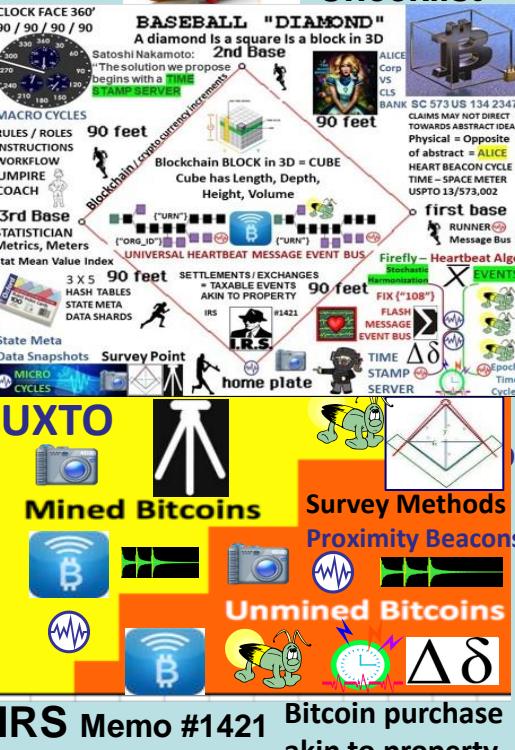
Instead of repeatedly altering the numbers in the block header & repeated hashing for the solution value as in a PoW system, PoC works by storing a list of possible solutions on the mining device's hard drive before mining activity starts



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



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

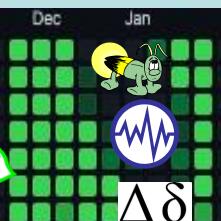


PoST Proof-of-Spacetime (PoST)

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

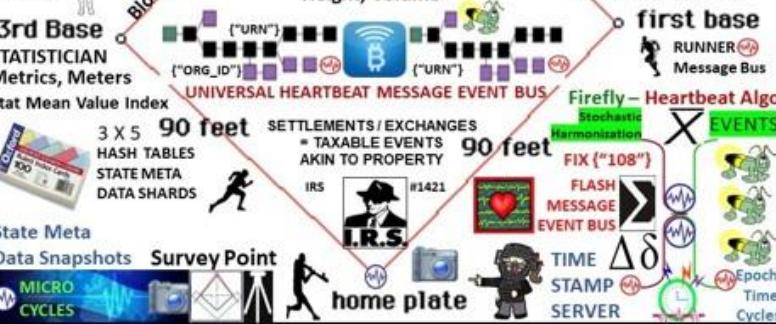
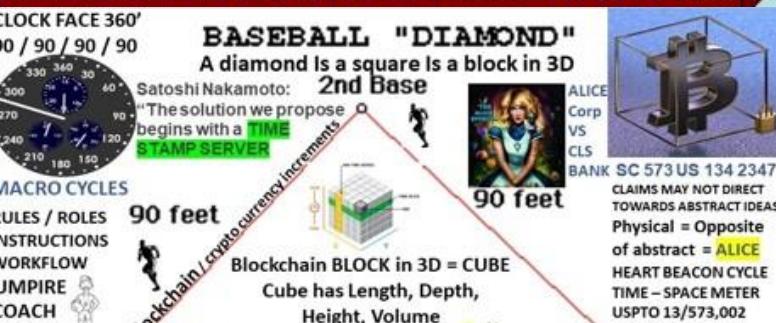


PoST users / nodes must prove that they are spending a certain amount of space for storage.



DISTRIBUTED AUTONOMOUS ORGANIZATIONS DAO

Heart Beacon Cycle FEDERATE / TRADE FEDERATIONS



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

Shore

queueing systems wait times stochastic processes, function scheduling Start, Stop TTL

Nicotib Erlang PROXIMITY BEACONS BLOCKCHAIN PARSING

STATE META DATA SNAPSHOTS BITCOIN BLOCKCHAIN TRANSACTIONS ARE BASED ON TIME SEQUENCING TRANSACTION STATE CHANGES TO DISTRIBUTED LEDGERS

BEACON BROADCAST MICRO- CYCLES QUANTUM RANDOM #

Time Series Arrival Rate Queue Forms Limited Resource Service Rate

RFID Delay Utilization Service Time (T_s)

Erlang / Equilibrium Time – Sync Algorithms ROLES RULES O'REILLY TIME EQUATIONS Time Series Databases

Time ATOMIC CLOCK NIST Beacon A Public Beacons Service NON REPUDIATION

Time Series Value Time

ERLANG CALENDAR: Calculate Wait Times Time Stamp to Date Time Conversion

Proof of Authority



{"GROUP ID"}
{"Org_ID"}

Not pay to play, Node identity is kept as stake

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



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

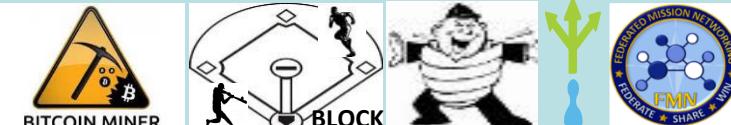
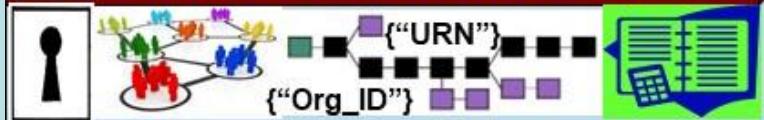
Parity supports a Proof-of-Authority consensus engine. Proof-of-Authority is a replacement for Proof-of-Work, and can be used for private or centralized chains. PoA as tested by a Kovan test network improves outdated economic models.



DISTRIBUTED AUTONOMOUS ORGANIZATIONS DAO

Heart Beacon Cycle

FEDERATE / TRADE FEDERATIONS



	Bitcoin Mining Pools MEME / METAPHOR MEDIATION		BITCOIN MINER
	DISTRIBUTED AUTONOMOUS ORGANIZATION = DAO RAND Corp		term coined circa 1991 now in use by Blockchain tech corporations
	Uniform_Resource_Name		FIREFLY FLASH
	IoT DEVICE / PLATFORM		HEARTBEAT MESSAGES
	IoT SENSOR DEVICE		</RESOURCE> {"URN"} {"Asset_Class"} </URN>
123e4567-e89b-12d3-a456-426655440000	UUID	123e4567-e89b-12d3-a456-426655440001	STOCK EXCHANGE
123e4567-e89b-12d3-a456-426655440002			MIC MARKET IDENTIFIER
			CODES / BREVITY CODES

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

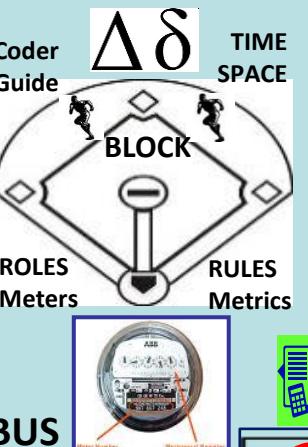
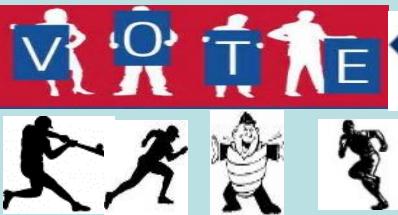
Federation
Gateway
Net joins, drops, splits, merges, moves
Agile, adhoc NETOPS Vs acquisition preserves the **CHANNEL**

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

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



XBRIL / CDL / DAML
STOCK MIC CODES

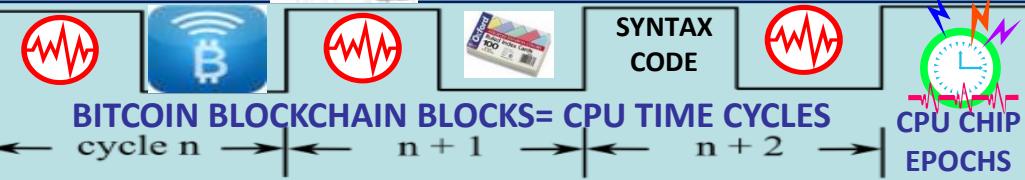
STRUCTURED
MILITARY MESSAGE
TEMPLATE FORMS
LOGIC / FILTERS



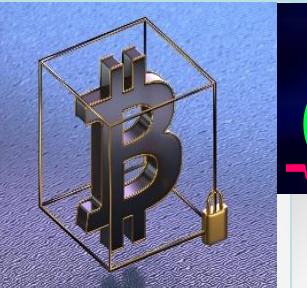
NDN

SYNTAX
LEXICON LIBRARY

CPU CHIP
EPOCHS

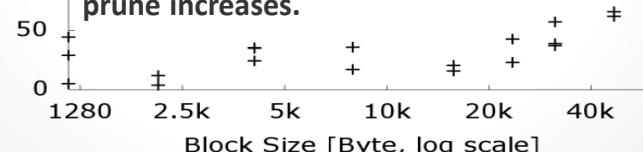


long exponential
intervals (10 min)



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.



COMMAND SYNTAX
RESTFUL State Transfer

MACRO – CYCLES



MICRO-CYCLES

short deterministic
intervals (10 sec)





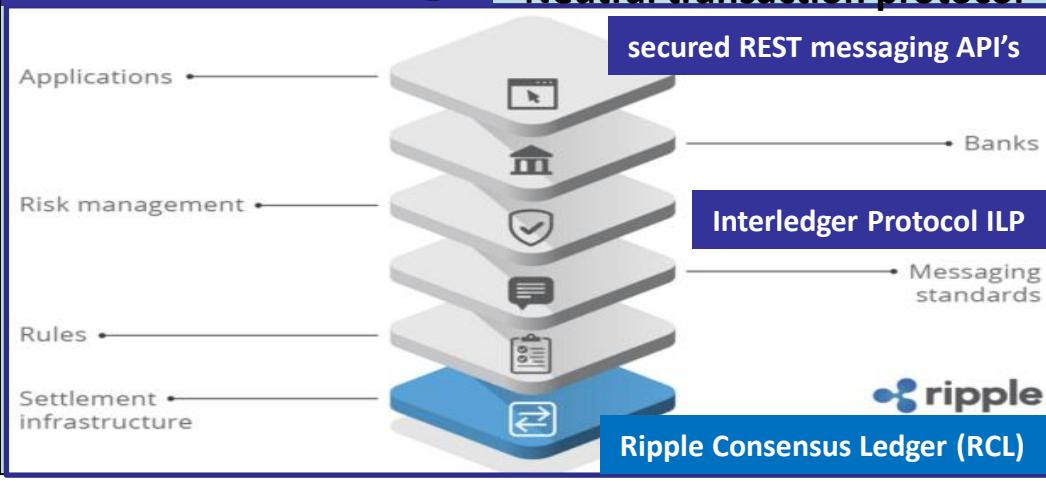
real-time gross settlement system,
currency exchange, remittance network

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

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

Provides information about total costs of the transaction.  

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



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

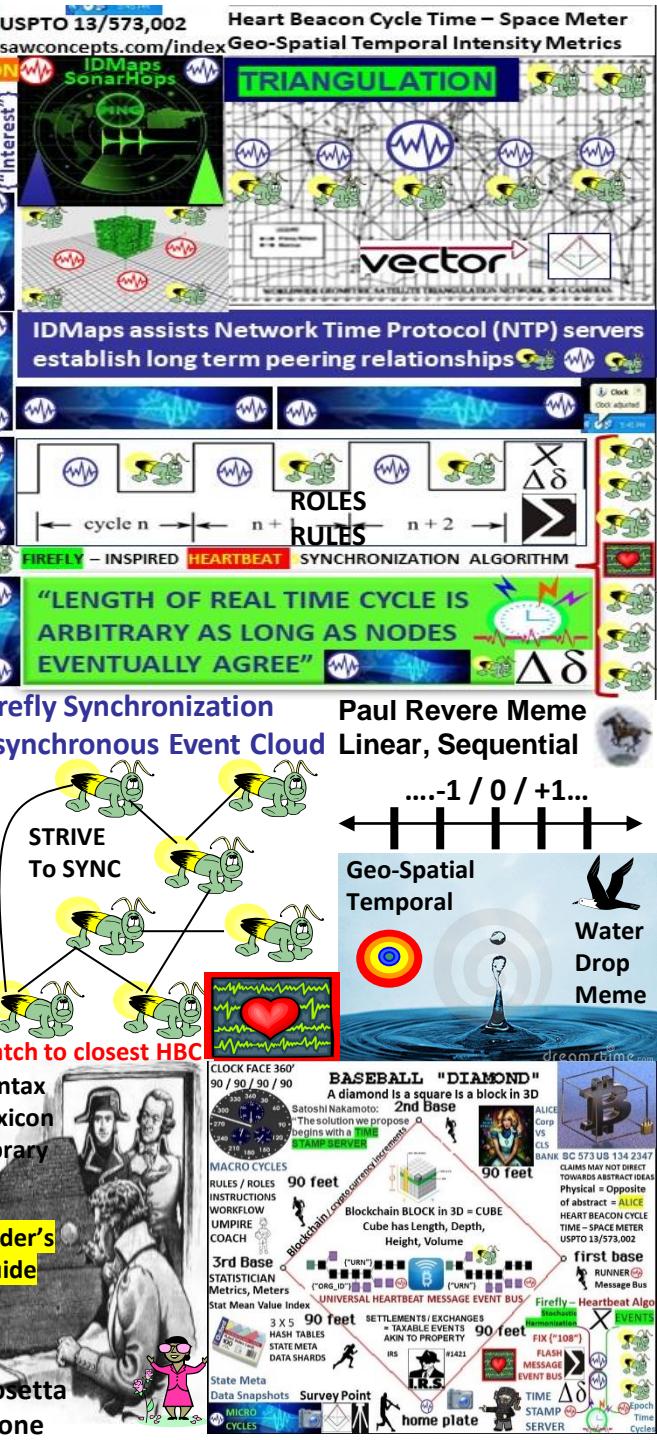
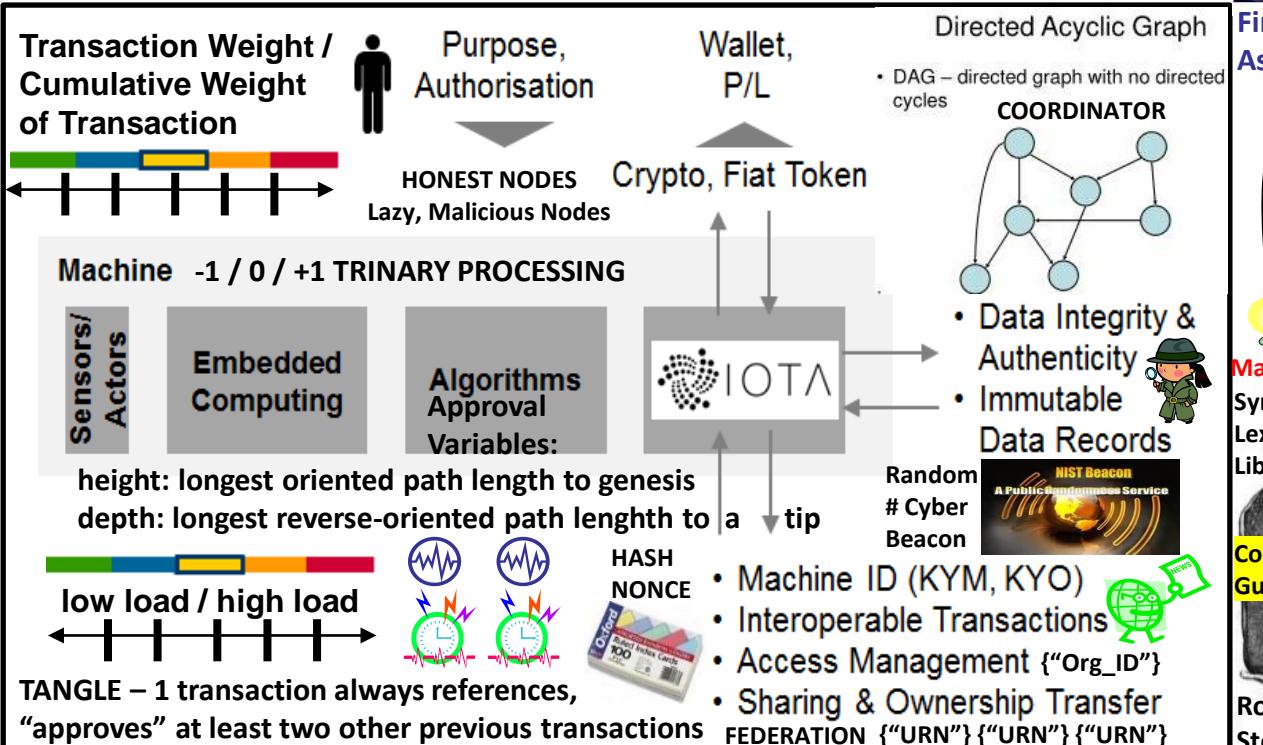


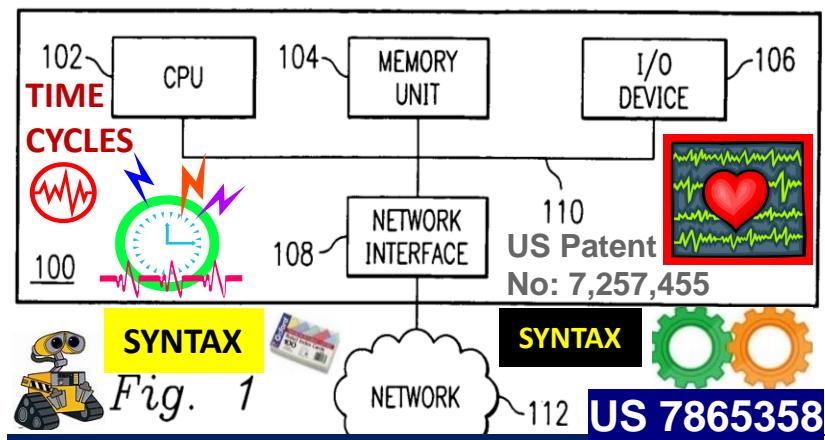
OTA: Internet Of Things IOT distributed ledger
with microtransactions without fees

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



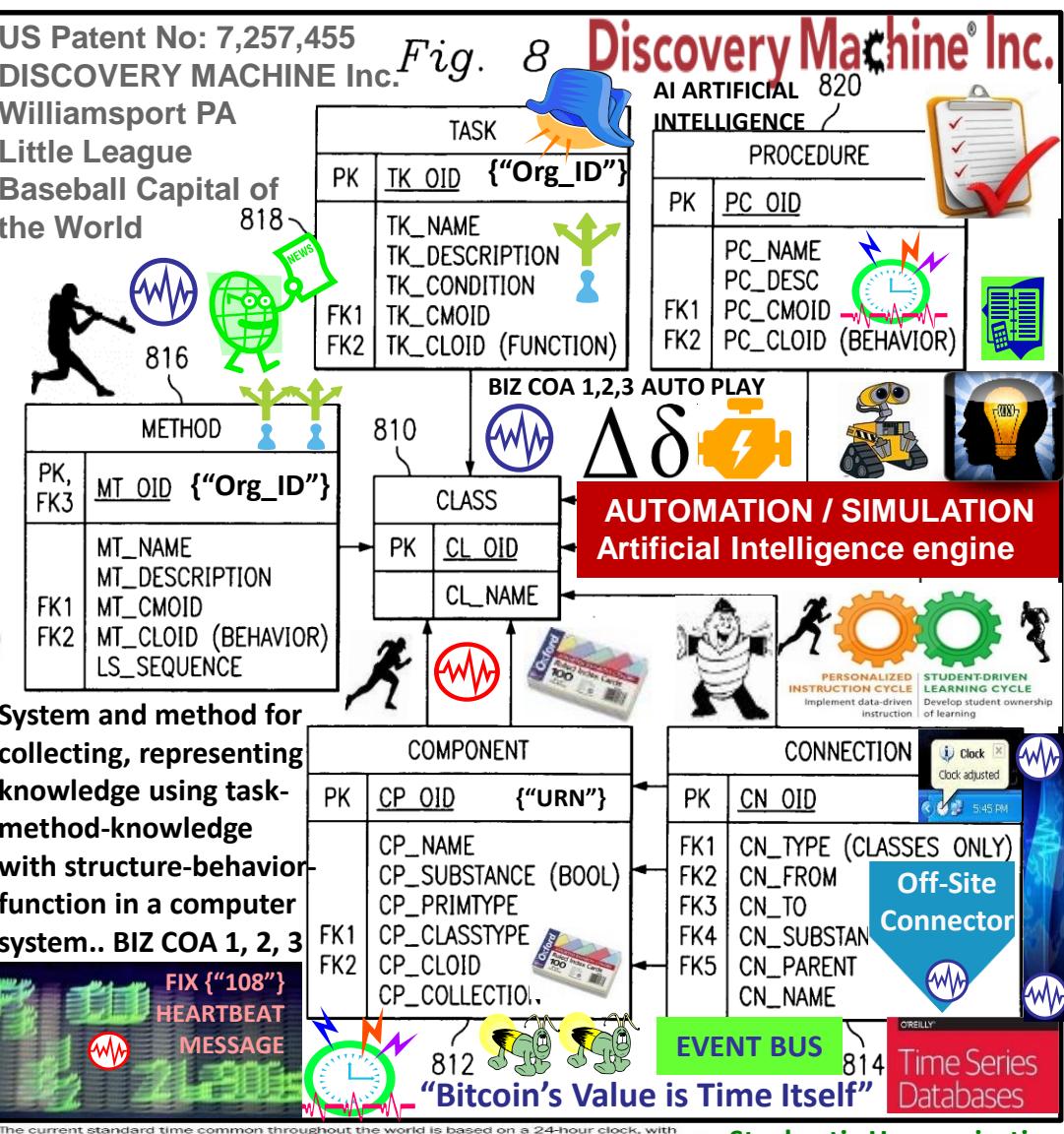
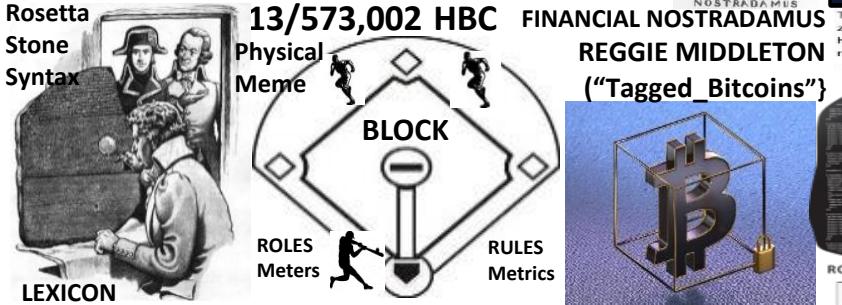


Machine-based system for transforming data from a source form to a target form, a tool is provided for sharing information established in developing a transformation model. The shared information may relate to rules for mapping source collection terms to standardized terms, rules for ordering or **SYNTAX**,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

ORACLE Veritaseum





ZEPPELIN

ZEPPELIN OPEN, GLOBAL ECONOMY

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

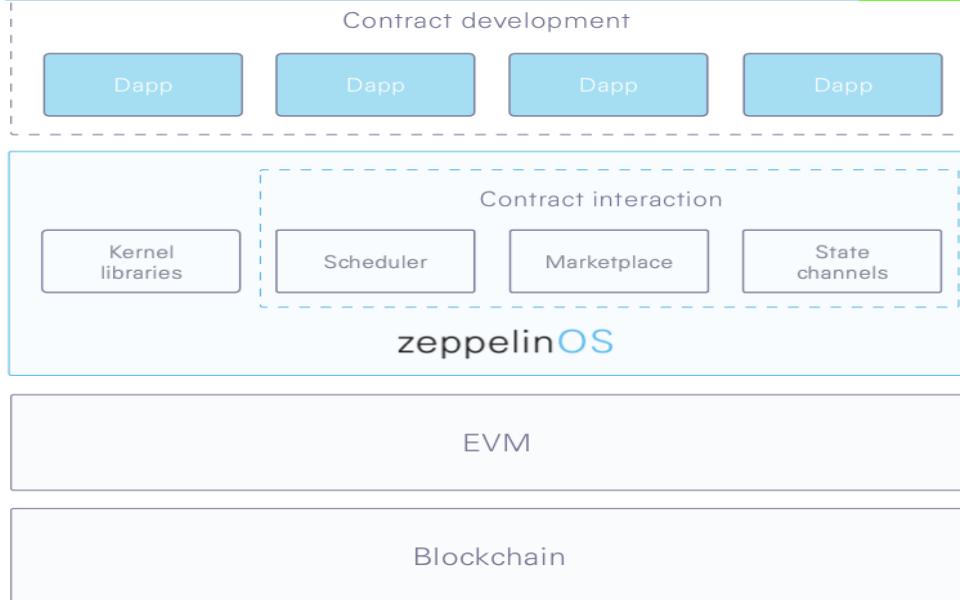
zeppelinOS, operating system for smart contracts
“the rate of innovation in building decentralized applications is limited by the manual and duplicative efforts developers must make to ensure basic usability and security.”

ZEPPELIN / zeppelinOS Common Functionality:

zeppelinOS Kernel common set of functions for smart contracts requesting services from the OS rather than re-implementing them from scratch. Functions will be available as an on-chain standard library of reusable contracts and functions, inspired by [OpenZeppelin](#) Libraries Create and customize your own Erc20 Token.

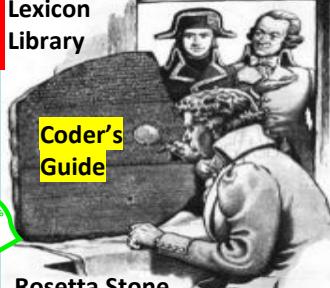
Create and customize your own ERC20 Token.

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



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

Syntax 300 + Templates
Lexicon
Library



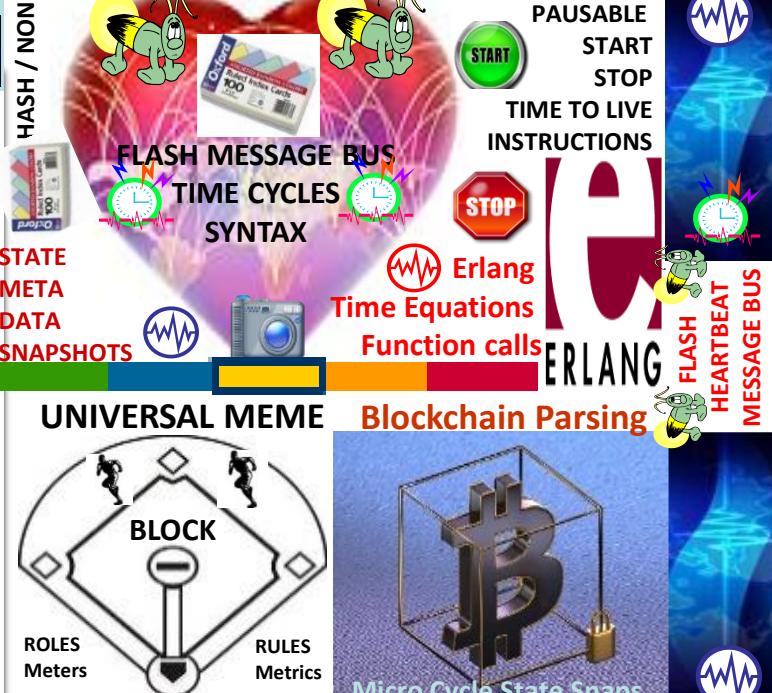
STRUCTURED DATA EXCHANGE

LOGIC / FILTERS ALPHA-NUMERIC BREVITY CODES

STOCHASTIC HARMONIZATION for TELCO Mesh Fabrics



CE

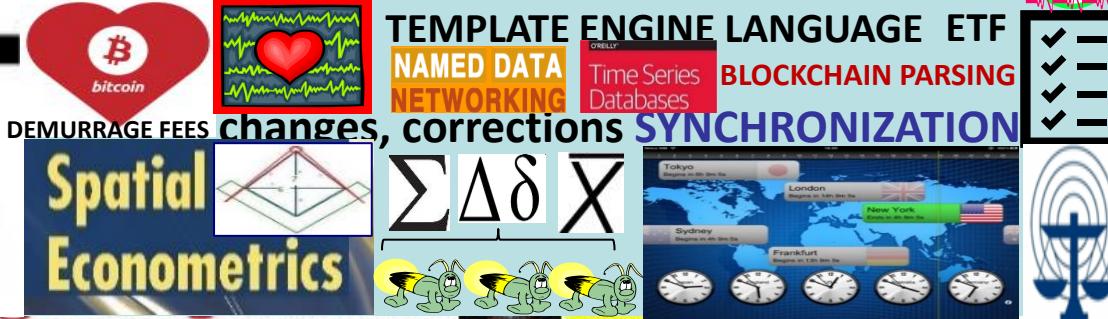
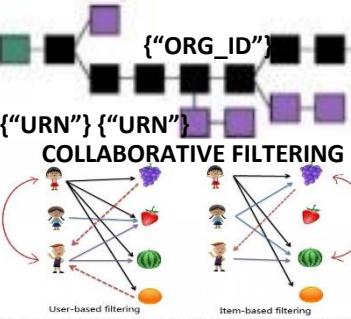




EGaaS

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



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.

eGaaS: 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.



FORM	CODEC-A	TAKE	ASAS	AMPCP	AFPIRIS	MECH
ASAB	P0001	P0001	P0001	P0001	P0001	P0001
ANOMHIC	P0002	P0002	P0002	P0002	P0002	P0002
AFATOR	P0003	P0003	P0003	P0003	P0003	P0003

SYNTAX / SYMBOL LEXICON LIBRARY STRUCTURED

DATA EXCHANGE 300 + TEMPLATE FORMS LOGIC / FILTERS

ALPHA-NUMERIC BREVITY CODES





GNOSIS

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

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

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

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

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



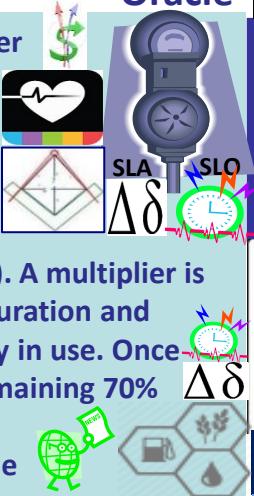
The proposed **Universal Timezone System** would do away with all these different time zones. Instead, it would be the same time all over the world, all the time.

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

Futarchy PREDICTION MARKETS
GnosisAMA

Gnosis trading interface alpha
WIZ token fee payment
INFORMATION ARBITRAGE ECONOMICS

TERRACYCLE Price Oracle



THE TERRA (TRC)

Trade Reference Currency

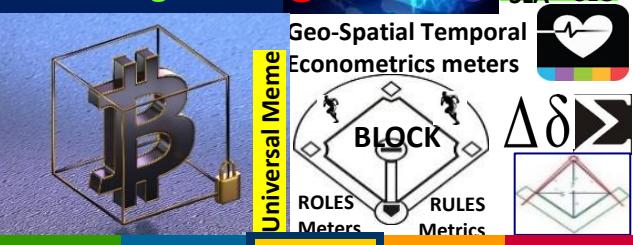


\$0.49 USD
฿ 0.001076 BTC

MICRO PAYMENTS
bitcoin

Need Bitcoin?

Demurrage Fees



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

NAMED DATA NETWORKING

<CONTENT> CENTRIC NETWORKING



<ORG_ID>
<ORG_ID>
<ORG_ID>
<URN>
<URN>

<GLOBAL> <JOINT> <COMMUNITY> <DOMAINS> <SHARED> <PRIVATE>
</INTEREST> <STRAT_ML> <IODEF RID> </DISTANCE>

Situational Awareness Reference Architecture (SARA) IDENTITY, Inventory, Activity, and Sharing



<Federated ID> <URN> <type_event> <Data Class Types>

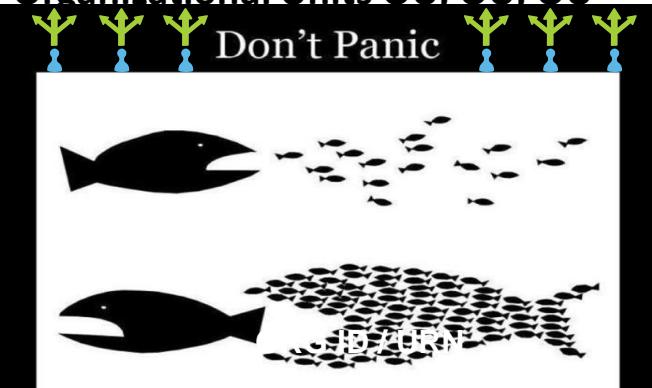
STRUCTURED MILITARY MESSAGING FORMS: FIELD TYPES, FILTERS, TAGS
PARSED, PROCESSED, COMPILED TELEMETRY SIGNALING STANDARDIZATION

USMTF / XML MTF FORMATTED MESSAGE CATALOG

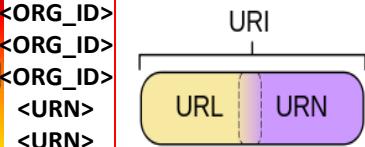
Catalog has over 300 messages to choose from have a wide number of information exchange requirements using common, CONSENSUS Message Text Formats MTFs. MTFs specify <CONTENT> / information agreed by group consensus presenting information in a logical, well specified and unambiguous layout resulting in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

</Organizational_Identifier_Org_ID>

Organizational Units OU, OU, OU



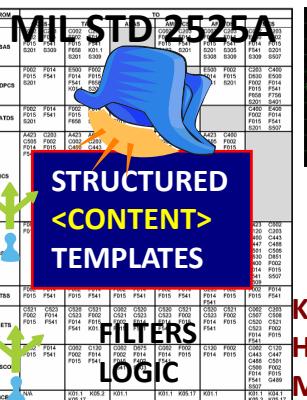
FEDERATE



Uniform Resource Names (URNs): A Uniform Resource Identifier (URI). Both URNs (names) and URLs (locators) are URIs, and a particular URI may be a name & locator. Each plays a specific role:

- URNs IDENTIFICATION (SENSORS, DEVICES)
- URCs INCLUDE META-INFO
- URLs LOCATE / FIND RESOURCES

SITUATION AWARENESS



SURVEY METHOD
ID <ITEMS><INTEREST>
GEO-SPATIAL AREA
TEMPORAL INTENSITY
MEASURES / METRICS

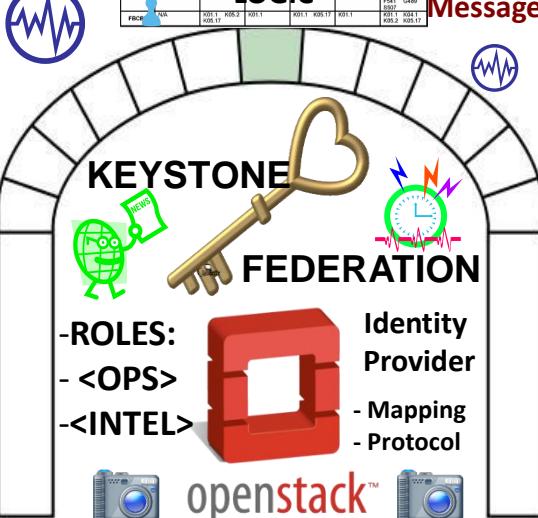
IDMaps
SonarHOPS



K0.99
Heartbeat
Message



FILTERS LOGIC



KEYSTONE
FEDERATION

- ROLES:
- <OPS>
- <INTEL>



Identity Provider
Mapping Protocol

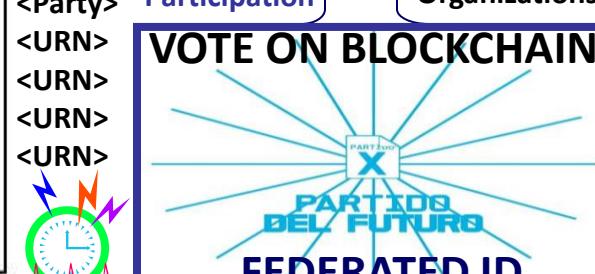


<Org_ID>
<Org_ID>
<Org_ID>
<Party>
<Party>
<Party>

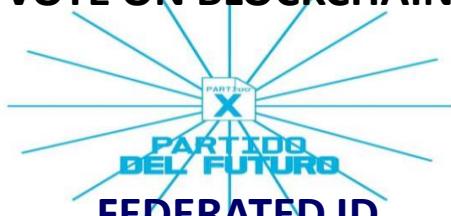
<URN>
<URN>
<URN>
<URN>

PARTIDO X:
Distributed
Democratic
Participation

ETHEREUM:
Decentralized
Autonomous
Organizations



VOTE ON BLOCKCHAIN



PARTIDO DEL FUTURO



DAO









Dogezer software development platform allows team members to become product investors by investing their time, labor. The Dogezer Platform combines the functionality of Kickstarter, UpWork, GitHub, Slack, Jira, Google Docs, Dropbox and ICO analogues with a set of defined processes how these solutions relate to each other in a clear, transparent and predictable way. Dogezer gives an opportunity to start a project in minutes; organize a set of teams working on the project; define how project contributions are rewarded, driving a project to completion by using independent contributor skills around the world.



13/573,002 HEART BEACON CYCLE

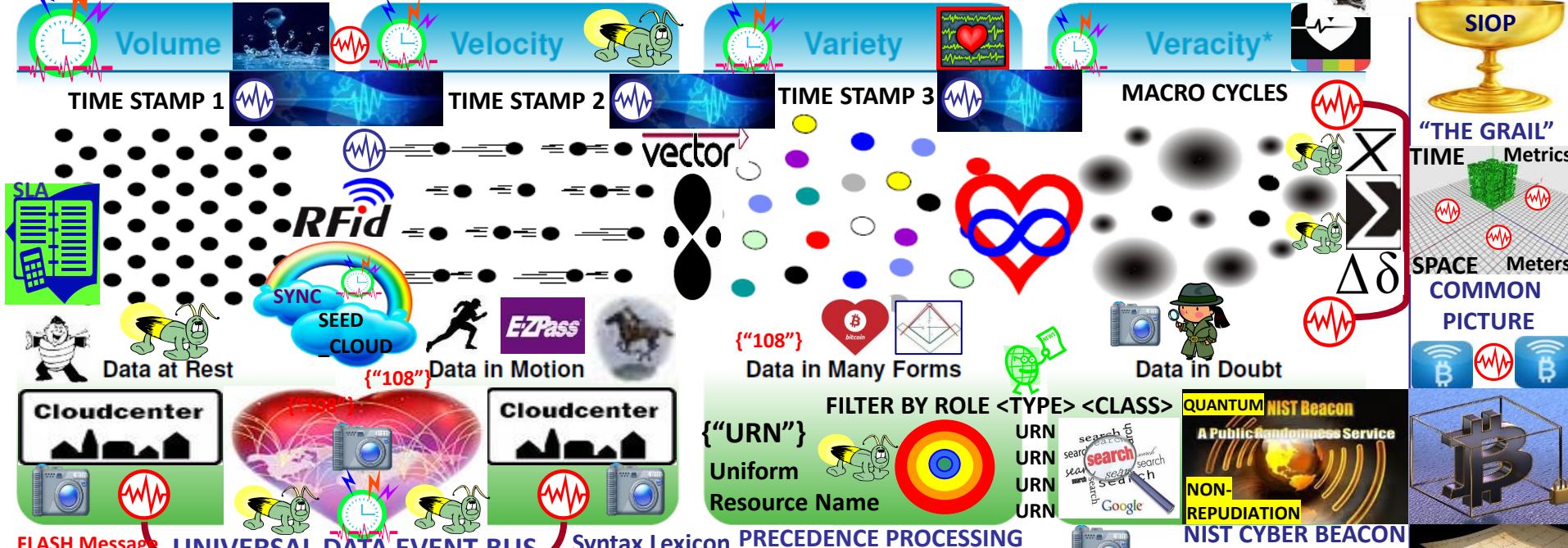
Time -Space meter, metrics / Universal data event, alert bus
Internet of Everything “ability to hear the world’s heartbeat”



The four dimensions of Big Data

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

TIME STAMP BY Org_ID, URN Before FUSION CENTER



* Truthfulness, accuracy or precision, correctness

FIREFLY – HEARTBEAT {"108"}
Stochastic Harmonization UTZ SYNC

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

State Meta Data
Heartbeat Snaps

MICRO

CYCLES

ERLANG

Flash HB Messages



HASHGRAPH
Consensus Algorithm
Time Averaged
Time Stamping

Functional Sequential Erlang

SPACE – TIME Equations
BLOCKCHAIN PARSING

{"Org_ID"}
{"URN"}

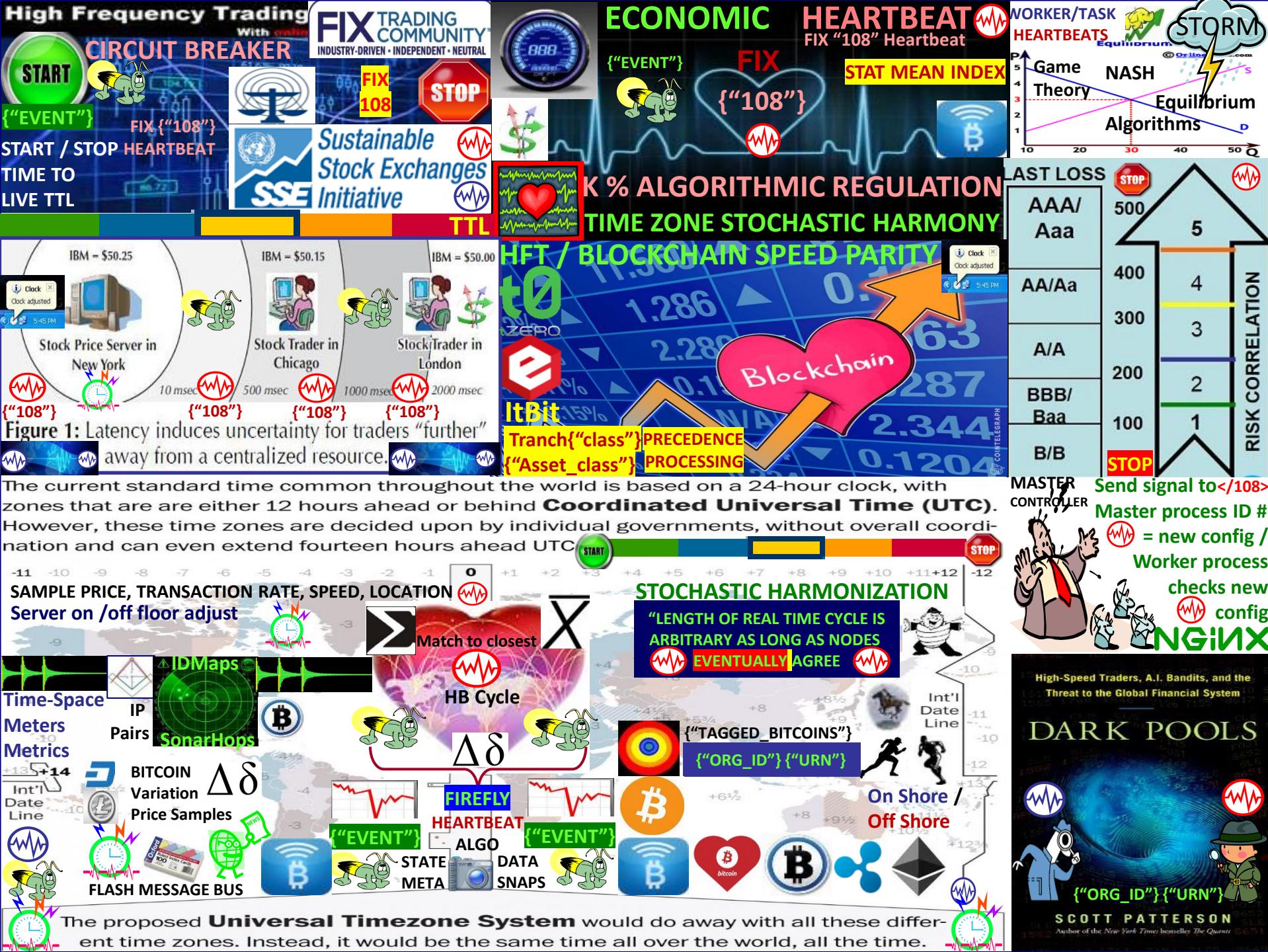
PAUL REVERE MEME
LINEAR SEQUENTIAL

< / = / >

HEARTBEAT SYNCRONIZATION

FIREFLY SYNC
CONSENSUS







"THE FINANCIAL
NOSTRADAMUS"
REGGIE MIDDLETON



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



VERITAS TOKENS P2P Capital Market smart contracts Eco Economic HEARTBEAT

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



INFOCON
5 4 3 2 1
INFORMATION
CONDITION

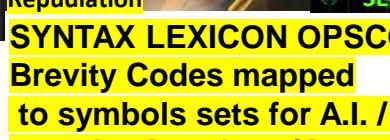
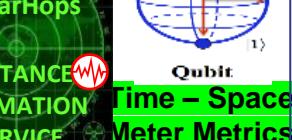


{"108"}
{"108"}



STATISTICAL MEAN VALUE INDEX PULSE

GDP INDEX ECONOMY K% RULE



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

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

DAO Distributed Autonomous Organization Investor Pools

Place Order X ritaseum™

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

NAMED DATA NETWORKING {"TAGGED"} CRYPTO

Denominating Asset: ~BTC:SATOSHIS

Contract Expiry: 16w

Contract Starts at: -

Contract Ends at: -

Cancel Contract at: -

Est. Trans. Fees: \$0.0437

Transaction Fees: \$1.0262

Leverage Fees: \$3.2528

Max. Profit/Loss: + \$95.6773 / - \$104.3227

Total Required: \$104.3227

05:08:50

Collateral Notional Expiry

Heartbeat Flash Messages Precedence Processing

FIREFLY HEARTBEAT ALGO 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.

Length of Real Time Cycle is Arbitrary as Long as Nodes Eventually Agree

STOP TTL

Non Repudiation

SYNTAX LEXICON OPSCODE

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

Time – Space Meter Metrics

Qubit

Rosetta Stone

START

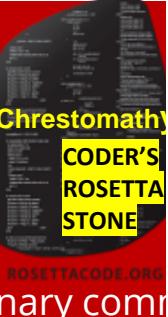




Erlang programming language / mini OS
massively scalable high availability, real-time Erlang's runtime system built-in concurrency distribution, fault tolerance



- 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 comr



Functional Sequential Erlang

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

SORTING ALGO'S

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

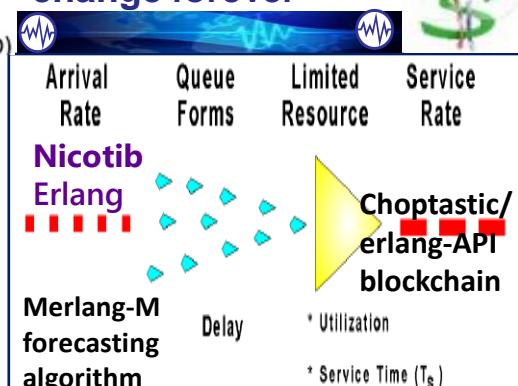


[20130166398 "System And Method For Implementing A Context Based Payment System."](#)

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



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



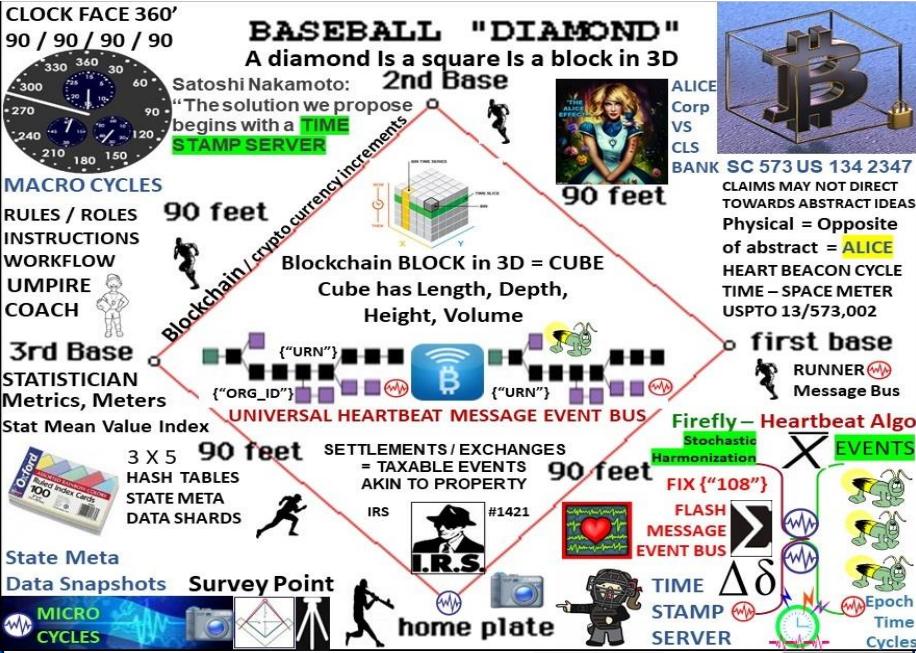
distributed "noSQL" database, embedded right into Erlang,
supports indexing, replication, transactions, and fail-over
Fast ETS in-memory, and DETS persistent on-disk database

Mnesia database ("Organization_ID") Global name resolution

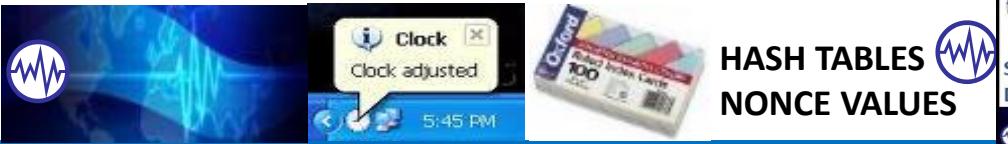
FROM	TO/CC	THIS	AS/AD	AMERICA	AF/AF	WIC
XBRL	/ CDL / DAML					
ALPHA	NUMERIC					
BREVITY	CODES					
AZURE	BLETCHLEY					
STRUCTURED						
MILITARY	MESSAGE					
TEMPLATE	FORMS					
LOGIC	/ FILTERS					



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



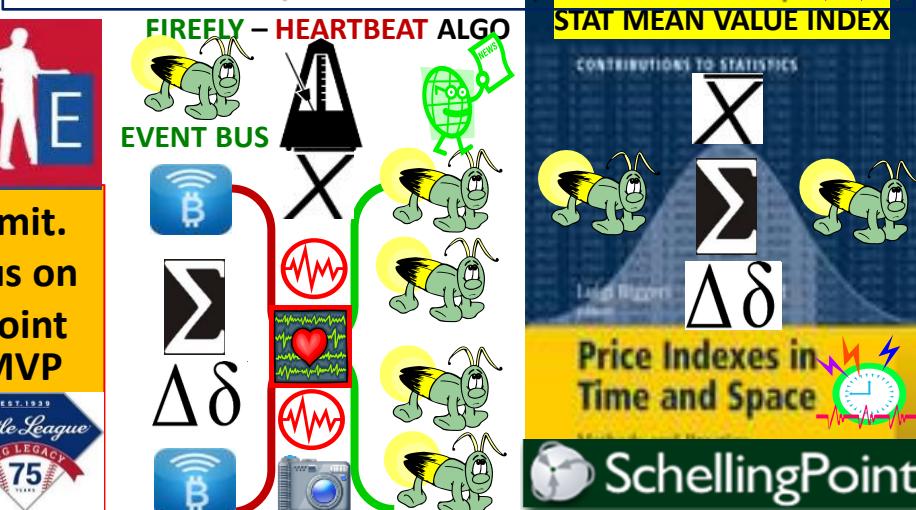
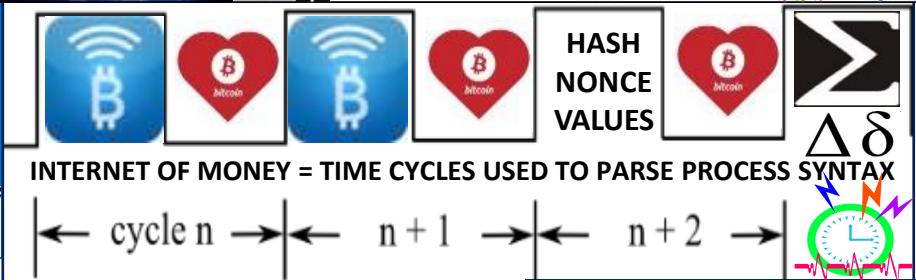
ALL THINGS INTERNET FORMED W 1) TIME EPOCHS 2) SYNTAX



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



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



Microsoft Bletchley modular framework: choose combination of technologies 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

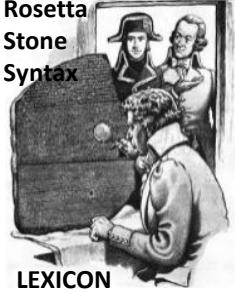
Blockchain middleware: identity and operations management, data, intelligence services like analytics and machine learning. New middleware works with existing Azure services, like Active Directory and Key Vault

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

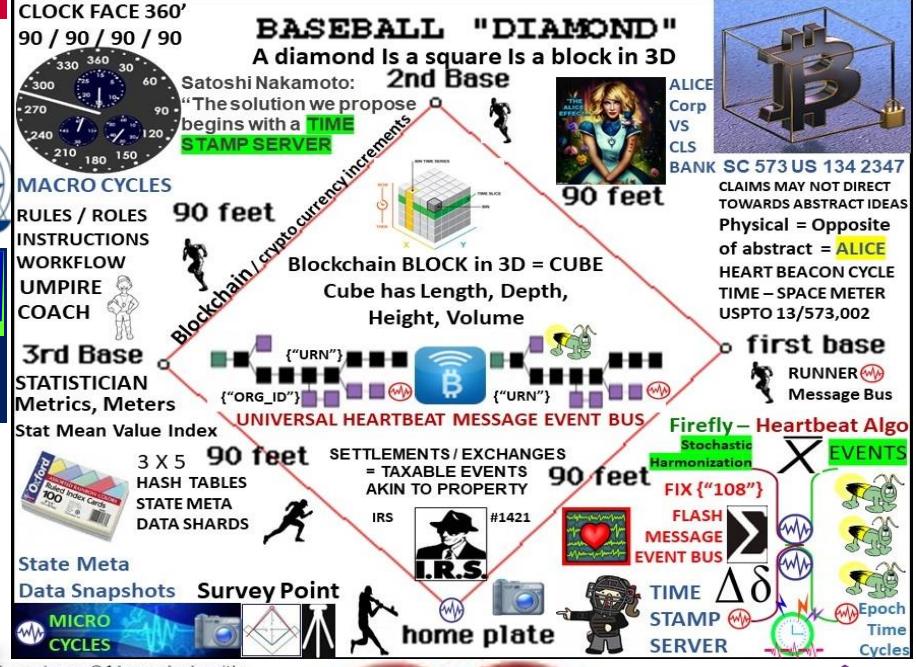
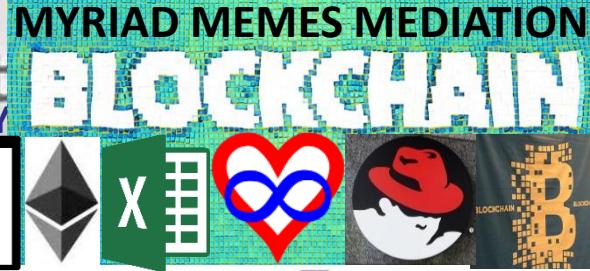
Utility and Contract. Developers can discover and enlist Cryptlets into their SmartContracts to create more robust and trusted transactions. Contract Cryptlets are full delegation engines that act as SmartContract surrogates off the chain. Cryptlets provide execution logic and securely store data in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



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

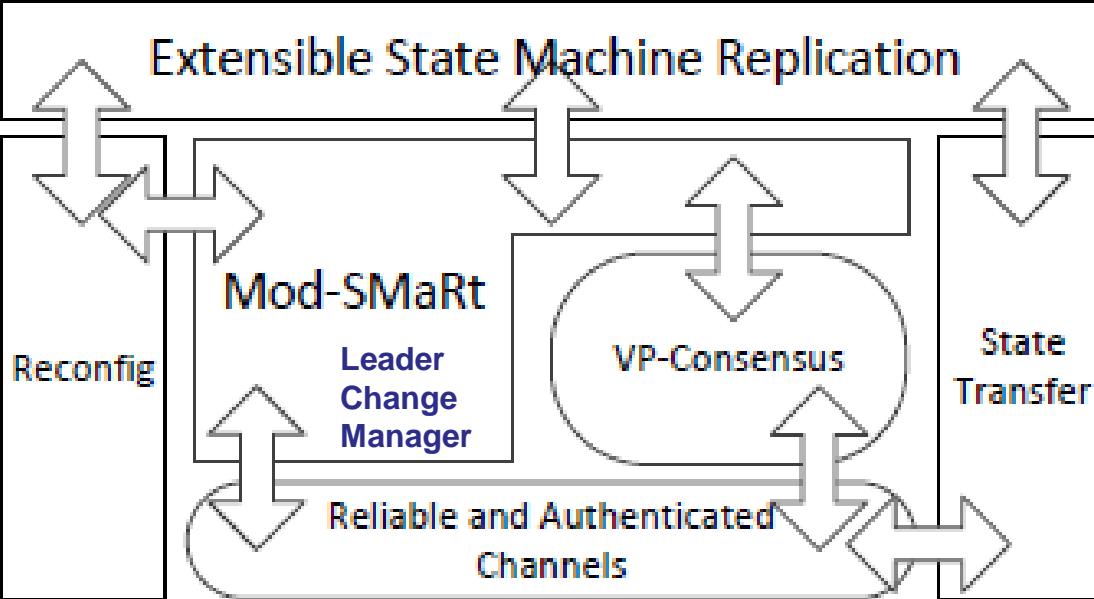
The current standard time common throughout the world is based on a 24-hour clock, with time zones that are either 12 hours ahead or behind Coordinated Universal Time (UTC). However, these time zones are decided upon by individual governments, without overall coordination and can even extend fourteen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

FIREFLY EVENTS
FLASH MESSAGES
SYNC TO CLOSEST
HEARTBEAT EPOCH



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



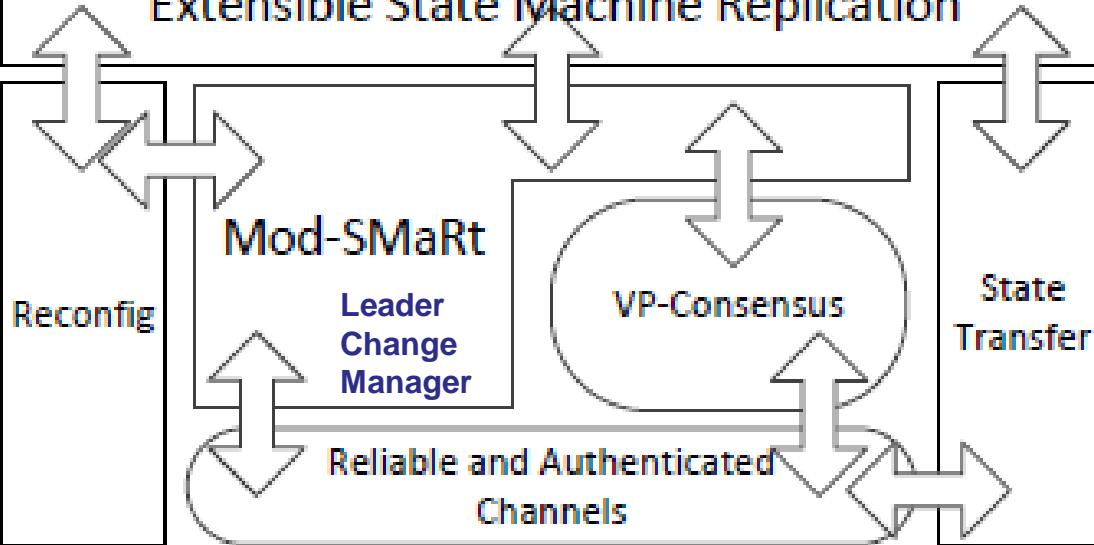
US Ct ALICE CORP V CLS BANK

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

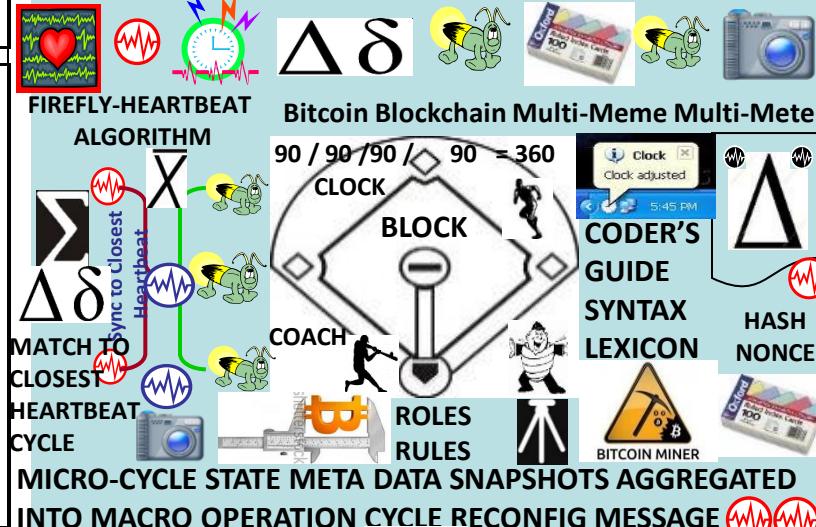


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KOO.99 HEARTBEAT SYNC DELTA STATE META DATA SNAPSHOT

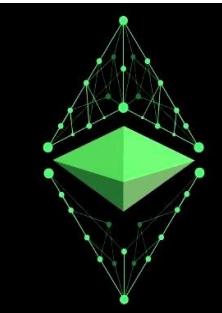


BUILDING BLOCKS:   

- 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”



ETHER: Compensate Resource Contribution

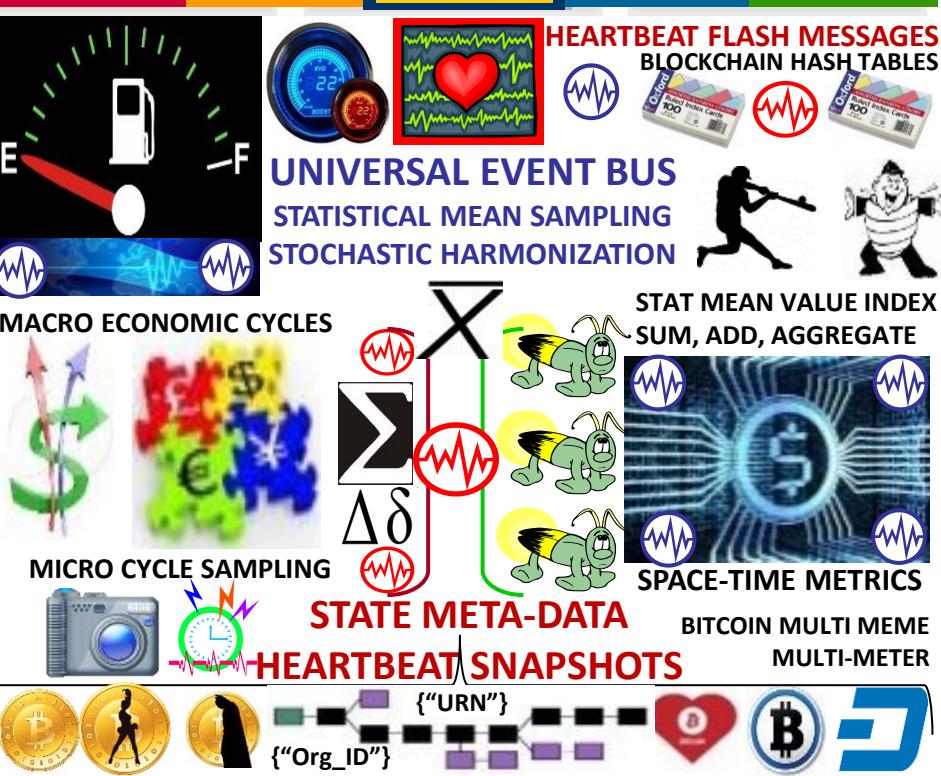
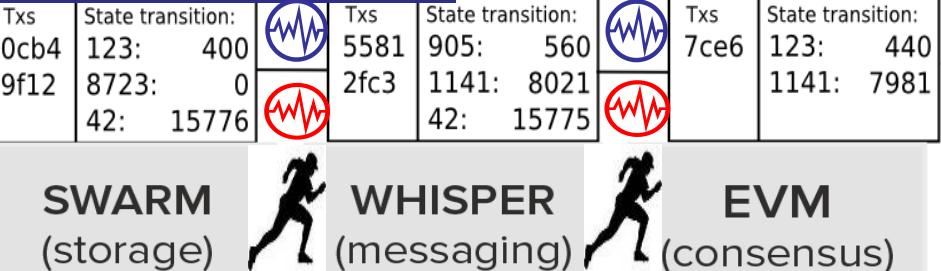
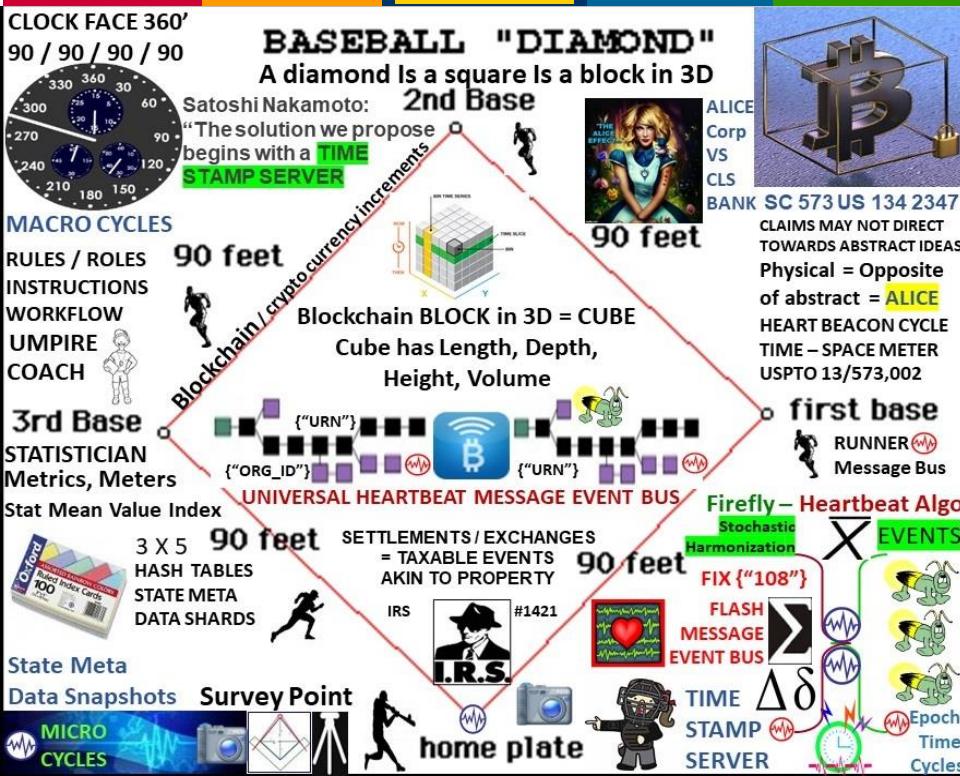
Gas: price to
Run contract
transactions

ethereum

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



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





D F I N I T Y

RANDOM # BEACON

NIST Beacon
A Public Randomness Service

QUANTUM RANDOM #

Blockchain Nervous System
HEARTBEAT {"108"} State Meta Data Snapshot Msgs

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

GROUP Signature is random number

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

HYPER GEOMETRIC PROBABILITY CALCULATOR

CONSENSUS / RANDOM BEACON

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

Each process has mining identity

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

UTZ TIME ZONE SYNC

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

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

CLOCK FACE 360'
90 / 90 / 90 / 90

MACRO CYCLES

RULES / ROLES INSTRUCTIONS WORKFLOW UMPIRE COACH

3rd Base STATISTICIAN Metrics, Meters

Stat Mean Value Index

3 X 5 HASH TABLES STATE META DATA SHARDS

SETTLEMENTS / EXCHANGES = TAXABLE EVENTS AKIN TO PROPERTY

IRS #1421

State Meta Data Snapshots Survey Point

MICRO CYCLES

home plate

Fix {"108"}

FLASH MESSAGE EVENT BUS

TIME STAMP SERVER

EVENTS

Time Cycles

HBC "ORG_ID" {"URN"} CLASS ASSET TYPE {"UUID"} DEVICE TYPE INDEX CARD="SHARD"



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

ERLANG API FOR BLOCKCHAIN



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

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

CROSS – CHAIN ATOMIC SWAPS

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



Aeons: energy for applications implemented on the platform.

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



(“ORG_ID”)

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



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

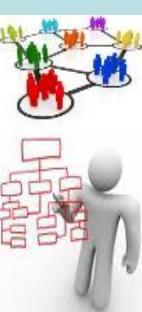
AETERNITY CROSS-CHAIN ATOMIC SWAPS CORRESPOND TO HEART BEACON CYCLE'S USE OF BATTLEFIELD DIGITIZATION DERIVED HEARTBEAT SYNC DELTAS



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

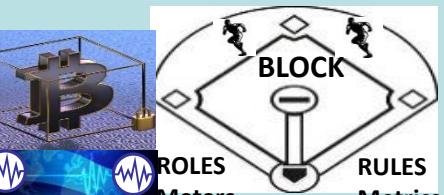
TOKENS REPRESENT REAL WORLD VALUE URN RESOURCES

ETHEREUM BASED USES GAS GAUGE MEME INDICATING THRESHOLD MET / NOT MET TO PROCESS



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

Federation Gateway
("ORG_ID")

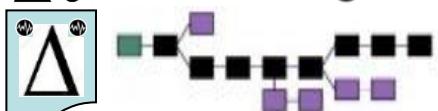


ARIN
American Registry for Internet Numbers

HYPER LEDGER OPEN SOURCE BLOCKCHAIN

Core APIs, & SDKs

$\Delta\delta$ Shared Ledger



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

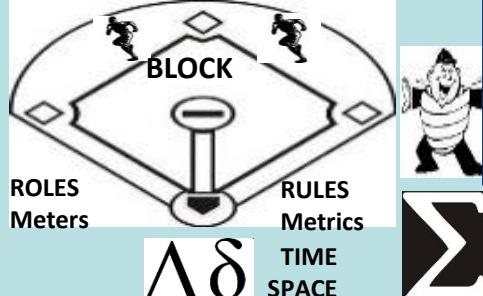
FEDERATION
Federation Gateway

METRICS ("Organization ID")
METERS

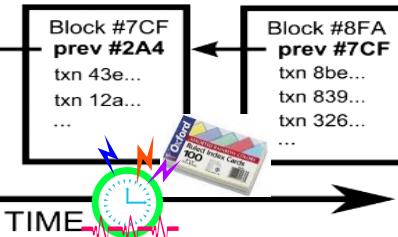
RESTFUL SYNC DELTA
CHANGE MANAGEMENT
MICRO-MACRO CYCLE



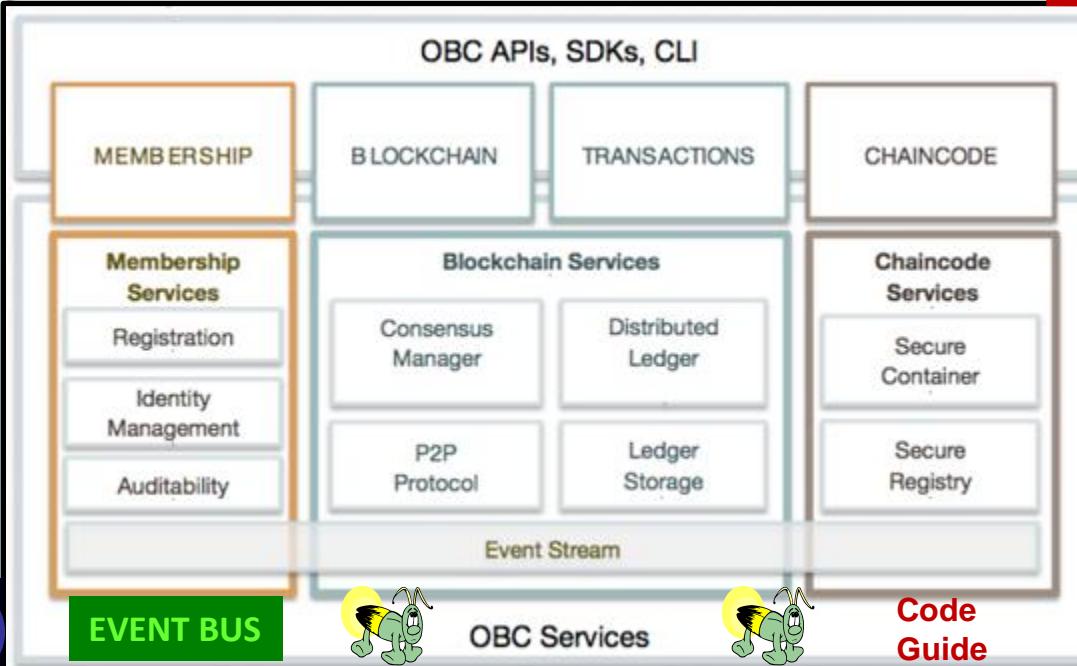
BLOCKTIME ARBITRAGE



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



Alpha-Numerics



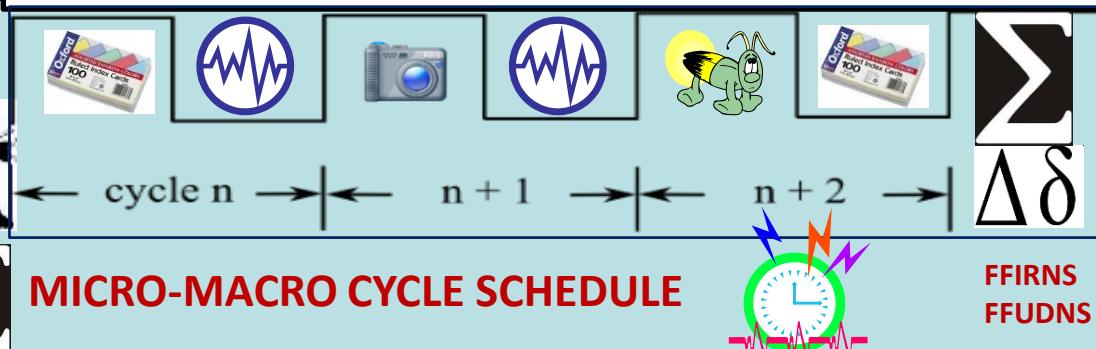
ROSETTA STONE

XBR / CDL / DAML
STOCK MIC CODES

STRUCTURED
MILITARY MESSAGE
TEMPLATE FORMS
LOGIC / FILTERS

SYNTAX
SYMBOL LIBRARY

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



FFIRNS
FFUDNS

MICRO-MACRO CYCLE SCHEDULE

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

DASH



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

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

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

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

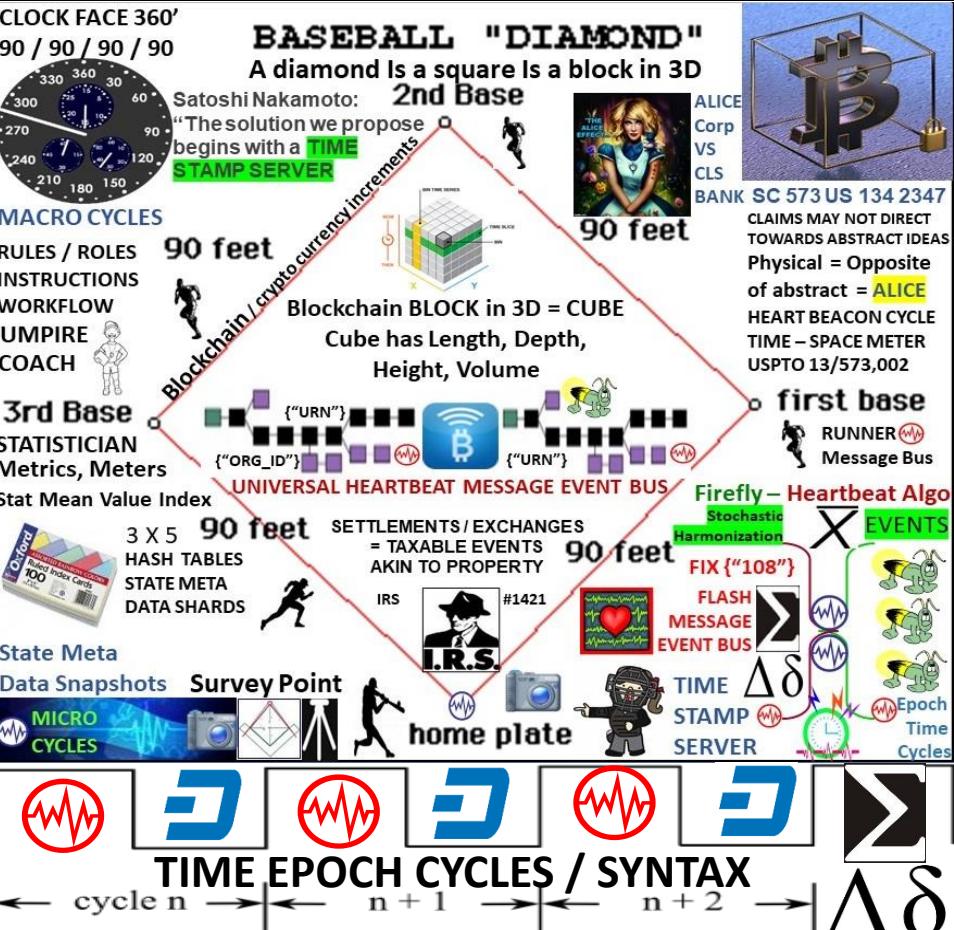
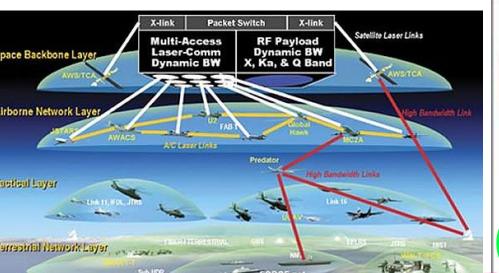
"Its makeup is thus: the block reward is divvied up in three parts. The first 45 percent goes to [Dash's miners](#). Another 45 percent goes to its Masternodes. And 10 percent is set aside to fund whatever other jobs or expenditures the Dash network deems necessary"

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

DAO: RAND THINK TANK TERM COINED + / - 2001

NETWORK CENTRIC WARFARE
Developing and Leveraging Information Superiority

ALICE CORP Vs CLS BANK



STOCHASTIC HARMONIZATION FIREFLY-HEARTBEAT EVENT BUS

HEART BEACON CYCLE = IMPROVEMENT TO NETWORK CENTRIC WARFARE



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



STATE: stored data at a given instant in time

STATE CHANNELS: blockchain interactions

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



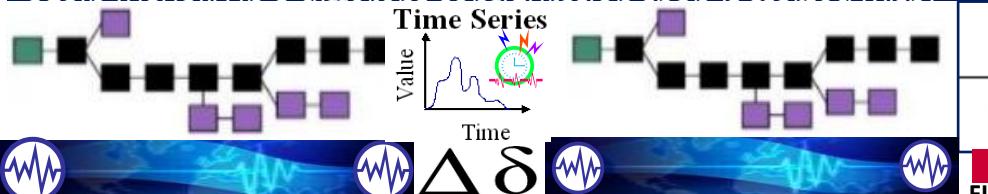
1. Part of the blockchain state is locked via multisignature or smart contract convention, so that a specific set of participants must completely agree with each other to update it.



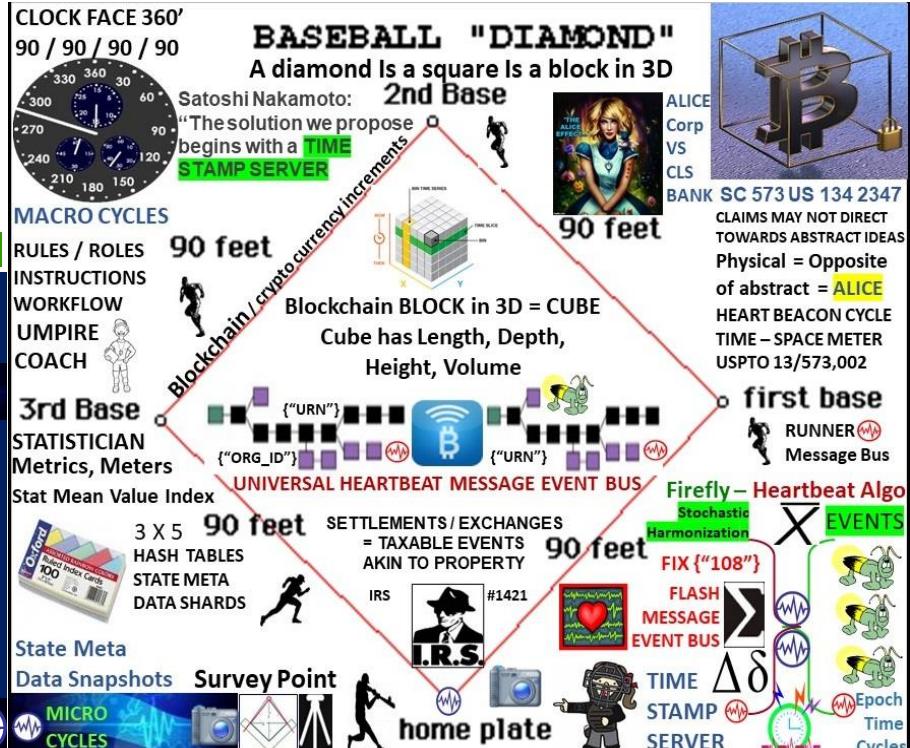
2. Participants update the state amongst themselves by constructing and signing transactions that *could* be submitted to the blockchain, but instead are made available for a new update "trumps" previous updates.



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

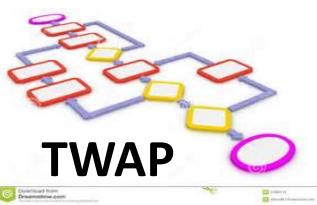
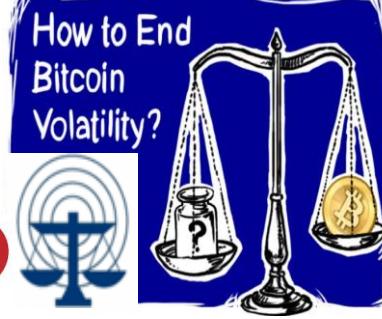


NEW UPDATES OVERWRITE THE PREVIOUS: simplest way is to have any unlocking attempt start a timer, during which any *newer* update can replace the old update (restarting the timer). When the timer completes, the channel is closed and the state adjusted to reflect the last update received. The length of 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.

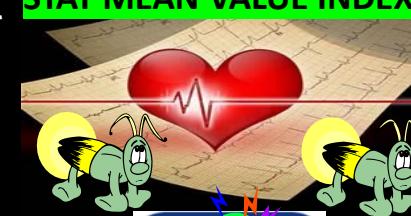


TWAP Algorithm Manages Bitcoin Price Volatility Algorithm

TWAP GOAL: provide a Time Weighted Average Price Benchmark



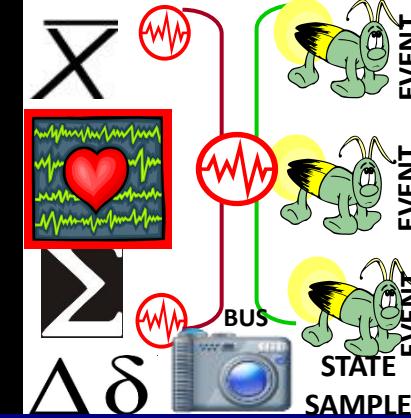
FIREFLY HEARTBEAT ALGO
STAT MEAN VALUE INDEX



EPOCH TIMES



STATE META
DATA SNAPSHOTS



BUS STATE SAMPLE

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



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



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

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



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

Key Features:

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



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

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

All rates time-stamped in UTC.

Ability to look up by time-stamp.

Ability to look up by block-height.

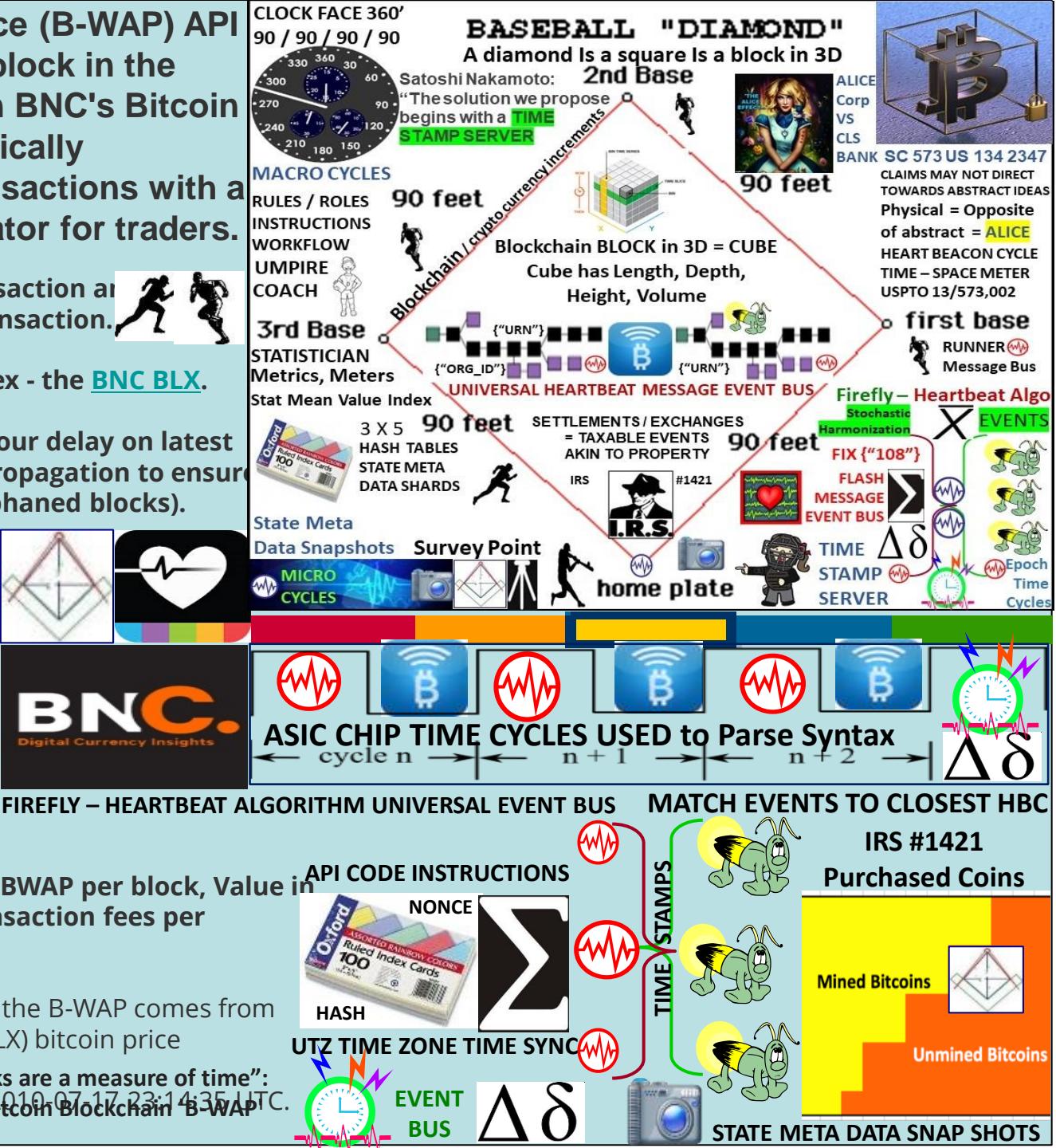
Asset Classes: Digital Currencies

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

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

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

“Blocks are a measure of time”: The Bitcoin Blockchain B-WAP





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



NETOPS
ECONOMIC HEARTBEAT



STAT MEAN VALUE PULSE
MACRO CYCLE AGGREGATE



STAT MEAN VALUE INDEX
CONTRIBUTIONS TO STATISTICS



PING
Sync Events



Price Indexes in
Time and Space
Methods and Practice

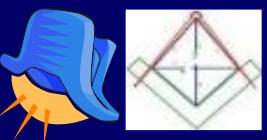


SchellingPoint

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 Fees TERRATRC TRADE
REFERENCE CURRENCY
"Money of Peace"
Commodity / Currency Index



Free and open markets:

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



• Privacy

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



HASH Values
Nonce Values

SCT Alice V Cls Bank

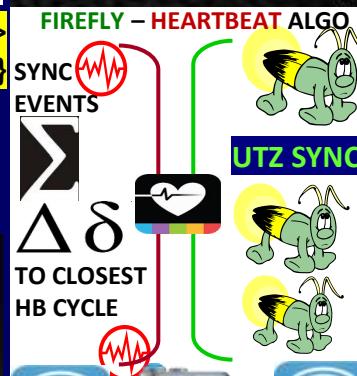


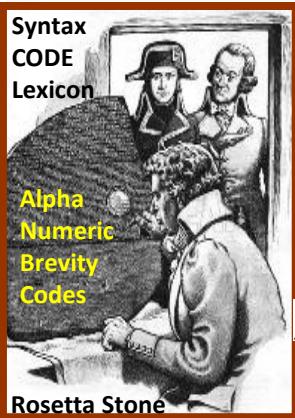
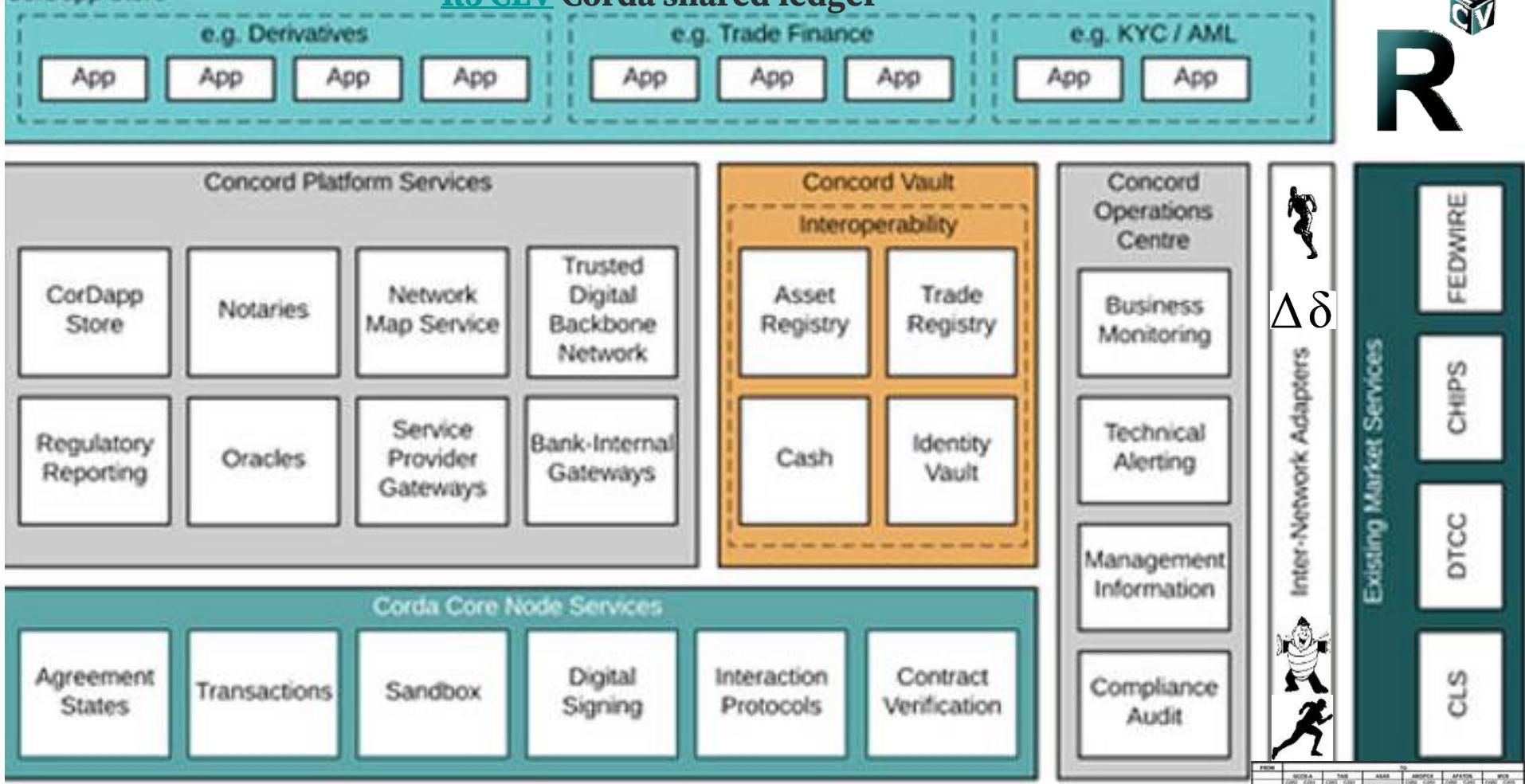
Bitcoin: OpenBazaar transactional currency



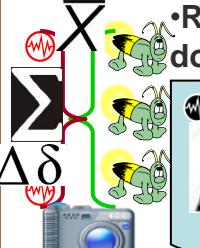
Cryptographic Security

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





UNIVERSAL
EVENT BUS



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

Federation
Gateway

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

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



XBRIL / CDE / DAML
STOCK MIC CODES

STRUCTURED
MILITARY MESSAGE
TEMPLATE FORMS
LOGIC / FILTERS
300+
Use Case Templates

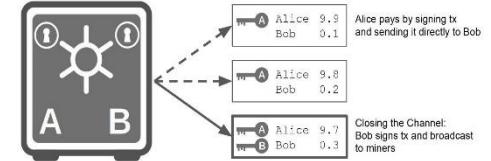
PROJECT LIGHTING



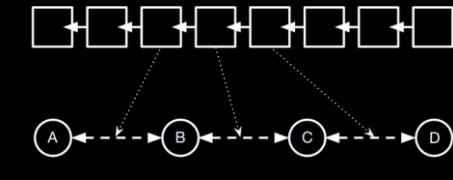
transactions sent over / off chain
micropayment channels

Micropayment Channels

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



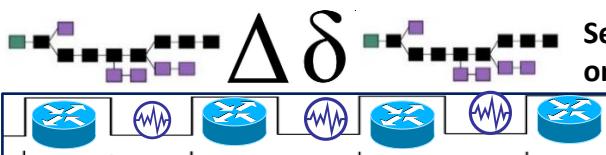
LIGHTNING



Millions of Transactions. Milliseconds of Delay.

Hashed TIME LOCK contracts component for global consensus

OP_CHECKLOCKTIMEVERIFY During Macro Cycle w/ Random # BEACON



Payment channels multi-hop hub
spoke model like internet routing

FIREFLY – HEARTBEAT ALGORITHM



FIREFLY – HEARTBEAT



EVENT REPORTING ACROSS TIME-SPACE



MESSAGE EVENT BUS

CLOCK FACE 360'
90 / 90 / 90 / 90



RULES / ROLES

INSTRUCTIONS

WORKFLOW

UMPIRE

COACH

3rd Base

STATISTICIAN
Metrics, Meters

Stat Mean Value Index



State Meta

Data Snapshots

Survey Point

MICRO CYCLES

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

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

90 feet

Blockchain / cryptocurrency increments

Blockchain BLOCK in 3D = CUBE

Cube has Length, Depth,
Height, Volume

90 feet

90 feet

Blockchain BLOCK in 3D = CUBE

Cube has Length, Depth,
Height, Volume

90 feet

90 feet

Blockchain BLOCK in 3D = CUBE

Cube has Length, Depth,
Height, Volume

90 feet

90 feet

Blockchain BLOCK in 3D = CUBE

Cube has Length, Depth,
Height, Volume

90 feet

90 feet

Blockchain BLOCK in 3D = CUBE

Cube has Length, Depth,
Height, Volume

90 feet

90 feet

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

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

SCt 573 ALICE CORP VS CLS BANK PHYSICAL MEMES

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



TIME / DISTANCE SERVICE LEVEL
AGREEMENT SLA / O Operations

IEEE 802.15.4 OASIS MQTT

TELEMETRY TRANSPORT

IEEE 802.1AG HOP BY HOP
DETECTION

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

Time Series

INFO SERVICE

DISTANCE

RISK

Value

Time

IDMaps

SonarHops

WATER DROP IN POND MEME IS

SONAR NAVY METAPHOR / MEME

NDN </INTEREST>

NDN {"DISTANCE"}

NAMED DATA

NETWORKING

IEEE C37.118

Harmonization

& Sync heartbeat

update Interval

PAUL REVERE

LINEAR, SEQUENTIAL

602

TCP/IP HOP BY HOP COUNT

Energy Attenuates over Distances

CLOSER SOURCE

CHEAPER RATE

TESLA



IEEE 802.11
HOP BY HOP CONTROL

Unused Resources / Unmet Needs



TIME-SPACE BEACON

INFOCON

INFORMATION CONDITION

Spatial
Econometrics

Spatial Econometrics

INFOCON

TIME-SPACE BEACON

METRICS / METERS

TRADE WITH EARTH

INFOCON

INFORMATION CONDITION

INFOCON

INFORMATION CONDITION

SIRIUS DISCLOSURE

vector

Spaceship

Earth

Signals &

Telemetry

Annex

Operating manual

for spaceship earth

???

MOON =

HELIUM 3

"Numbers are the

Universal Language

offered by deity to humans as

confirmation of the truth"

ASTEROID BELTS =

RARE MINERALS

MAIN ASTEROID BELT

MARS

MERCURY

VENUS

EARTH

STOCHASTIC

HARMONIZATION

Farther = More Cost

➤ Fuel, Resources

Service Level Agreements

FIREFLY-HEARTBEAT

ALGORITHM

UNIVERSAL

EVENT MESSAGE BUS

ERLANG

TIME-SPACE METRICS

TROJAN ASTEROIDS

JUPITER

ANDERSON INSTITUTE

SYNTAX LEXICON

K00.99

Alpha Numeric Brevity Codes

CODE

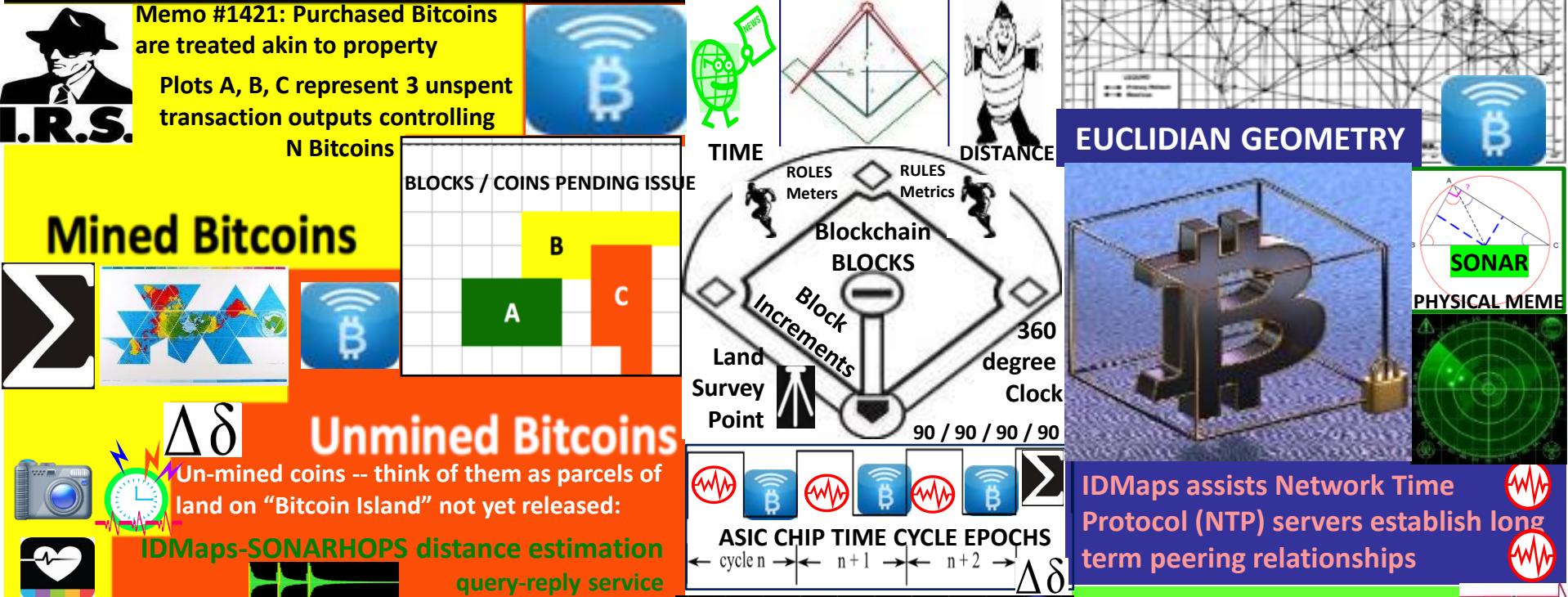
SYNTAX LEXICON</p

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.



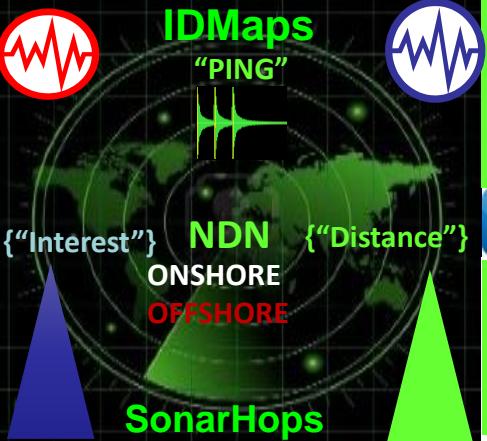
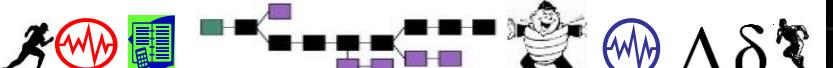
- End-state Bitcoin quantity will be fixed like land
 "Bitcoin as protocol of ownership, not transfer"
 Coins never travel, but simply switch owners"

Step 1: prove coin ownership <Org_ID> Coin Issuer

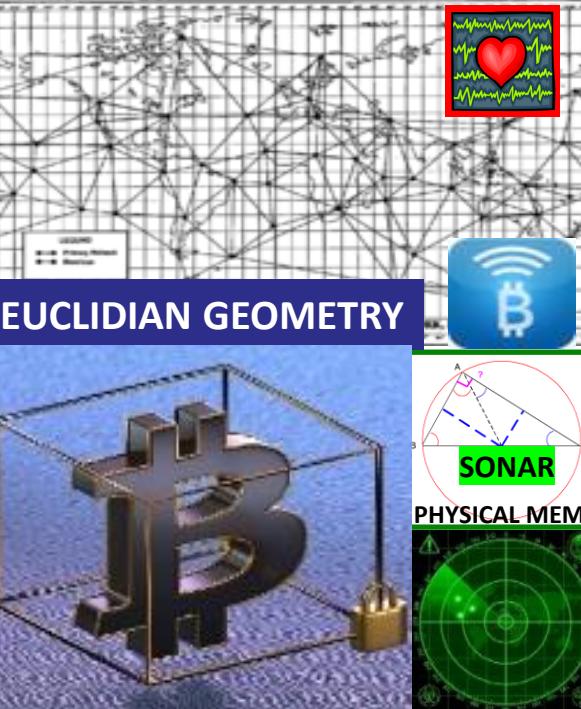
Step 2: coins sent where, when Lat-Long, Time Stamp

Step 3: specify ownership <Org_ID> issuing agent

Step 4: Issuing Org of Record adjudicates w buyer



TRIANGULATION



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

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



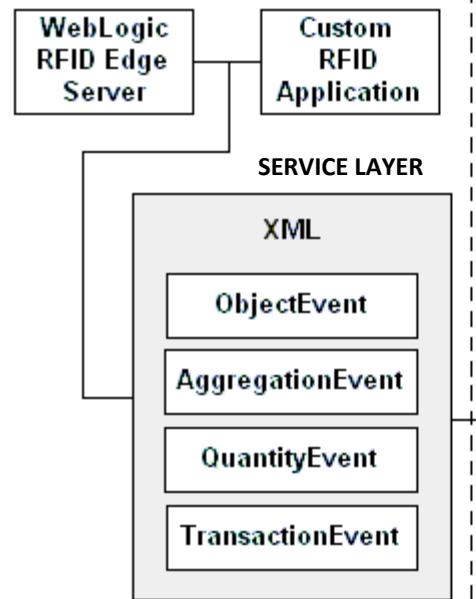
IDMaps Distance Metrics: latency (round-trip delay) available bandwidth estimation

Electronic Product Code Information Services (EPCIS)

GS1 Standard for creating, sharing visibility event data



 EPCIS DATA MODEL



Core Business Vocabulary (CBV)

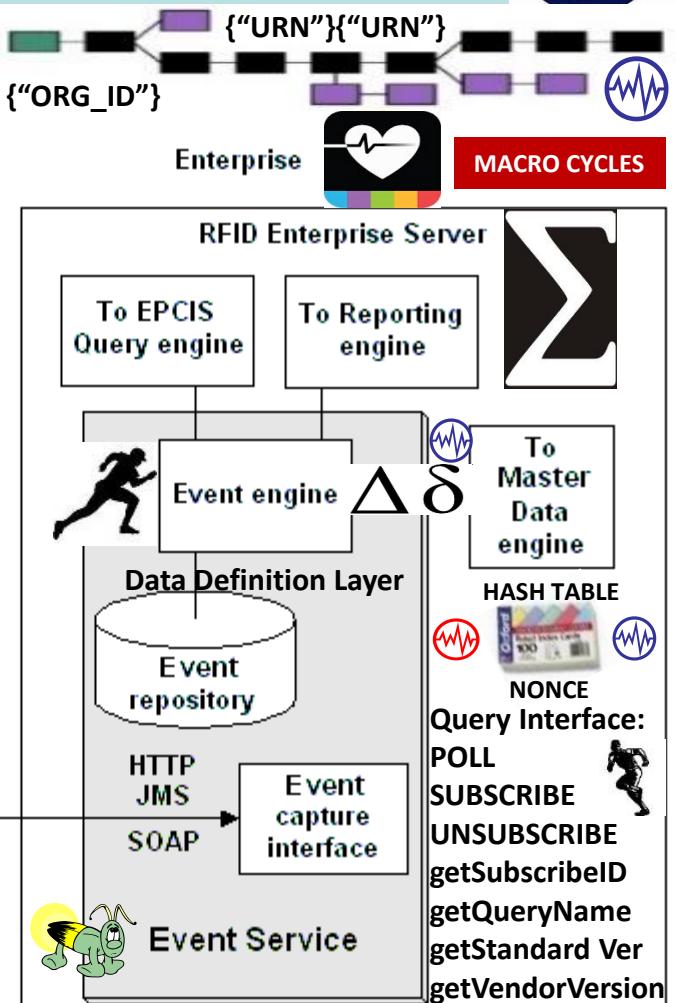
What identifiers of object(s) or entities / subject of the event

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

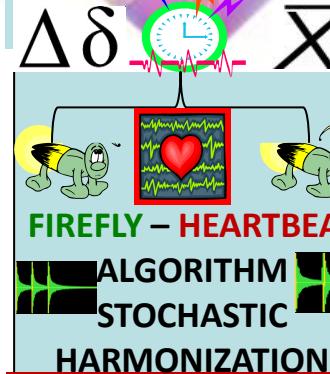
Where location identifier where event occurred, identifier of

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

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



CLOSER IS CHEAPER



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

RFID Configuration TCP/IP heartbeat message

STRUCTURED DATA EXCHANGE / STRUCTURED MILITARY MESSAGES

IMETS	F002 F015 F541	C032 F004 F194	S021 F002 F194	C523 F002 F194	S023 F002 F194	C523 F002 F194	C5070 F002 F194
ROLES / RULES ("FILTERS")							
ISYNSCON	F002 F015 F541	C002 F004 F194 F195	C002 F004 F194 F541	D675 F002 F194 F541	C002 F002 F194 F541	C120 F002 F194 F541	C002 F002 F194 F541



Sensor Networks in .. on reading tag in s heartbeat message

P/IP heartbeat message

BIZ USE CASES

ALPHA NUMERIC BREVITY CODES

SYNTAX LEXICON CODE GUIDE

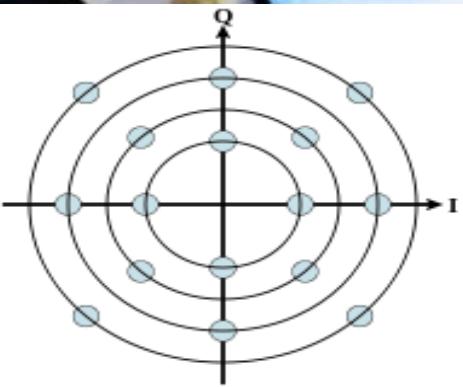


!st Compiler DESIGN Still the **BEST**





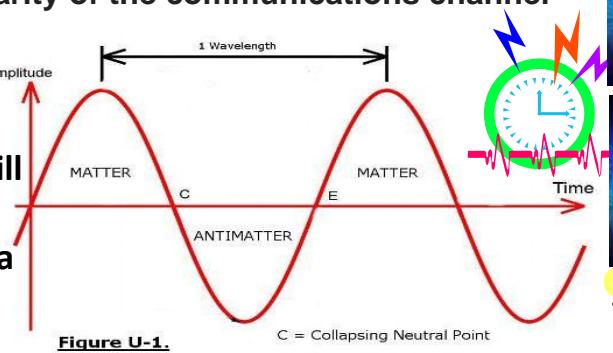
www.RLighthouse.com



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**”

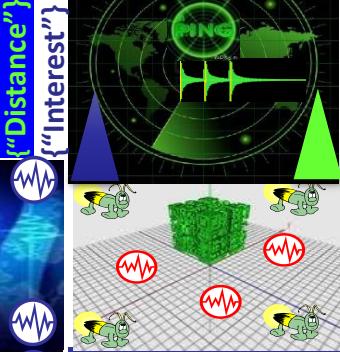


Sine wave of our blinking universe. The 4 fundamental forces will all be found to vary continuously when sampled at 2x the blinking frequency, per Nyquist-Shannon theory

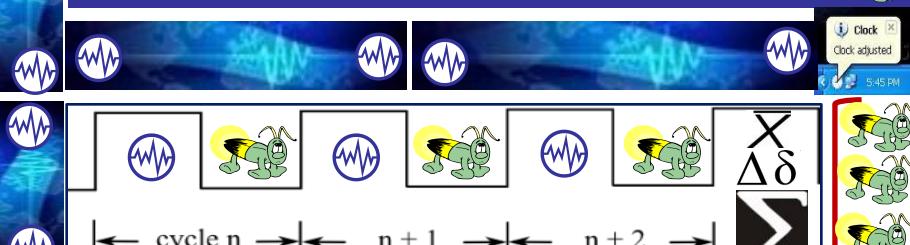


USPTO 13/573,002
sawconcepts.com/index

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



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

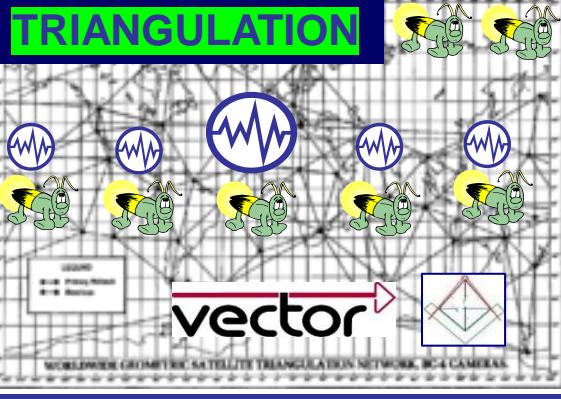


FIREFLY – INSPIRED HEARTBEAT SYNCHRONIZATION ALGORITHM

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



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



vector

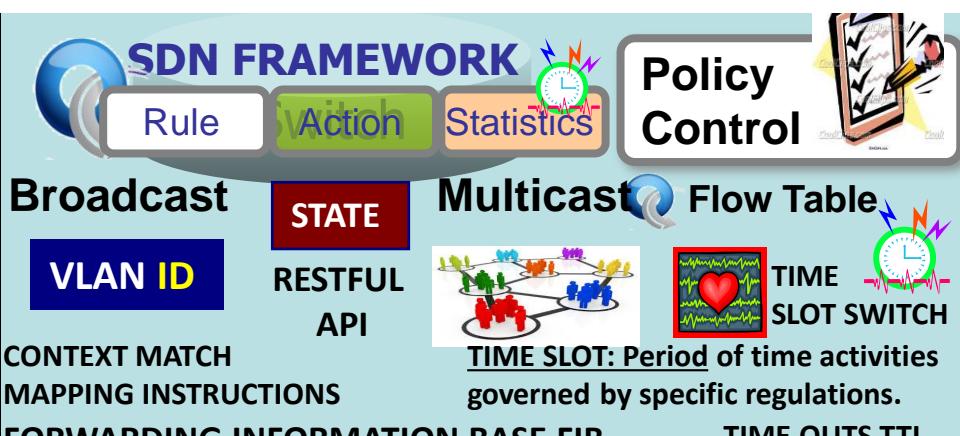






- SDN is a *framework* to allow network administrators to *automatically* and dynamically manage and control a *large number* of network devices, *services*, topology, traffic paths, and packet handling (quality of

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

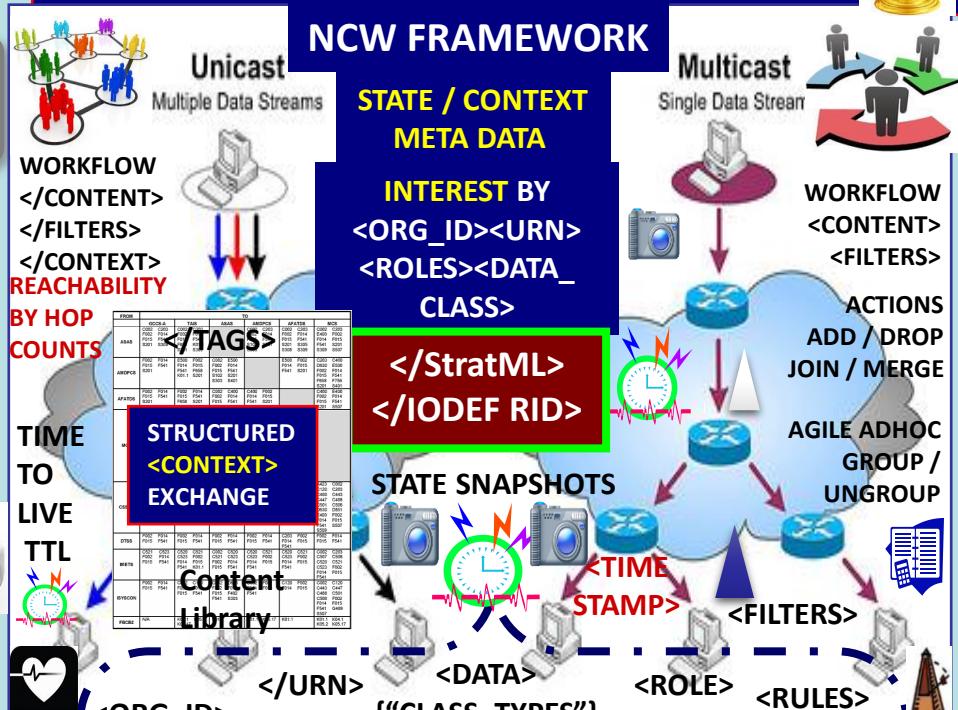


PACKETS ARE **TIME CYCLES** USED / NOT USED TO PROCESS / NOT PROCESS INSTRUCTIONS
DESCRIBED AS **SYNTAX** = STATE META DATA TYPE
BY DATA </CLASS> / DATA </CONTEXT>



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."



RULE: IF UNIT / SENSOR NET = < N members / platforms, then show AS Non Mission Capable or if no reports within n cycles, UNIT = STALE, NMC. IF NMC, Take ACTION based on statistics = drop, merge, add

WHO, WHAT, WHERE
HOW OFTEN, HOW MUCH
SNAPSHOT SYNC DELTAS

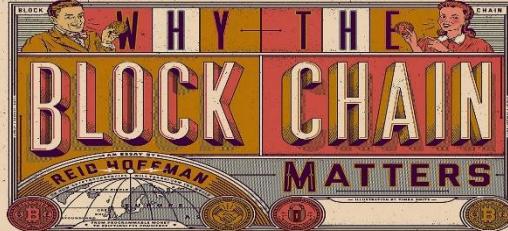
HEART BEACON CYCLE: ALL THINGS INTERNET ARE PROGRAMMED USING TIME CYCLES USED / NOT USED TO PROCESS / NOT PROCESS SYNTAX



TradeNet



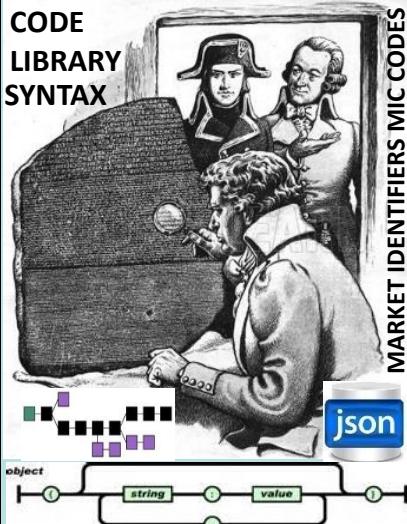
Programmable Money \$\$\$



RIED HOFFMAN 15 May 2015 [LINK](#)

"The CODE that secures Bitcoin could also power an alternate Internet [LINK](#)

CODE
LIBRARY
SYNTAX



MARKET IDENTIFIERS MIC CODES

300 + MESSAGE
TEMPLATES
SYNTAX LIBRARY
PROGRAMMING

STRUCTURED
<CONTENT>
EXCHANGE

BREVITY CODES
MARKET ID CODES

USE CASE TEMPLATES

SIGNALLING, TELEMETRY

object

string

value

object

ORGANIZATIONS



</Org_ID>
{"URN"}
Organizational
Units OU, OU

Bitcoin and the blockchain function as a medium of exchange, a store of value, a unit of account. Bitcoin adds digital, cryptographic, distributed server functions to currencies. Because it functions simultaneously as a currency, an asset and a platform, Bitcoin is better described as a global cryptoCAP (currency, asset, platform) -- a synergistic form of "cryptocapital" to unleash the full economic power of the networked age. **Bitcoin makes money PROGRAMMABLE. MONEY IS SIMPLY DATA** - a simple way to measure and keep track of exchanges in value wealth accumulation. Bitcoin aggregates data in a distributed global ledger accessible to anyone, and software. First open platform for financial services. Color coins represent stocks, bonds, currencies, properties as E-assets.

WIRE

[http://en.wikipedia.org/wiki/Organizational_unit_\(computing\)](http://en.wikipedia.org/wiki/Organizational_unit_(computing))

In computing, an organizational unit (OU) is a way of classifying directories objects, or names in a **DIGITAL CERTIFICATE HIERARCHY**

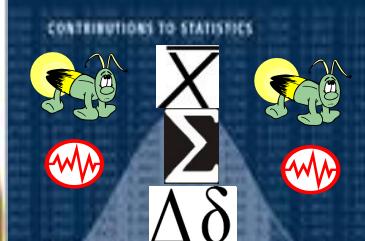


NATO

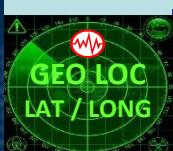


OTAN

MONEYBALL ECONOMICS



Price Indexes in
Time and Space



STATE
META DATA



SNAPSHOTS



GEOLOC

LAT / LONG



Commodities

Time Series
Analysis

Forecasting and Control

FOURTH EDITION

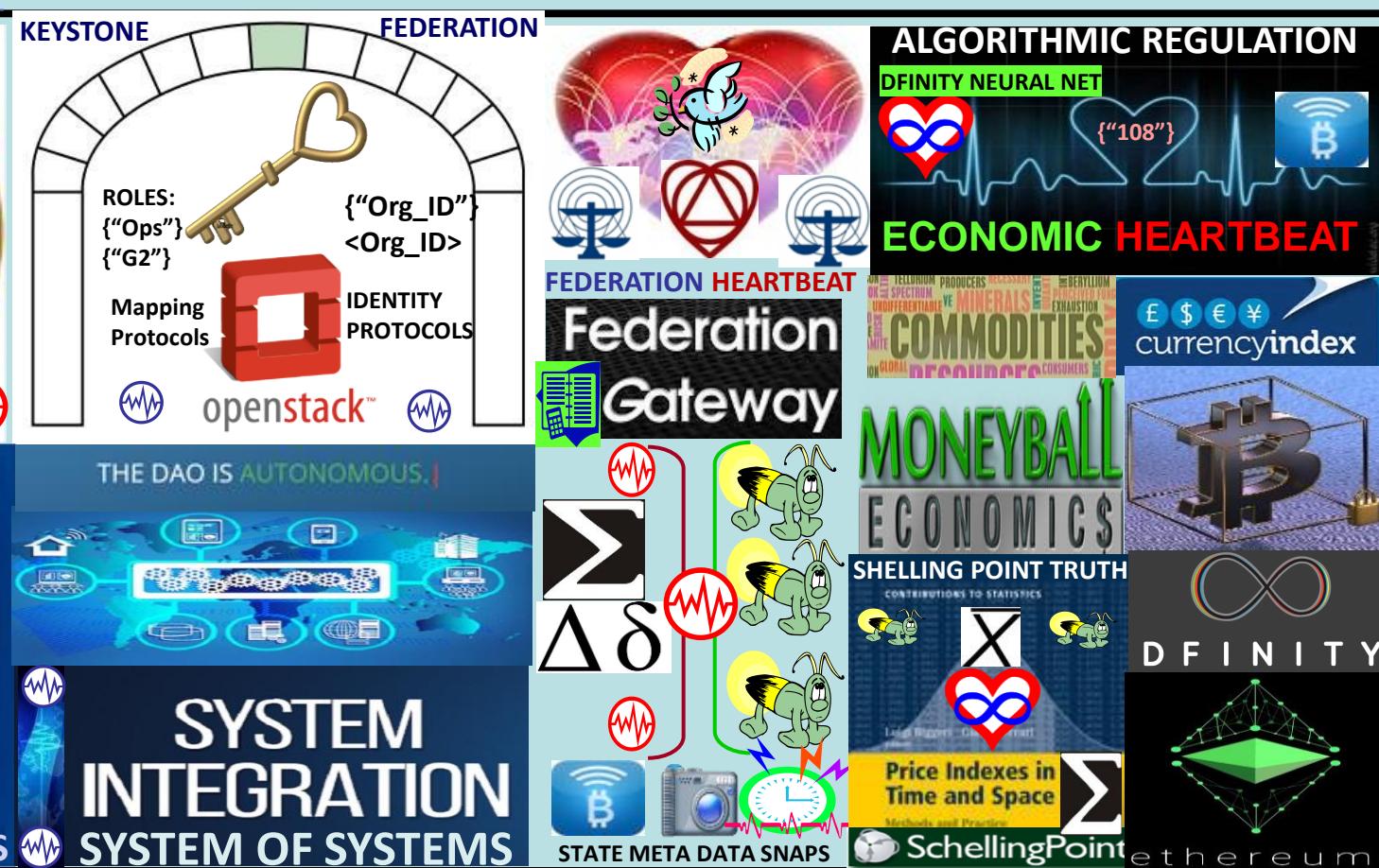
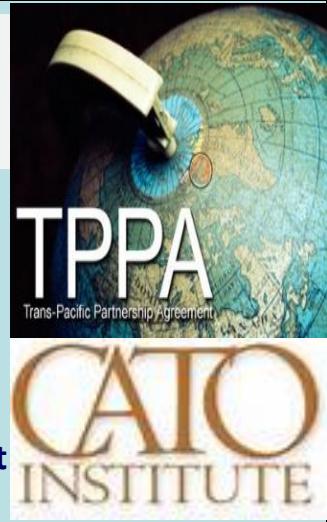
George E. P. Box
Wiliam M. Jenkins
Gregory C. Reinsel





Trans-Pacific Partnership is great for elites. Is it good for anyone else? by [Timothy B. Lee](#) on April 17, 2015

How the TPP empowers elites. The nature of trade agreements has shifted. They're no longer just about removing barriers to trade. They've become a mechanism for setting global economic rules more generally. This system for setting global rules has some serious defects. We expect the laws that govern our economic lives will be made in a transparent, representative, and accountable fashion. The TPP negotiation process is none of these — it's secretive, it's dominated by powerful insiders, and it provides little opportunity for public input. Attributed to CATO Institute

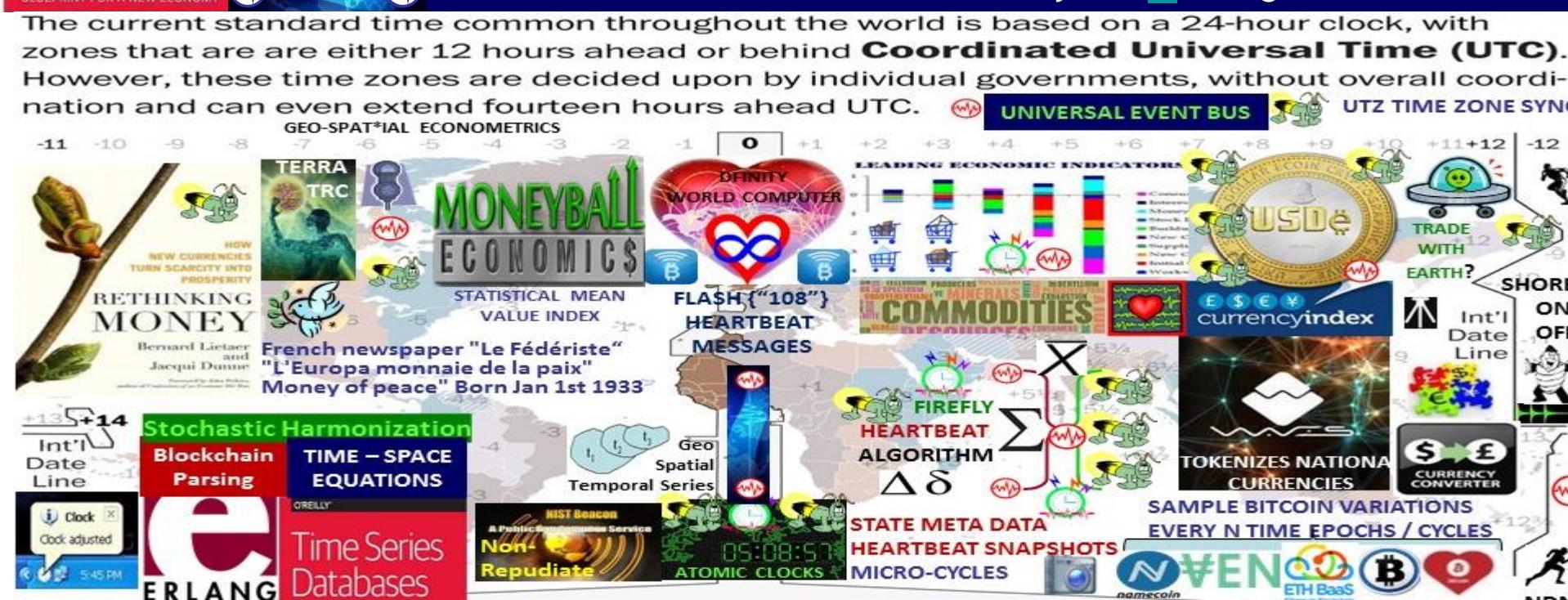




The current standard time common throughout the world is based on a 24-hour clock, with zones that are either 12 hours ahead or behind **Coordinated Universal Time (UTC)**. However, these time zones are decided upon by individual governments, without overall coordination and can even extend fourteen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



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.



A decentralized exchange called BitSquare has [launched a campaign](#) on the decentralized crowd funding app [Lighthouse](#). Its campaign is simultaneously an example of how powerful decentralized crowd funding is, and how difficult running a successful campaign is... segue to the MESH ECONOMY

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.



Autonomous Device Coordination Framework



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

Rules of engagement

FEDERATION
AGREEMENTS
PROCEDURAL
TEMPLATE

FEDERATION

<UUID> <ORG_ID> <URN>

LDAP DIRECTORY

Physical proximity

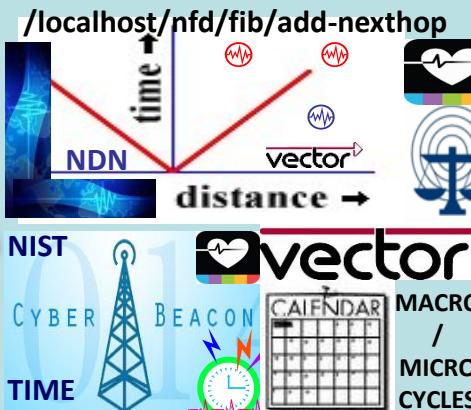
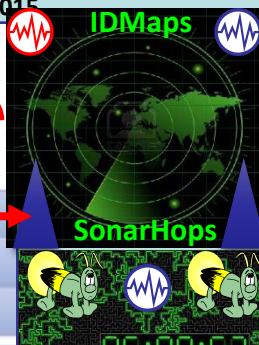
Social proximity

Temporal proximity

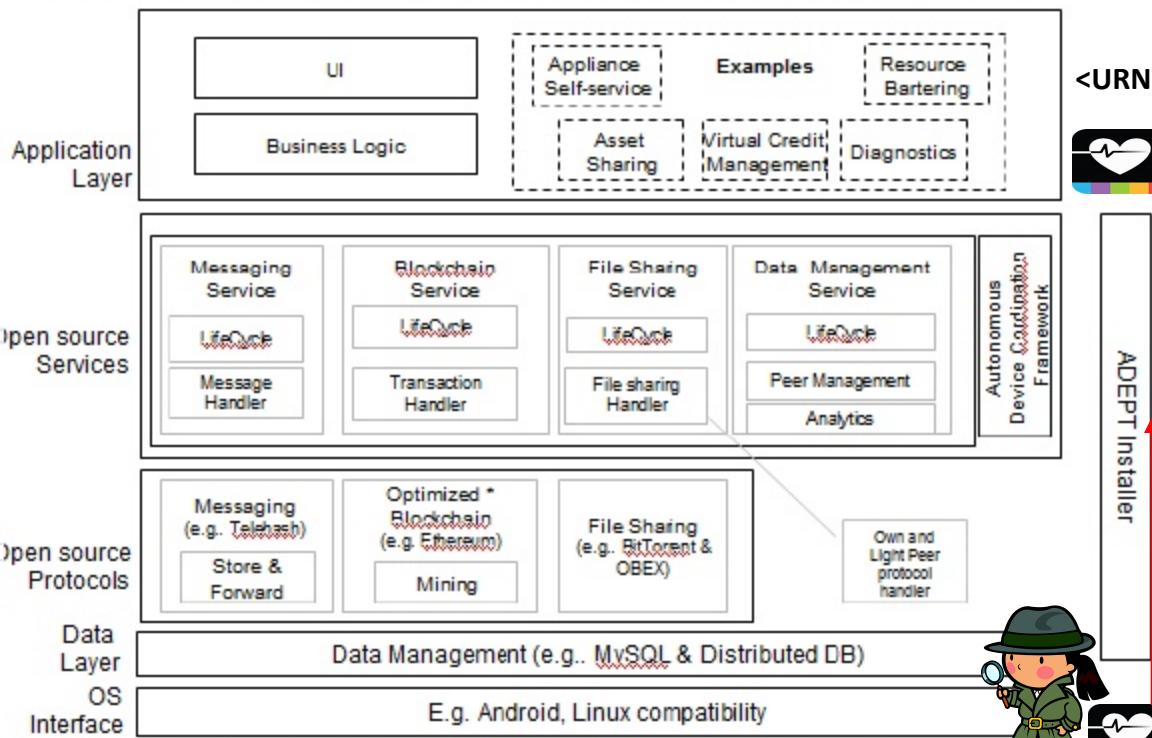
Agreements

Payments

Barter



ADEPT Standard Peer Architecture – Logical View

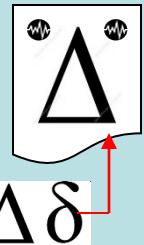


PAYMENTS BASED ON GEO-SPATIAL TEMPORAL METRICS / METERS
<URN> DESCRIBES COMMODITIES ETC BY UNIFORM RESOURCE NAME BY </INTEREST>>



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



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

<ELEMENTS>

STRATML / IODEF RID CLASSES:

<GLOBAL><JOINT><SHARED>

<DOMAIN><FEDERATION>

<CITY><STATE><PRIVATE>

STRATEGIC
MARKUP

StratML

LANGUAGE

INVENTORY: Uniform Resource Name <URN>

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



vector

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

GEO-SPATIAL TEMPORAL INTENSITY METRICS

UNIFIED EVENT / ALERT TRIGGER / THRESHOLDS

ACTIVITY: <EVENT><ALERT>

CONTENT LEXICON
ROSETTA STONE

<TIME_STAMP><ORG_ID><URN>

<GEO_LOC_GPS><STATUS>

<Halt><Moving><Stale><Ready>

A V A L A N C H E

SHARING:

COMMON <TAGS>

<Organizational_ID>

Resource Names <URN>

<Time_Stamps>

<State-Meta_Data>

<DATA_CLASS_TYPE>

<Heartbeat_snapshots>

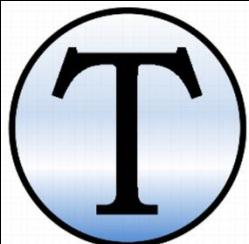


WELCOME TO THE FS-ISAC SECURITY AUTOMATION GROUP. OUR VISION IS
A FEDERATED NETWORK OF STIX-BASED REPOSITORIES SHARING INTELLIGENCE IN
REAL-TIME. AVALANCHE: STRENGTH IN NUMBERS, SECURELY SHARE INTELLIGENCE

NIST CYBER SECURITY FRAMEWORK

CYBER SECURITY
CONTENT
LEXICON ROSETTA STONE

FROM	TO	MCS
OCOS-A	TAB	C002
ASAD	ASAB	C002
ASAD	AMPS	C002
AMPS	ASAD	C002
AMPS	AFATP	C002
AFATP	ASAD	C002
AFATP	P012	C002
AFATP	P013	C002
AFATP	P014	C002
AFATP	P015	C002
AFATP	P016	C002
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AFATP	P360	C002
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AFATP	P362	C002
AFATP	P363	C002
AFATP	P364	C002
AFATP	P365	C002



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

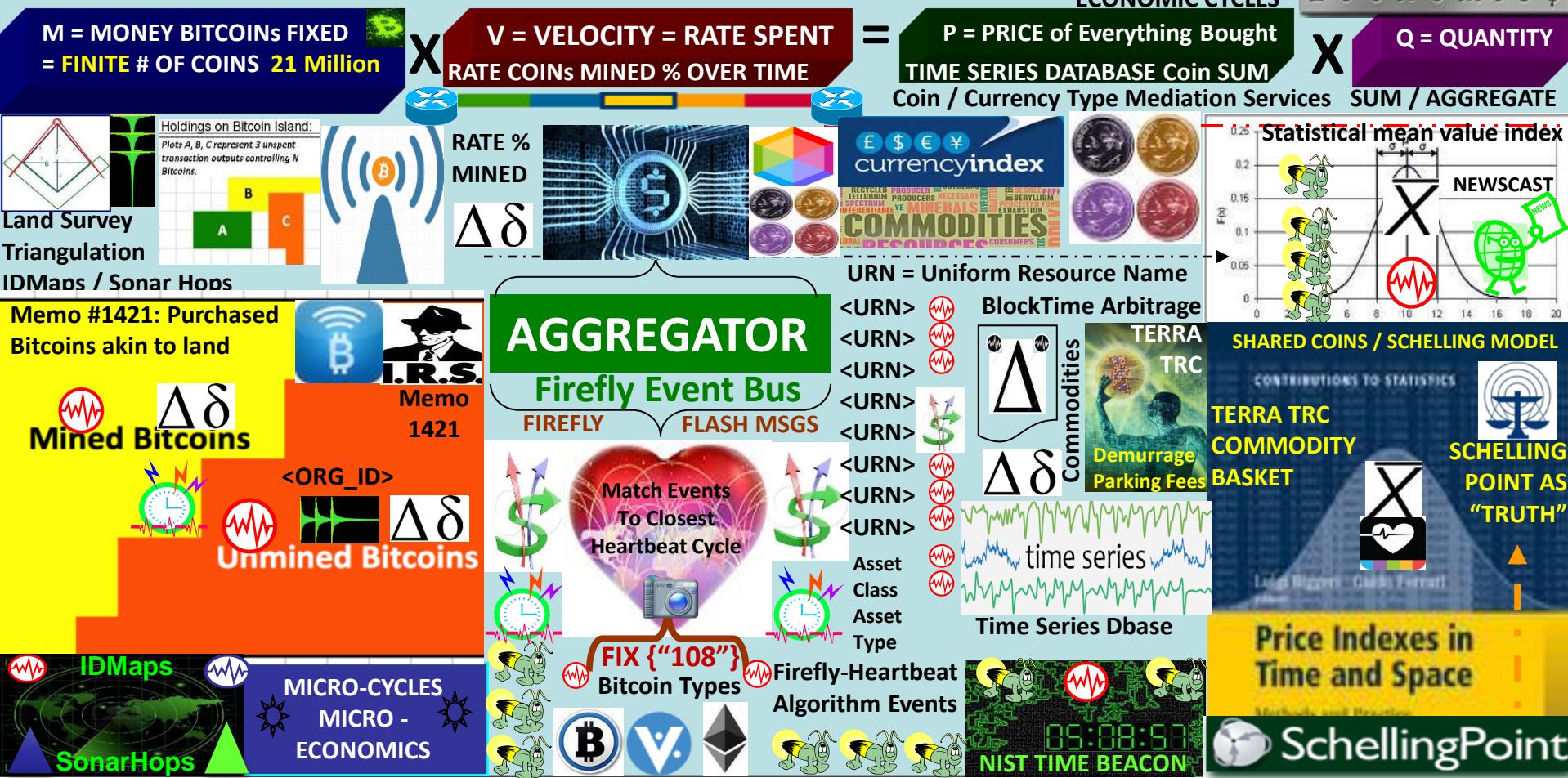
Finance Thing	Interpretation	EVENT DERIVATIVE CORP = <Org_ID_1,2,3>
Bond (Debt)	“I, Paul Sztorc, owe \$20 to whoever is holding this bond certificate on 03/02/2015.”	
Stock (Equity)	“I, the CEO of SztorcCorp, owe 1/100 th of SztorcCorp’s profits to whoever is holding this stock certificate on 03/02/2015.”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

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

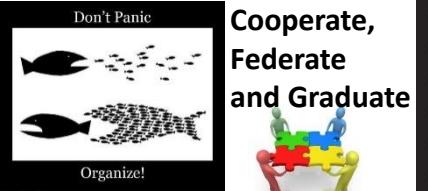
How 'Bitbanks' Could Solve Bitcoin's Volatility Problem

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

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



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



HOW GAMIFICATION WORKS:

5 COMMON MECHANICS



POINTS

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

4 MAIN WAYS TO DRIVE ENGAGEMENT



ACCELERATED FEEDBACK CYCLES



CLEAR GOALS AND RULES OF PLAY



A COMPELLING NARRATIVE



LEVELS

Encourage users to progress and unlock new rewards



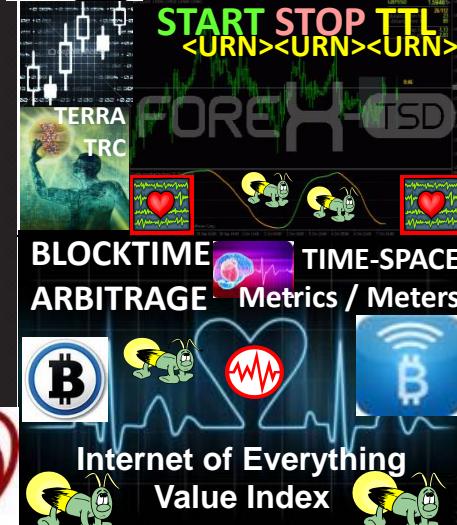
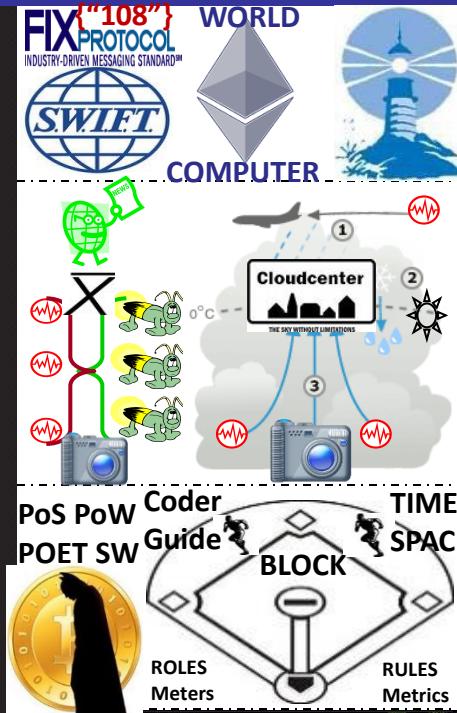
LEADERBOARDS

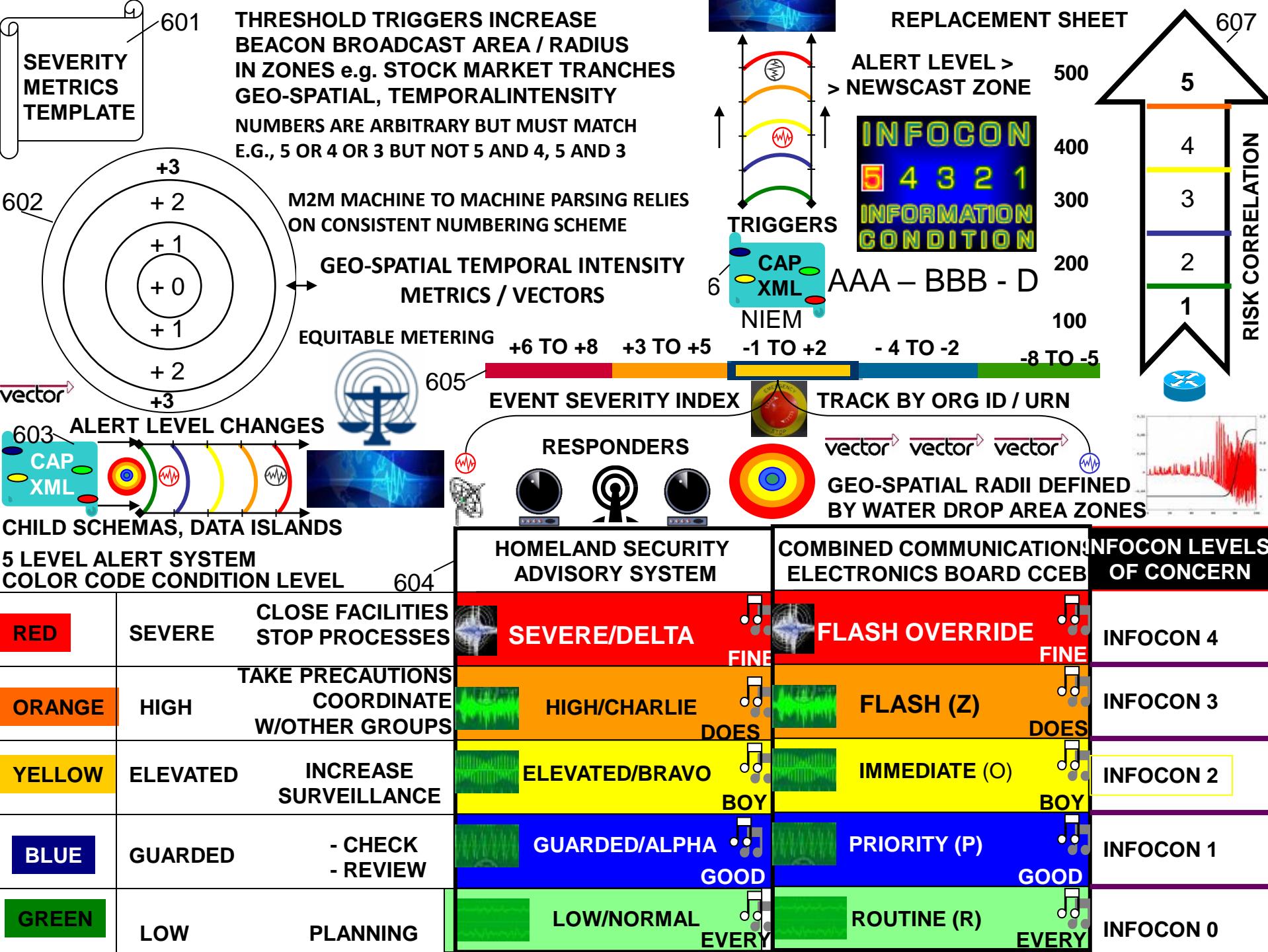
Organise players by rank



CHALLENGES

Encourage engagement by offering specific tasks to complete





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:



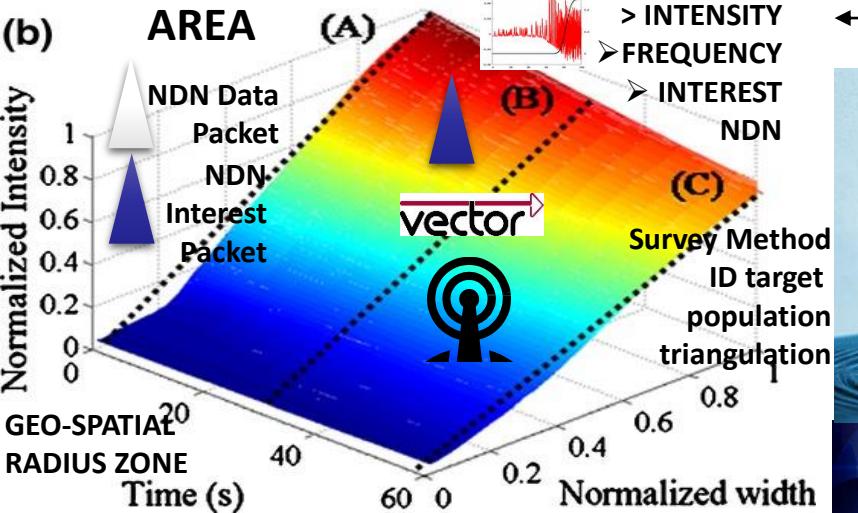
Paul Revere = linear, sequential



TCP/IP hop by hop counts, by hop controls



Water Drop = AREA / INTENSITY Cyclic Frequency

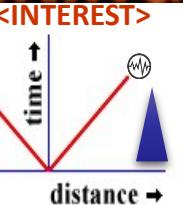


NAMED DATA NETWORKING

</IoT>
MQTT



NIST TIME BEACON



ARRESTED-D

XML	5
MTF	4
300 +	3
MSG	2

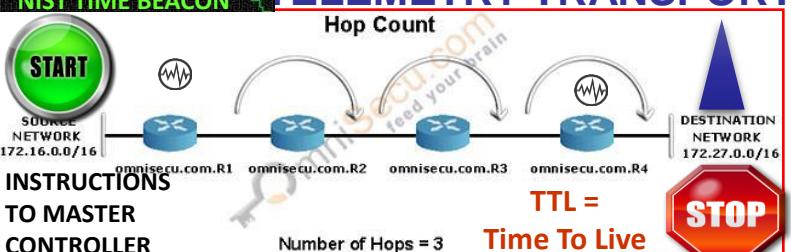
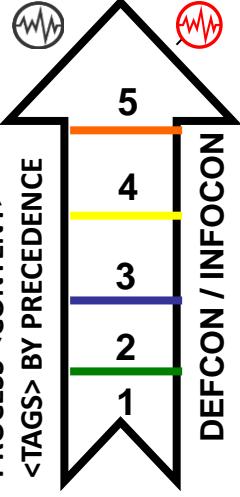
INFOCON
INFORMATION CONDITION

5 4 3 2 1

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

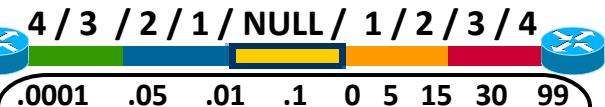
OASIS

IEEE 802.15.4
OASIS MQTT
TELEMETRY TRANSPORT



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

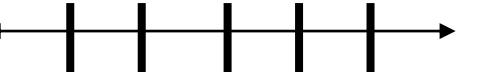
IDMAPS
SONARHOPS
INTERNET
TRIANGULATION



vector WirelessHART

time synchronized,
self-organizing,
mesh Net

ALERT LEVEL >
> NEWSCAST ZONE



SINE-WAVE

TRIGGERS

NDN

<INTEREST> BY

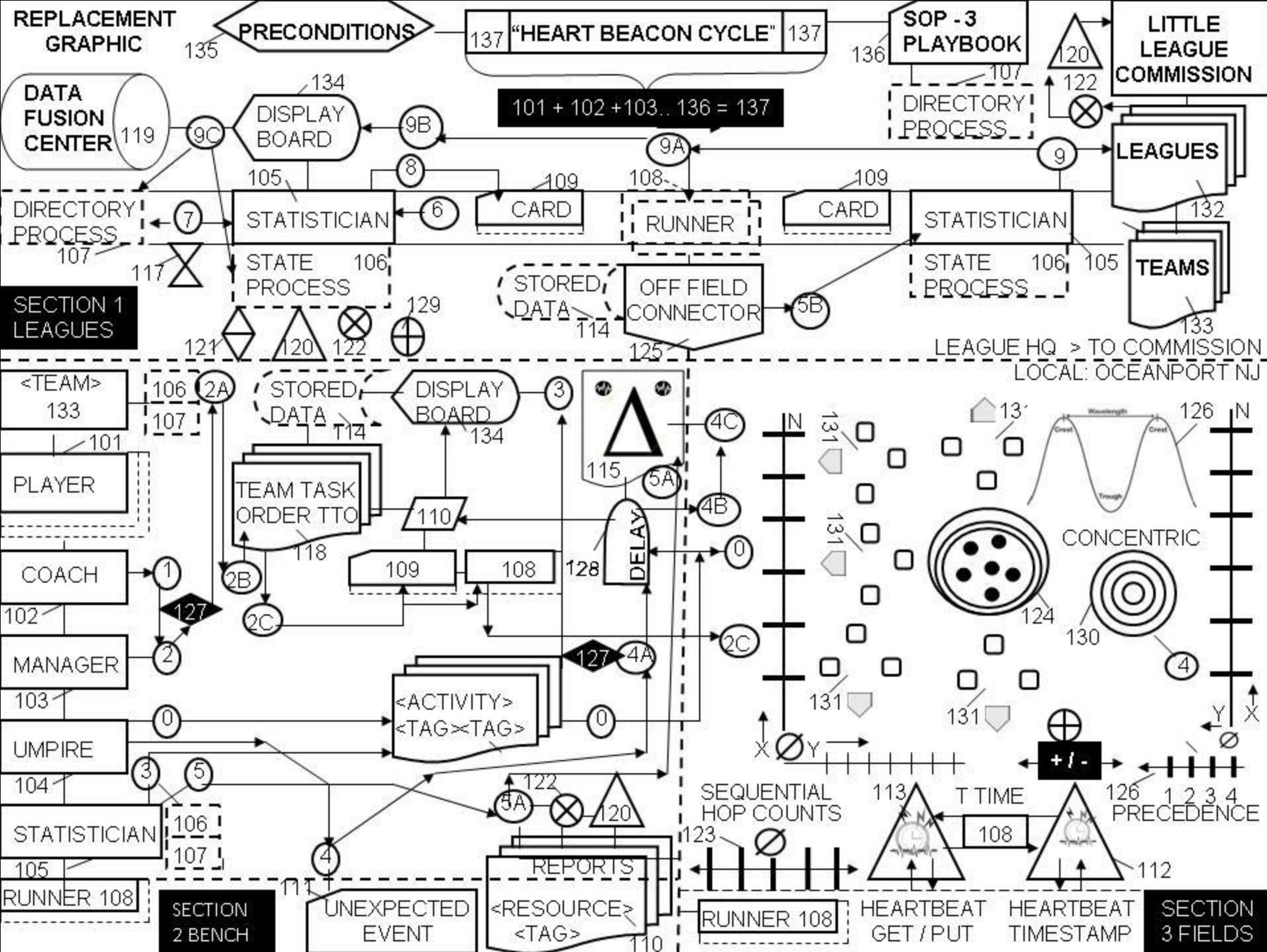
INTENSITY / FREQUENCY

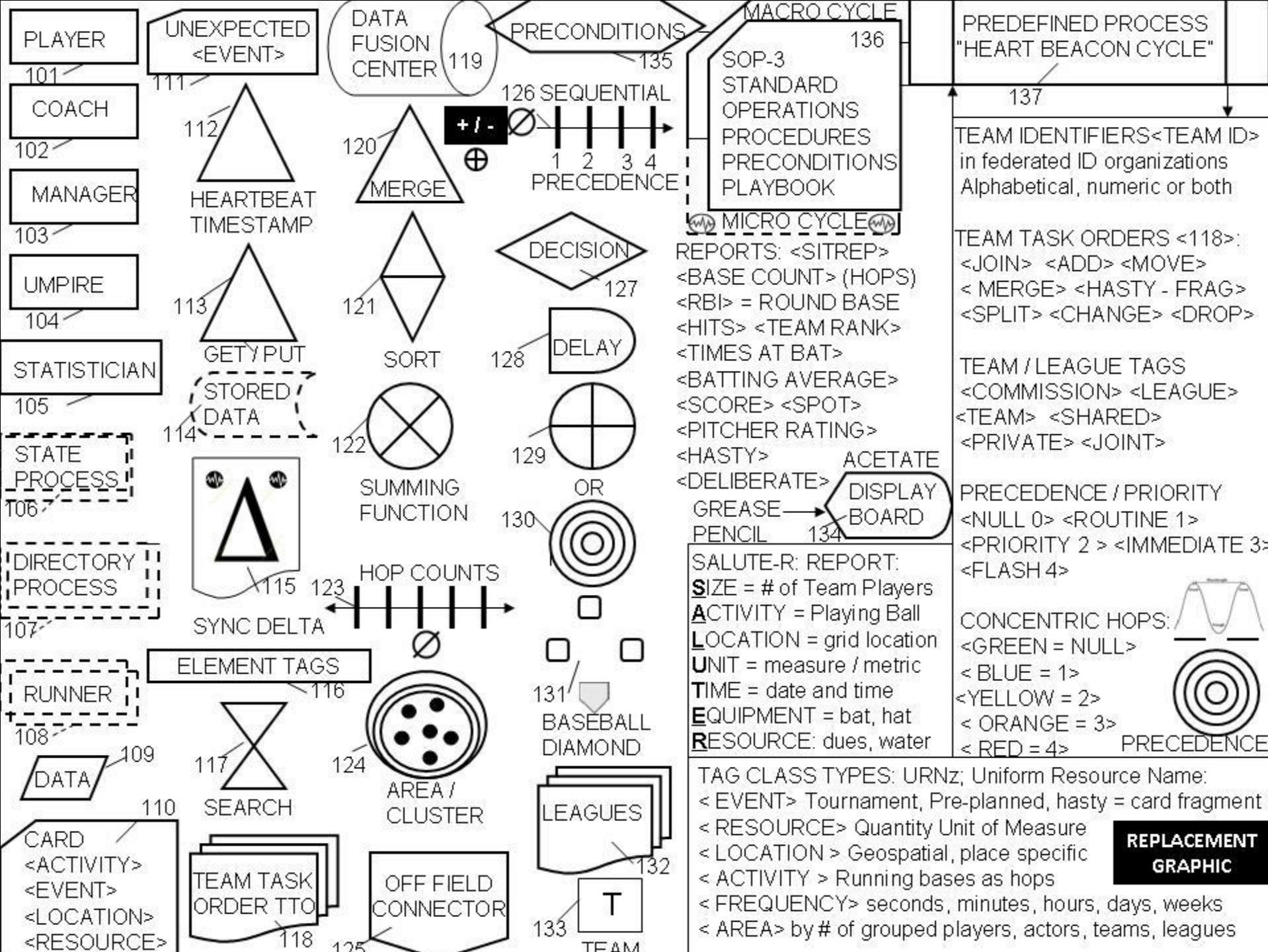
CAP XML

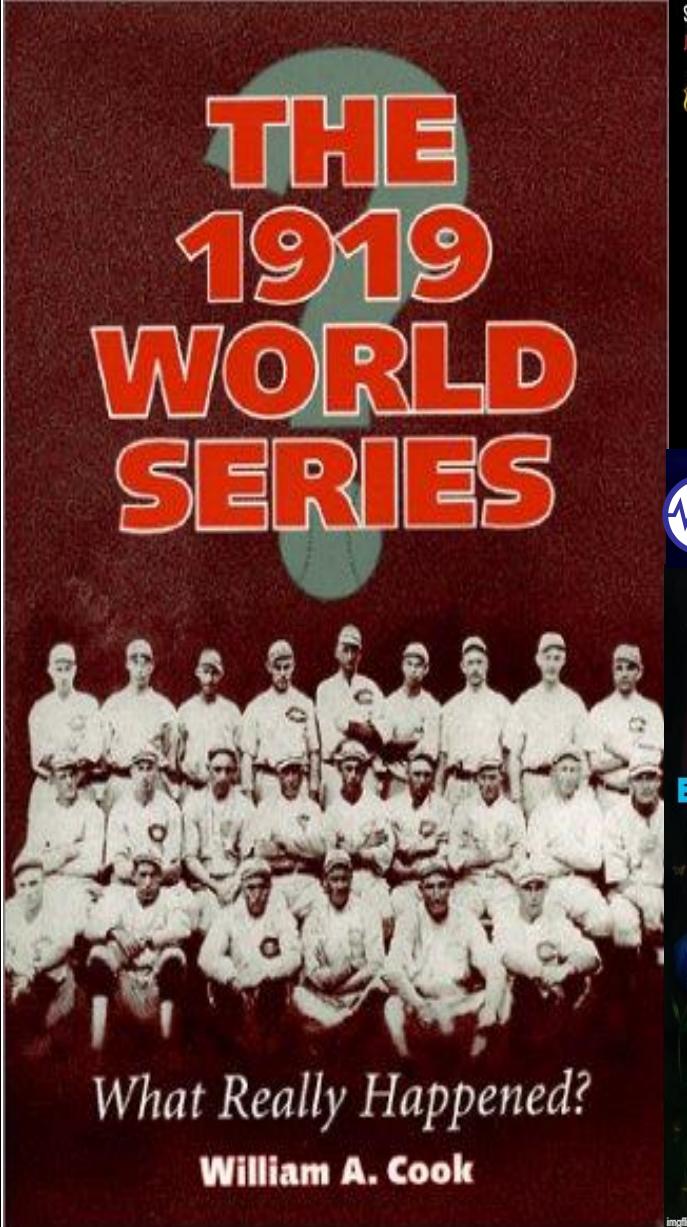
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INFOCON
INFORMATION CONDITION

5 4 3 2 1







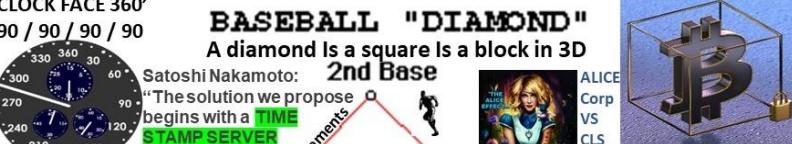
Alice Corp. v. CLS Bank International, 573 U.S. 134 S. Ct. 2347 (2014)
RULING: "claims may not direct towards abstract ideas"



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 90
300 270 240 210 180 150



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

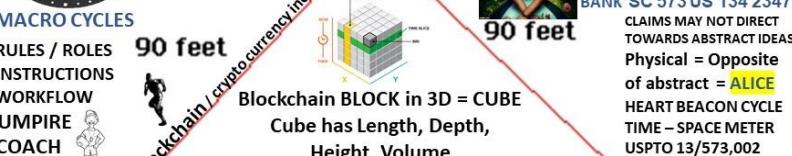
= TAXABLE EVENTS AKIN TO PROPERTY

IRS #1421

State Meta

Data Snapshots Survey Point

MICRO CYCLES



90 feet

Blockchain / cryptocurrency increments

TIME BLOCK

TIME INDEX

TIME SERVER

SETTLEMENTS / EXCHANGES

= TAXABLE EVENTS AKIN TO PROPERTY

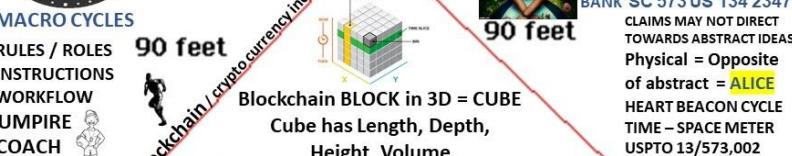
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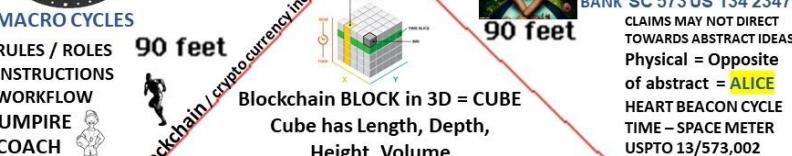
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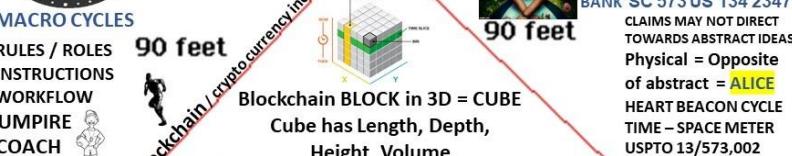
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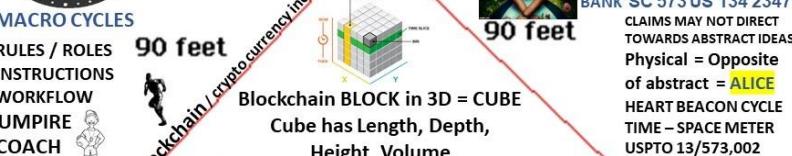
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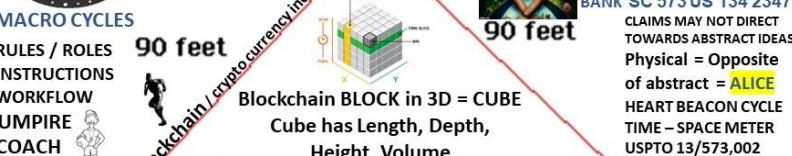
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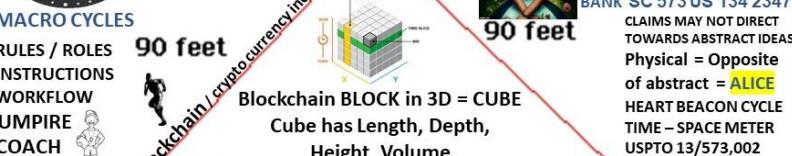
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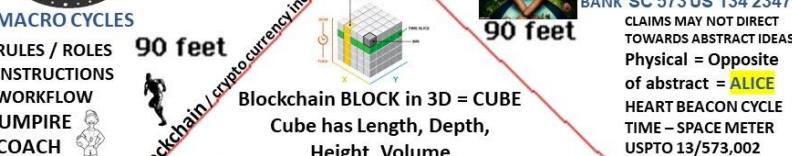
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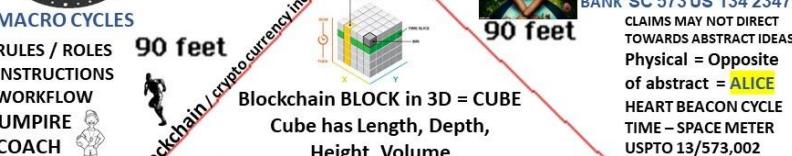
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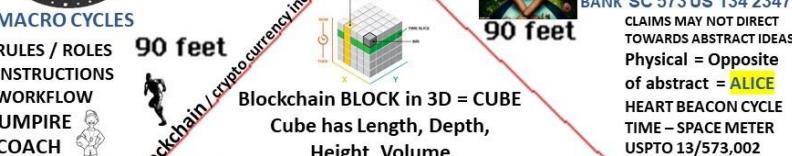
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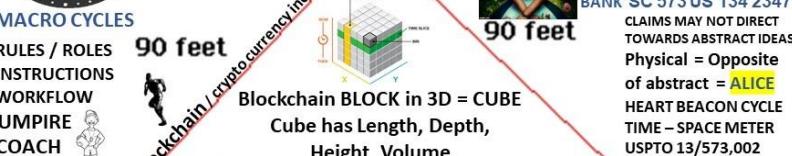
IRS #1421

State Meta

Data Snapshots Survey Point

MICRO CYCLES

TIME STAMP SERVER



90 feet

Blockchain / cryptocurrency increments

TIME BLOCK

TIME INDEX

TIME SERVER

SETTLEMENTS / EXCHANGES

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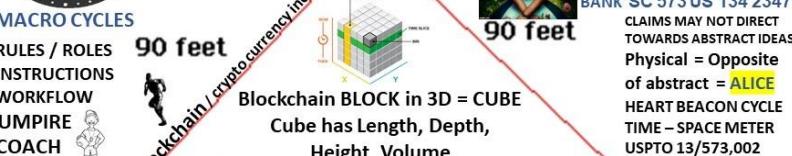
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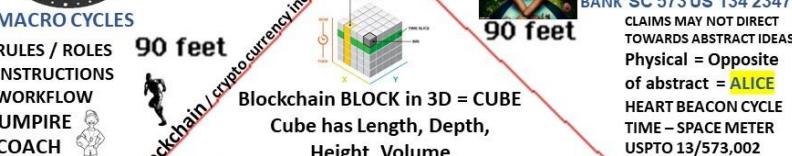
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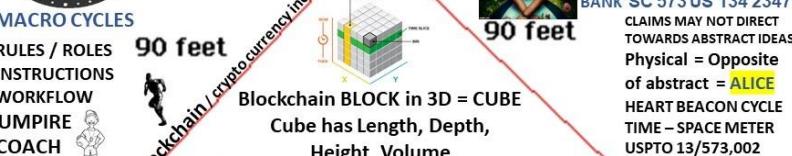
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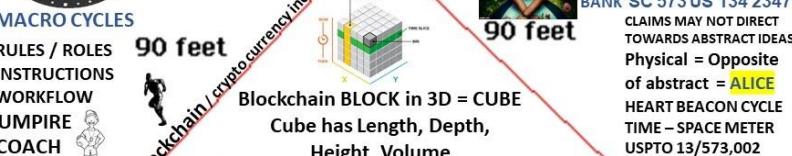
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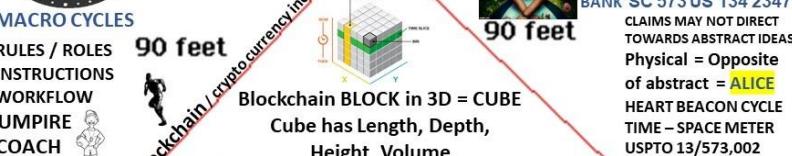
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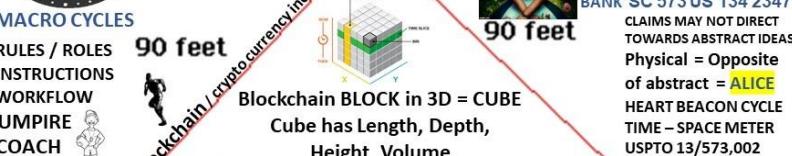
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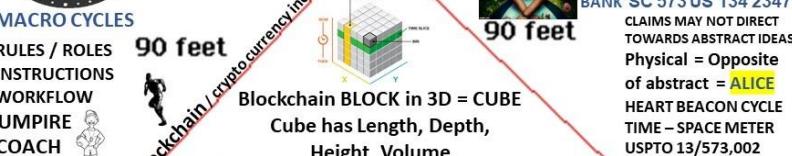
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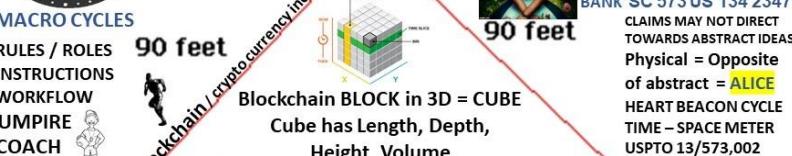
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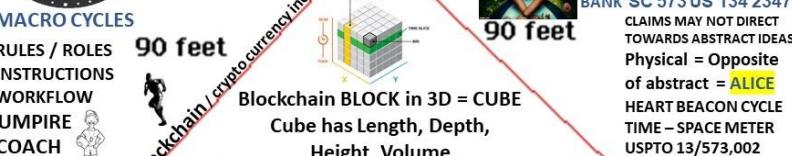
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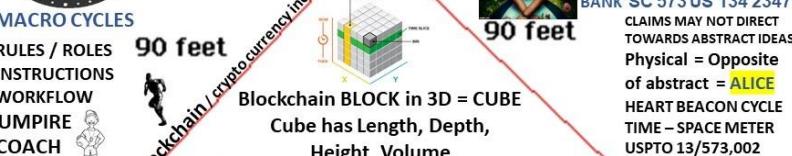
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district0x

decentralized markets communities network. Create, operate, govern. Powered by Ethereum, Aragon, IPFS.

Districts are marketplaces and communities that exist as decentralized autonomous organizations on the district0x Network. All internet citizens will be able to deploy districts to the network free of charge, forever. All districts possess the following core functionalities...

- | | |
|--|---|
| Signaling via CarbonVote | Graphene executables: |
| Status = browser,
messenger, gateway | witness_node,
cli_wallet, genesis_util |
- Posting and listings
 - Search and filtering
 - Ranking and reputation
 - Payments and invoicing

d0xINFRA provides districts with core functionalities required to operate an online market or community. e.g., ability for users to post listings, filter and search listings, rank peers, amass reputation, send invoices, collect payments

district0x Network Token: means of facilitating open participation and coordination on the network. Voting rights are utilized to come to a consensus on everything ranging from a district's branding and design decisions, to what functionality is added to the district via auxiliary modules, to the appropriate settings for any adjustable parameters of these modules, to the means in which revenue collected by a district is distributed

NAME BAZAAR: peer-to-peer marketplace for the exchange of names registered via the Ethereum Name Service trading of subdomains, enabling the exchange of usernames in decentralized applications such as **STATUS** and **ORGANIZATION NAMES** in the Aragon Network **COMPANY REGISTRY**

Meme Factory users mint their own tokenized memes for sale i.e., rare digital assets on the Ethereum blockchain posted to a bulletin board-style marketplace exchange.

Dharma Credit is a suite of tools that make it easy to plug a line of credit into any decentralized application. In lieu of forcing your first-time users to purchase crypto at a brokerage or exchange, a Dharma Credit integration will give your users a button that they can click and get a small cryptocurrency loan within your app in under 5 minutes.

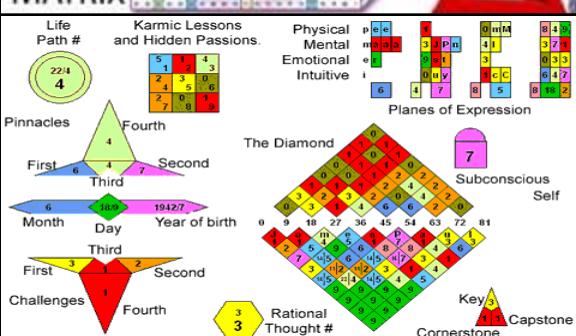
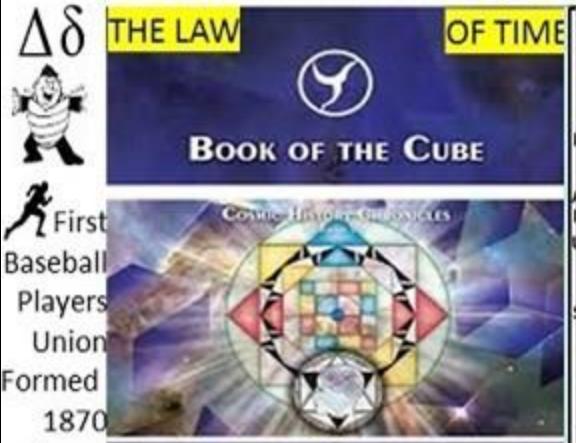
USPTO APPLICATION 13/573 002

The Heart Beacon Cycle Time-Space Meter

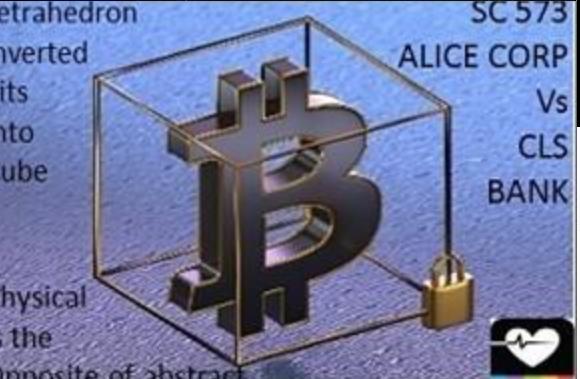
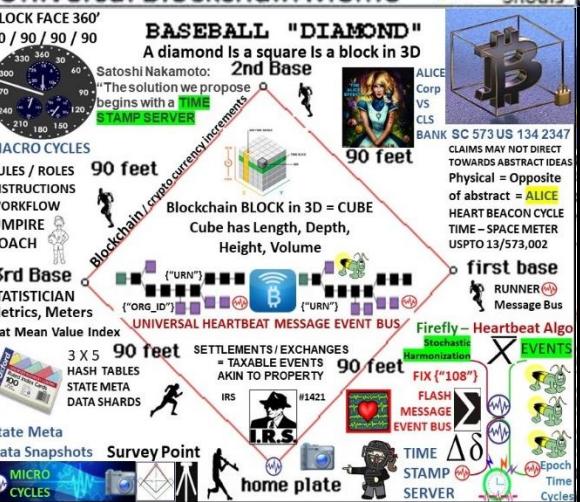
Main Embodiment: Baseball Diamond = block in 3D = cube

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

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



An invasion of germs
can be resisted
but not in foot
where time has come.
—Kurt Hahn



atoshi Bitcoin Blockchain
Time Stamp Server

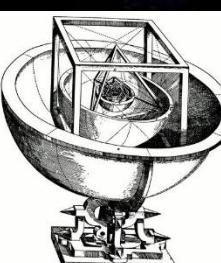
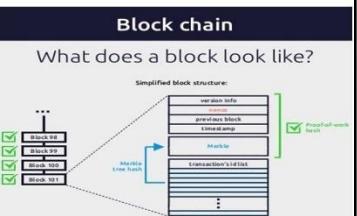
Timestamp Server

we propose begins with a timestamp server. A timestamp server works by taking a block of items to be timestamped, widely publishing the hash, such as in a Merkle tree, and then timestamping each item sequentially. This allows us to timestamp all the items in the block, in order to get into the hash. Each timestamp includes the previous timestamp in its header, forming a chain, with each additional rendering the rendering below it.



```

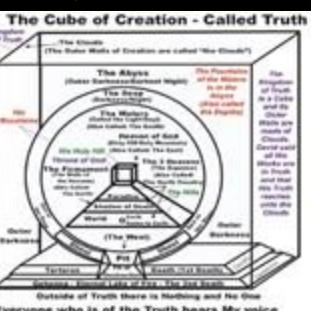
graph LR
    Block[Block] --> TS[Timestamp Server]
    TS --> TS_out[Timestamped Block]
    
```

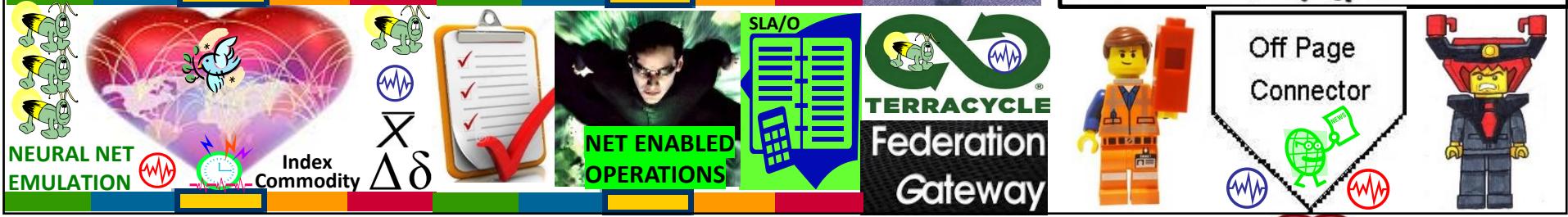


"In the beginning (of time) there was the word"



SEED OF LIFE





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





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

