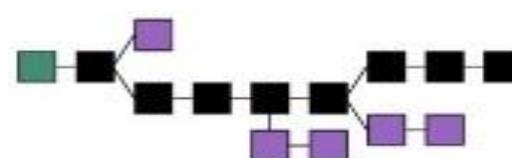
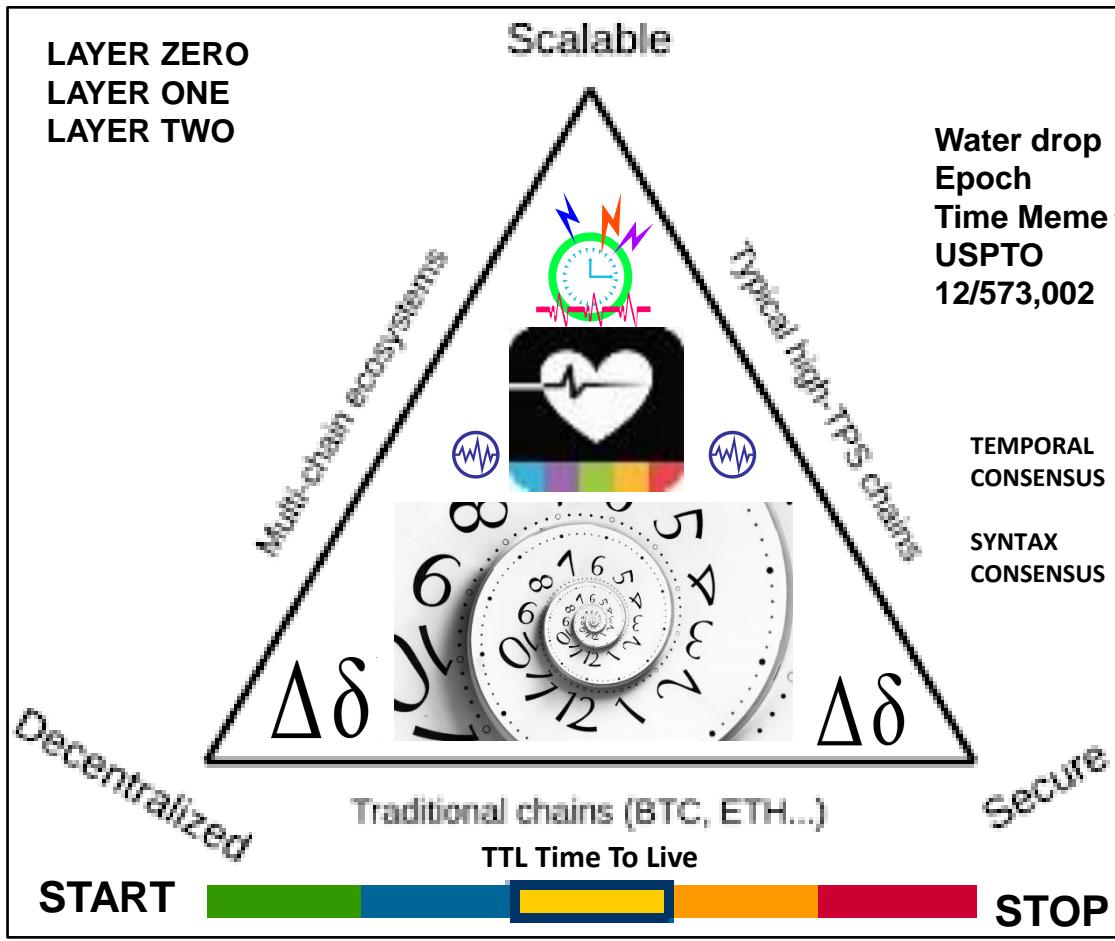


Blockchain Tri-lemma



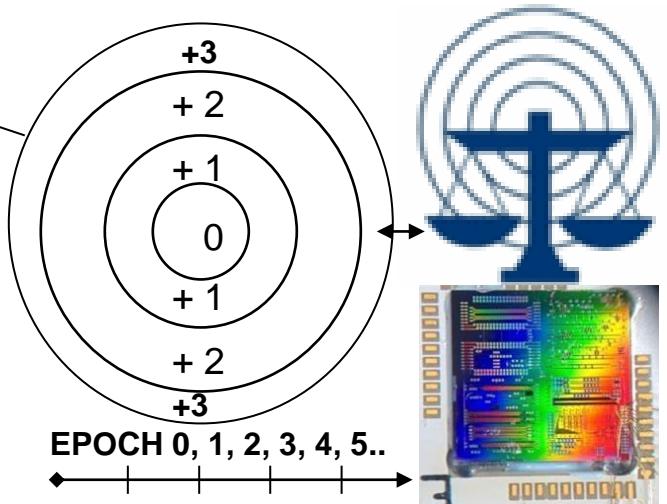
"BLOCKCHAIN" = LEDGER / Database

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

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

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

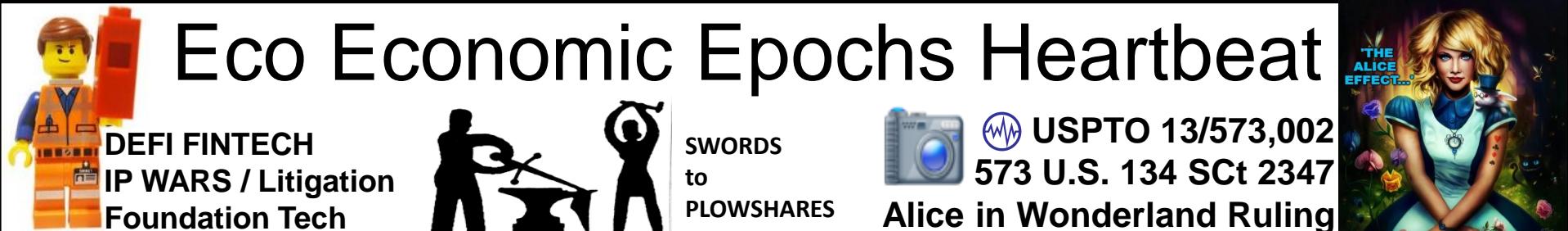
No Layers L0, L1, L2... only GENESIS EPOCH
Follow on Epoch time cycles, intervals



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

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

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



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



Humanitarian Assistance Networked Donor System

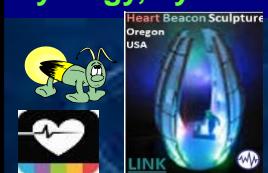
H.A.N.D.S: "Based on the need to speed up the processes of influencing an adversary, new concepts result in the adaptation of military doctrine, organization, training, material, infrastructure, interagency interaction, leadership, personnel and facilities" ... German Bundeswehr concept of "OOTW Operations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



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



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



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



Beacon Communities

Vernetzte Operationsführung



PING

Proximity Beacons

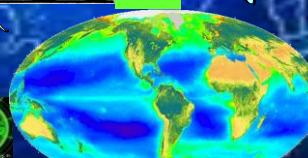
JAEGERS

BIOCOIN



Closer < \$\$\$ < FUEL

PING



OFF SHORE

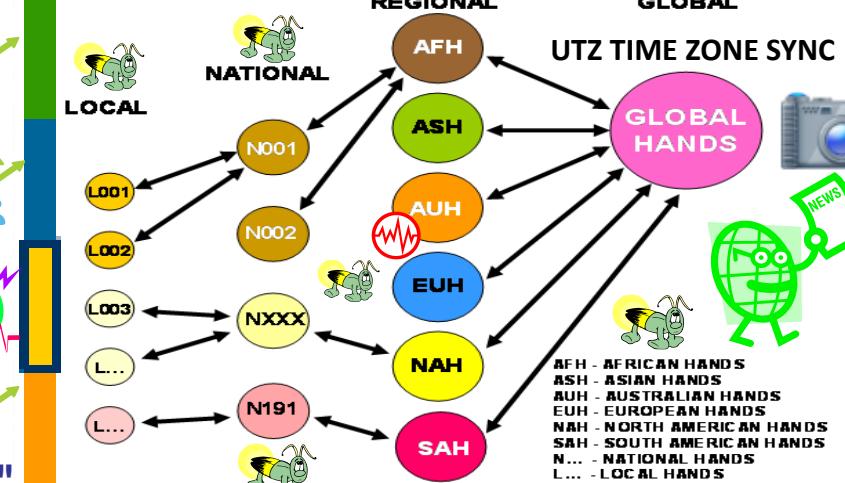


OUTER BANKS

FREELY
HEARTBEAT
EVENT / ALERT Flash Heartbeat Message Bus
ALGORITHM



SYSTEM
Of
SYSTEMS



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



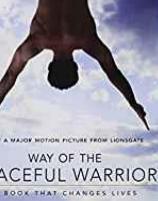
WORLD BEYOND WAR.org
a global movement to end all wars



NEWS



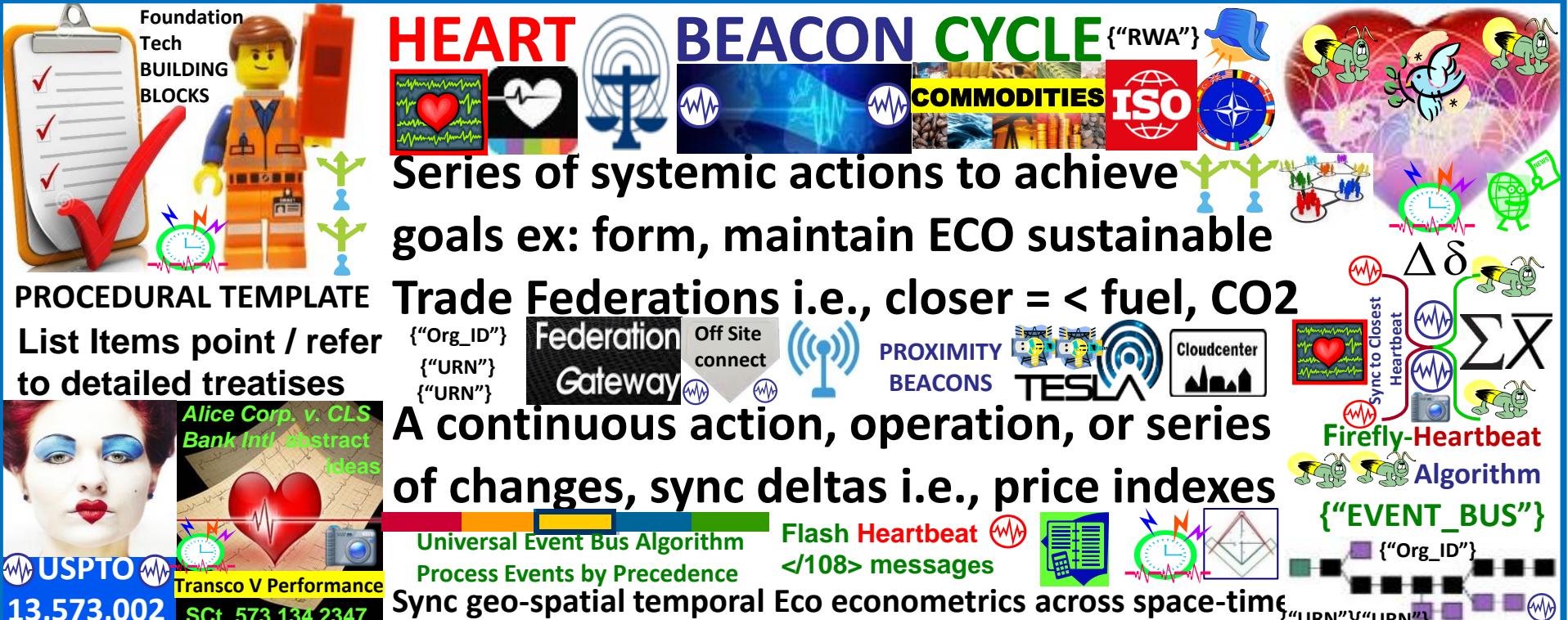
Neural Net



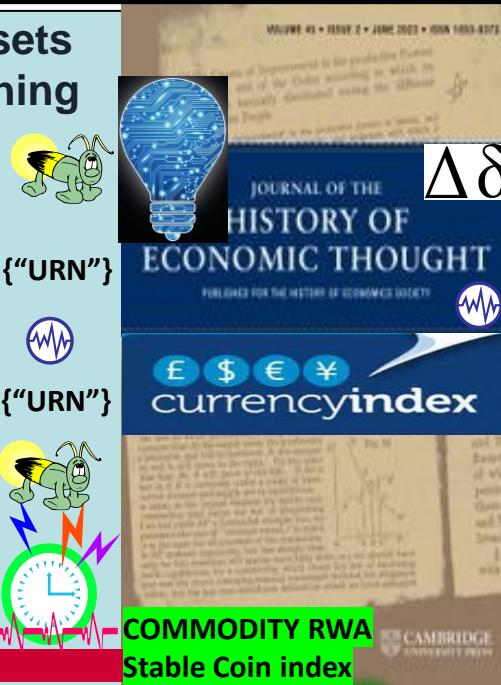
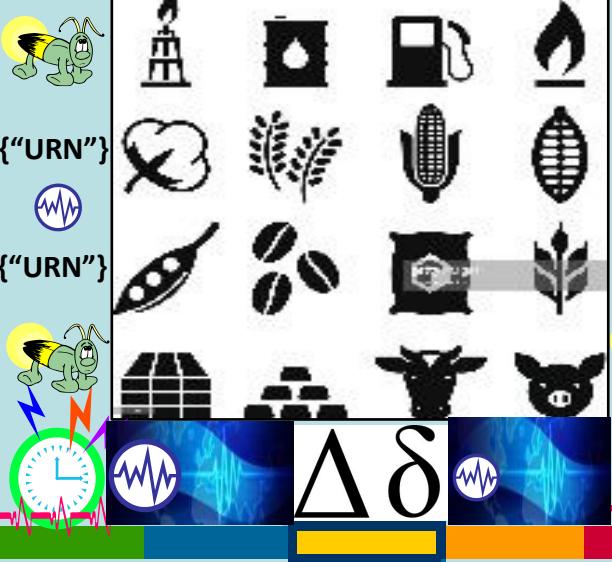
DAN MILLMAN
WAY OF THE
PEACEFUL WARRIOR
A BOOK THAT CHANGES LIVES



KAIJU



Tokenization of Physical Assets Enables Economy Of Everything



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



NETWORK
CENTRIC
OPERATIONS
INFOCON
5 4 3 2 1
INFORMATION
CONDITION



$\Delta\delta$



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

Thomas Edison's Monetary Option Cambridge University Press 2009

"Crops hold their value best over time"



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

</Organizational_ID>
</Personal_ID>
USPTO 13/573,002 The Heart Beacon Cycle Time – Space Meter



THE BITCOIN BLOCKCHAIN FOR DUMMIES



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

Satoshi Nakamoto Bitcoin Paper



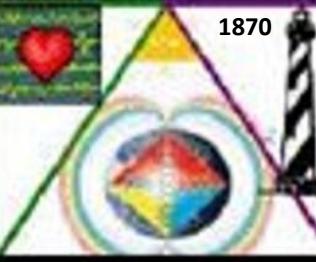
Satoshi Nakamoto



Craig WRIGHT
a.k.a.
Satoshi Nakamoto



"Bitcoin is a LANGUAGE"



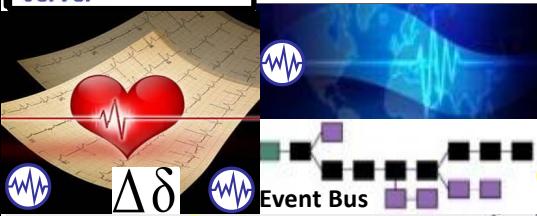
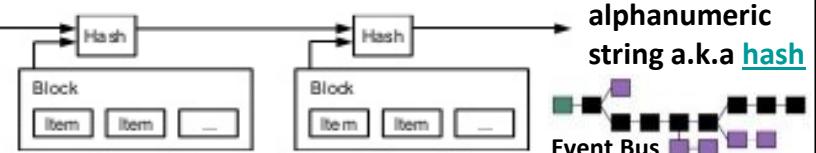
Wright Brother's 1st Flight
Cape Hatteras Outer Banks

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

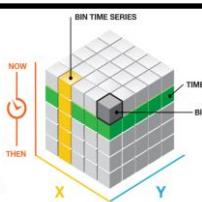
3. Timestamp Server

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



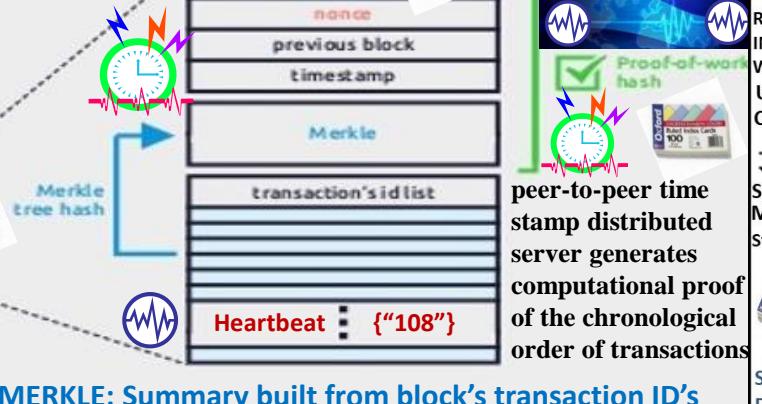
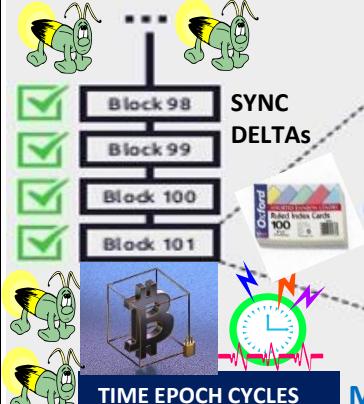
JapanNet Crypto Time Authentication Service (Timestamp Service)



"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"



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

Header - Contains service information (version info, nonce, previous block id and timestamp). {"Org_ID"}
Merkle - A summary built from the block's transaction identifiers.

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

CLOCK FACE 360°
90 / 90 / 90 / 90



MACRO CYCLES

RULES / ROLES
INSTRUCTIONS
WORKFLOW
UMPIRE
COACH

3rd Base

STATISTICIAN
Metrics, Meters
Stat Mean Value Index

3 X 5
HASH TABLES
STATE META
DATA SHARDS

State Meta

Data Snapshots

Survey Point

MICRO CYCLES

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



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

90 feet

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

Blockchain / cryptocurrency increments

90 feet

90 feet

SETTLEMENTS / EXCHANGES
= TAXABLE EVENTS
AKIN TO PROPERTY

IRS #1421

Fix {"108"}

FLASH MESSAGE
EVENT BUS

TIME STAMP SERVER

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

Epoch

Time Cycles

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

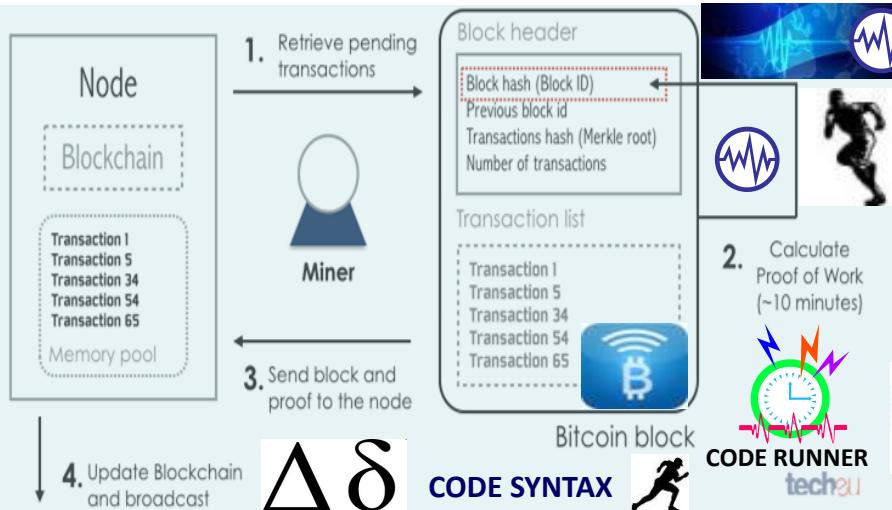


“Bitcoin is a Language”

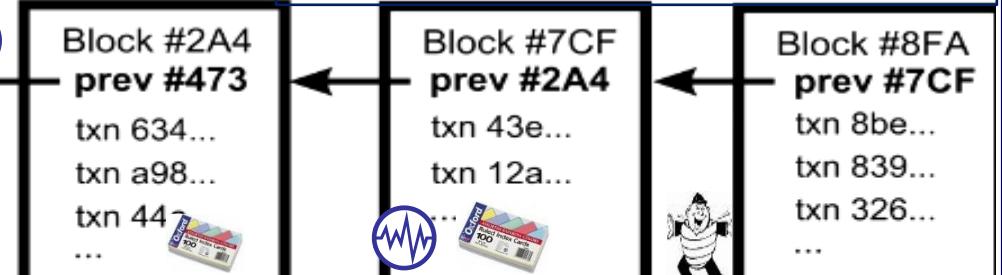
WIRED

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

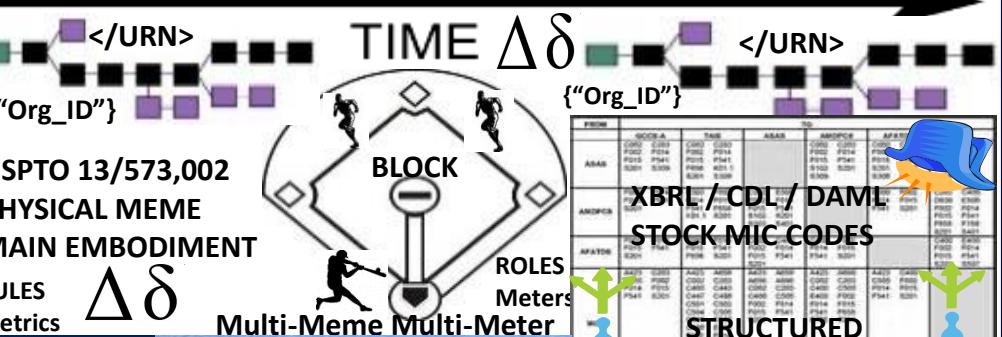
Alice Corp. v. CLS Bank International, 573 U.S. 134 SCt 2347 (2014) is a 2014 decision of the United States Supreme Court about patentable subject matter (patent eligibility).[2] The issue in the case was whether certain claims about a computer-implemented, electronic escrow service for facilitating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



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



BLOCKCHAIN = TIME / SYNTAX



Net of \$\$\$ formed with:

1 EPOCH TIME CYCLES

2 {"Syntax"} "The Word"

"In the Beginning" Genesis Block

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

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

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

NAMED DATA NETWORKING



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



STOCK MIC CODES

STRUCTURED DATA EXCHANGE
TEMPLATE FORMS

300+ USE CASES
LOGIC / FILTERS

SYNTAX / SYMBOL LEXICON LIBRARY

SYNTAX LEXICON

Library

1st Compiler

R

W

A

Real World Assets

Alpha Numeric

Brevity

Codes

A.I.

AI

Coder Guide

Rosetta Stone



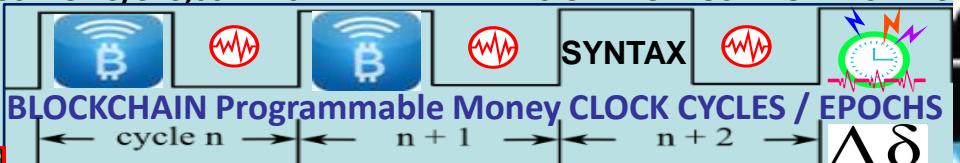
BITCOIN BLOCKCHAIN BLOCKS,
AGENTS, MOTES, BOTS, PACKETS,
FRAMES, HEARTBEAT, PINGS, HOPS,
BEACONS ARE METAPHORS / MEMES

ALICE CORP VS CLS BANK

"claims may not be directed towards an abstract idea"

US SC 573 US 134 2347

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



CLOCK FACE 360°
90 / 90 / 90 / 90

MACRO CYCLES

RULES / ROLES

INSTRUCTIONS

WORKFLOW

UMPIRE

COACH

3rd Base

STATISTICIAN

Metrics, Meters

Stat Mean Value Index

90 feet

Blockchain BLOCK in 3D = CUBE

Cube has Length, Depth,

Height, Volume

SETTLEMENTS / EXCHANGES

= TAXABLE EVENTS

AKIN TO PROPERTY

IRS #1421

108

FLASH MESSAGE EVENT BUS

EVENTS

TIME STAMP SERVER

Δδ

EPOCH Time Cycles

PROOF OF ELAPSED TIME

PROOF OF WORK

PROOF OF CAPACITY

PROOF OF DATA

PROOF OF STATE

PROOF OF DELEGATION

PROOF OF SIGNATURE

PROOF OF AUTHORITY

PROOF OF IDENTITY

PROOF OF INTEGRITY

PROOF OF NONREPUDIATION

PROOF OF NONCE

PROOF OF RANDOMNESS

PROOF OF SEQUENTIALITY

PROOF OF UNLINKABILITY

PROOF OF UNIVERSE

PROOF OF VOLUME

PROOF OF WORK

PROOF OF PROOF

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

HEART BEACON CYCLE
USPTO 13/573,002
SURVEY METHODS

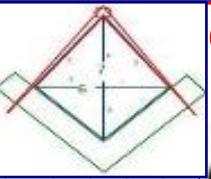
SC ALICE CORP VS CLS BANK: "claims may not direct towards abstract ideas"

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

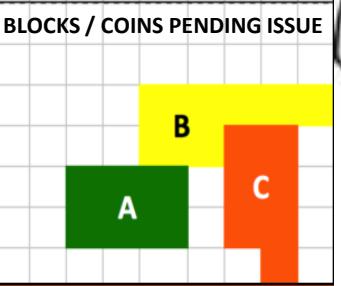


Memo #1421: Purchased Bitcoins are treated akin to property

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



Mined Bitcoins



$$\Delta\delta$$

Unmined Bitcoins



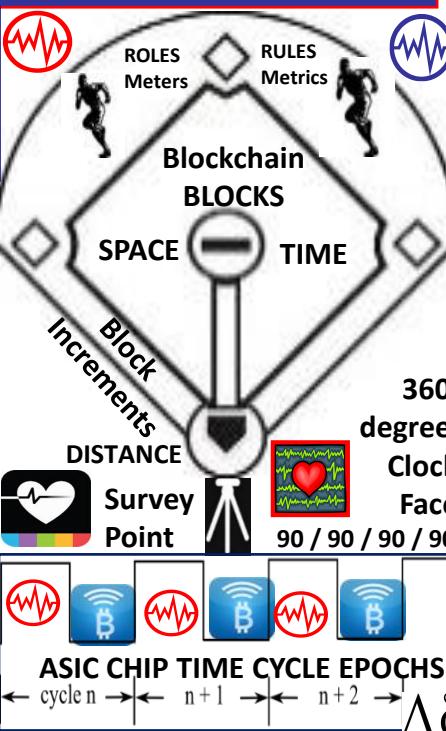
Un-mined coins -- think of them as parcels of land on "Bitcoin Island" not yet released:

IDMaps-SONARHOPS distance estimation query-reply service

- End-state Bitcoin quantity will be fixed like land

"Bitcoin as protocol of ownership, not transfer"

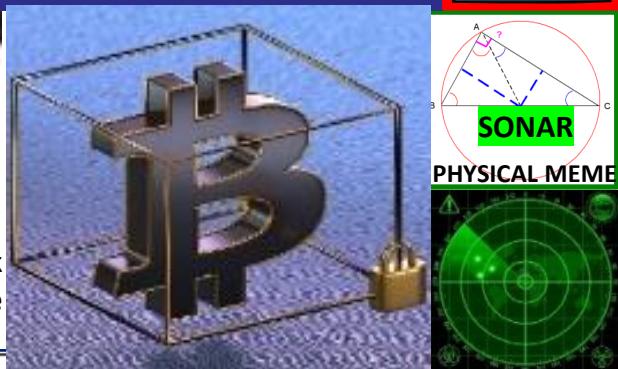
Coins never travel, but simply switch owners"



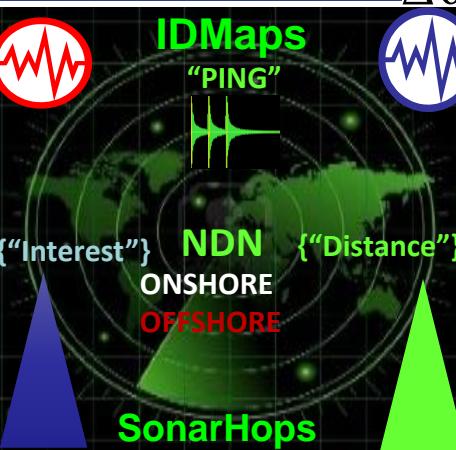
TRIANGULATION



DISTANCE ESTIMATION EUCLIDIAN GEOMETRY



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



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



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

Step 1: prove coin ownership <Org_ID> Coin Issuer

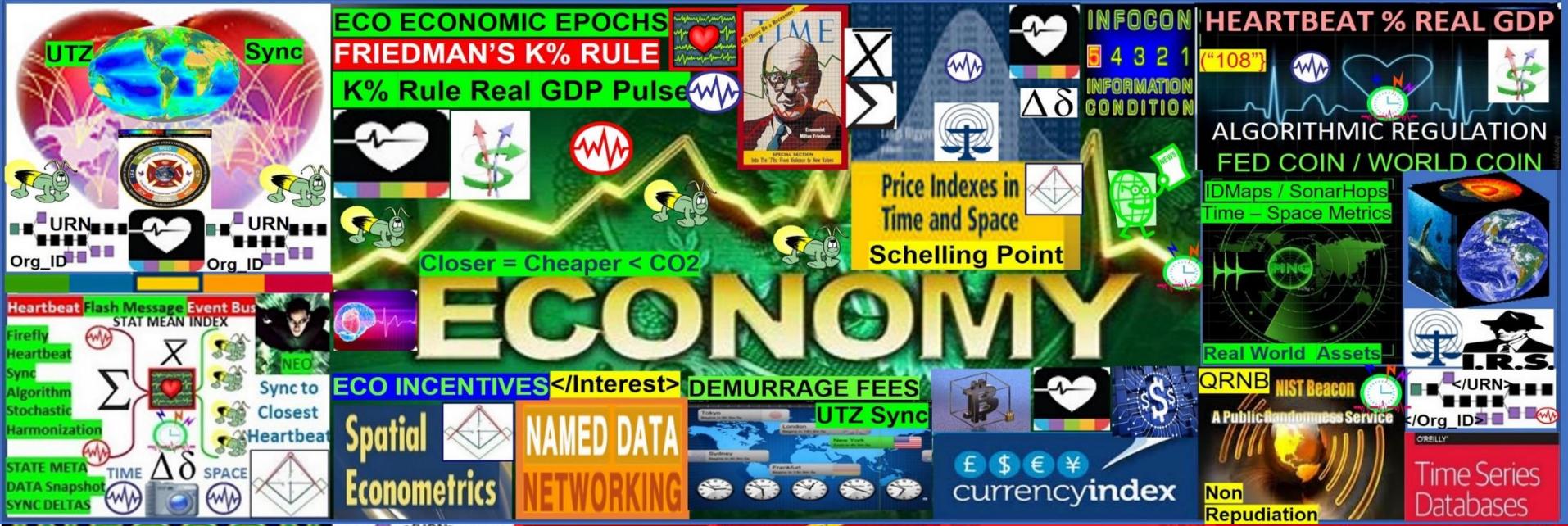
Step 2: coins sent where, when Lat-Long, time stamp

Step 3: specify ownership <Org_ID> issuing agent

Step 4: Issuing Org of Record adjudicates w buyer



$$\Delta\delta$$



Eco Economic Epoch Heartbeat: reuse of DoD / NATO signal, telemetry syntax - symbol set structured data exchange system of systems engineering framework for DAO Trade Federations, programmable money / Economy. It is time to stand on the shoulders of giants. SLA Service Level Agreement Eco incentives: closer = < time, cheaper, < fuel, < CO2 "Build a new model that makes the old model obsolete" Buckminster Fuller



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



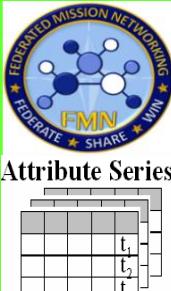
- Reuse, mod of System of systems engineering framework, Syntax Lexicon Library data elements
- STRUCTURED DATA EXCHANGE
Reuse brevity codes mapped to 2525D symbol sets comprised of 300 + message sets for A.I. - machine Block-Time DLT arbitrage among Trade Federations </Org_ID> {“URN”} </URN> = COMMODITY

Eco Economic Epoch GDP Heartbeat signals and telemetry framework



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

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



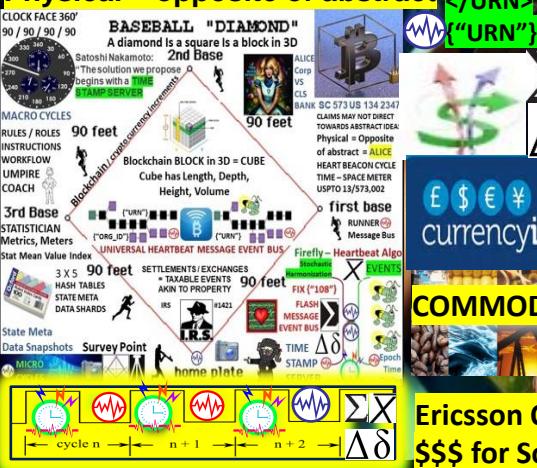
Attribute Series

SCOTUS 2014 ruling
SC 573 134 2347



"Claims may not direct towards abstract Ideas"

Trade Reference Currency TERRA TRC
Physical = opposite of abstract
</URN> </URN>

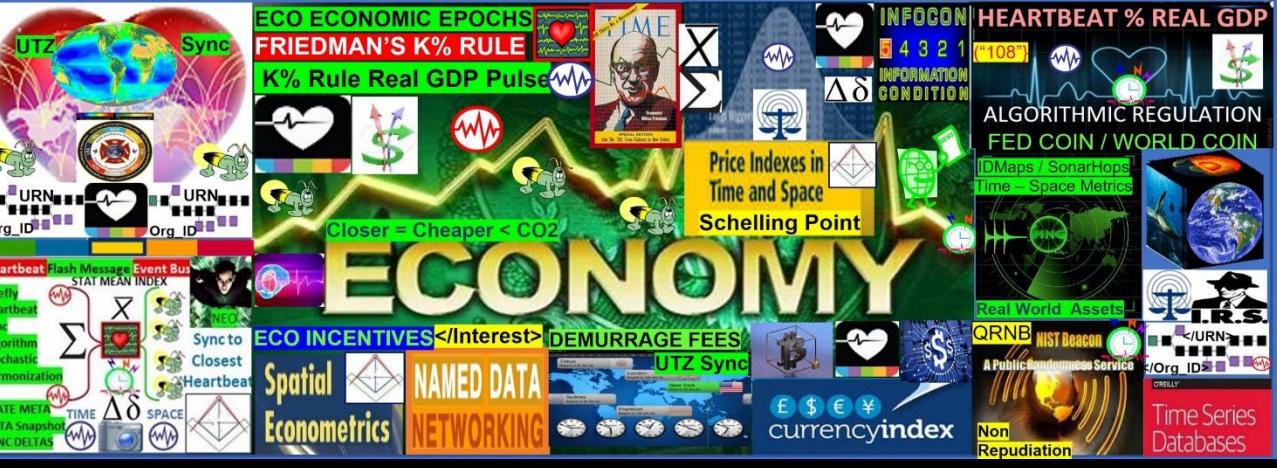


"The solution we propose begins with a time-stamp server" Satoshi

"The internet, internet of \$\$\$ is comprised:
1. Epoch time cycles 2. Syntax used / not used during epoch time cycles instructions

"Bitcoin is a language" "Bitcoin's value = time itself
Blocktime = computing clock-time that creates sync delta differentials in the chain of time described by MTT Machine Trust Language smart contracts adjusted by time arbitrators

USPTO 20130166398 Ericsson System Method Implementing Context Based Payment System







ISO Technical Committee TC68

Financial Services

SC2 Security	SC4 Securities	SC7 Banking
-----------------	-------------------	----------------

RMG members nominated by P-member countries and A-liaison organisations

TSG & SEG members nominated by all member countries and liaison organisations

ISO 20022 LV 66

Q: Which memo 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.

SpaceMesh

PROOF OF FORMULATION

Space-Time Consensus Algorithm

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

STRUCTURED EXCHANGES SYNTAX LEXICON

SYNTHETIC SYMBOL SETS AJ / Man - Machine

SETTLEMENTS EXCHANGES 90 feet

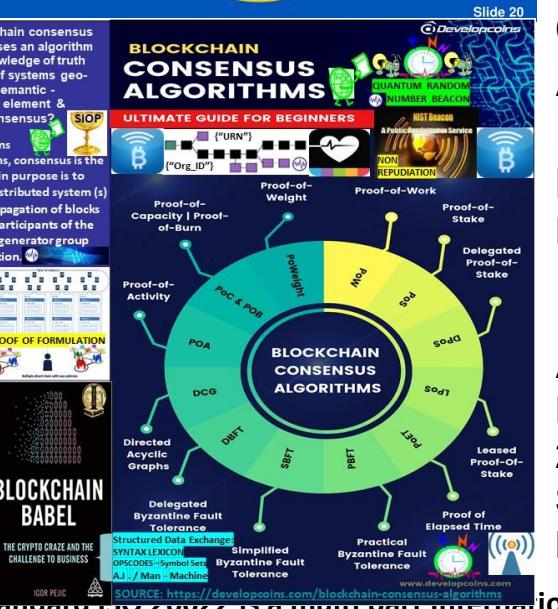
SYNTHETIC SYMBOL SETS AJ / Man - Machine

STRUCTURED EXCHANGES 90 feet

SYNTHETIC SYMBOL SETS AJ / Man - Machine

STRUCTURED EXCHANGES 90 feet

SYNTHETIC SYMBOL SETS AJ / Man - Machine



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

FOUNDATION STANDARDS TECHNOLOGY

- ISO 20022
- MIL STD Structured Data Exchange
- DoD System of Systems Engineering

CONSENSUS ALGORITHMS

- NDN: Named Data Networking
- ARIN, ASN-1 Binary XML
- 2525 A,B,C,D
- Symbol Sets for Human – A.I.

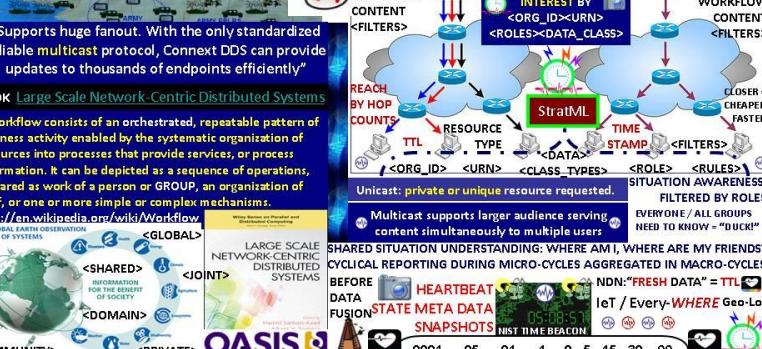
World Financial Standard ISO 20022 is a multi part international Standard prepared by ISO Technical Committee TC68 Financial Services. It

describes a common platform for the development of messages in ASN.1 Abstract Syntax Notation: A single standardization approach (methodology, process, repository) to be used by all financial standards initiatives. common platform for the development of messages using:

- a modelling methodology to capture in a syntax-independent way financial business areas, business transactions and message flows
- a central dictionary of business items used in financial communications
- a set of XML and ASN.1 design rules to convert the message models into XML or ASN.1 schemas, whenever the use of the ISO 20022 XML or ASN.1-based syntax is preferred ISO 20022: <https://www.iso20022.org/about-iso-20022>

"The fundamental value driver is easy integration of applications into subsystems, of subsystems into systems, and of systems into larger SYSTEM OF SYSTEMS"

The term **unicast** is contrasted with the term **broadcast** which means transmitting the same data to all possible destinations. Another multi-destination distribution method, **multicasting**, sends data only to **interested** destinations by using special address assignments.



BOOK Large Scale Network Centric Distributed Systems

A workflow consists of an orchestrated, repeatable pattern of business activity enabled by the systematic organization of resources into processes that provide services, or process information. It can be depicted as a sequence of operations, declared as work for a person or GROUP, an organization of staff, or one or more simple or complex mechanisms.

<http://en.wikipedia.org/wiki/Workflow>

THE GLOBAL EARTH OBSERVATION SYSTEM OF SYSTEMS

WORLD WIDE WEB FOR THE BENEFIT OF SOCIETY

<SHARED>

<GLOBAL>

<JOINT>

<DOMAIN>

<COMMUNITY>

<PRIVATE>

Large Scale Network-Centric Distributed Systems

White Boxes vs. Parallel and Distributed Computing

<GLOBAL>

<JOINT>

<COMMUNITY>

<DOMAIN>

<SHARED>

<PRIVATE>

<INTEREST>

<STRAT_ML>

<IDDEF_ID>

<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 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

Don't Panic

KEYSTONE FEDERATION

Identity Provider

- <OPS>

- <INTEL>

openstack



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)

- URLs LOCATE / FIND RESOURCES

SITUATION AWARENESS

NEWSCAST

SURVEY METHOD

ID <ITEMS> INTEREST

GEO-SPATIAL AREA

TEMPORAL INTENSITY

MEASURES / METRICS

CROWD SOURCING

TRIANGULATION

TELCO MESH FABRIC

vector

CROWD SOURCING / FUNDING

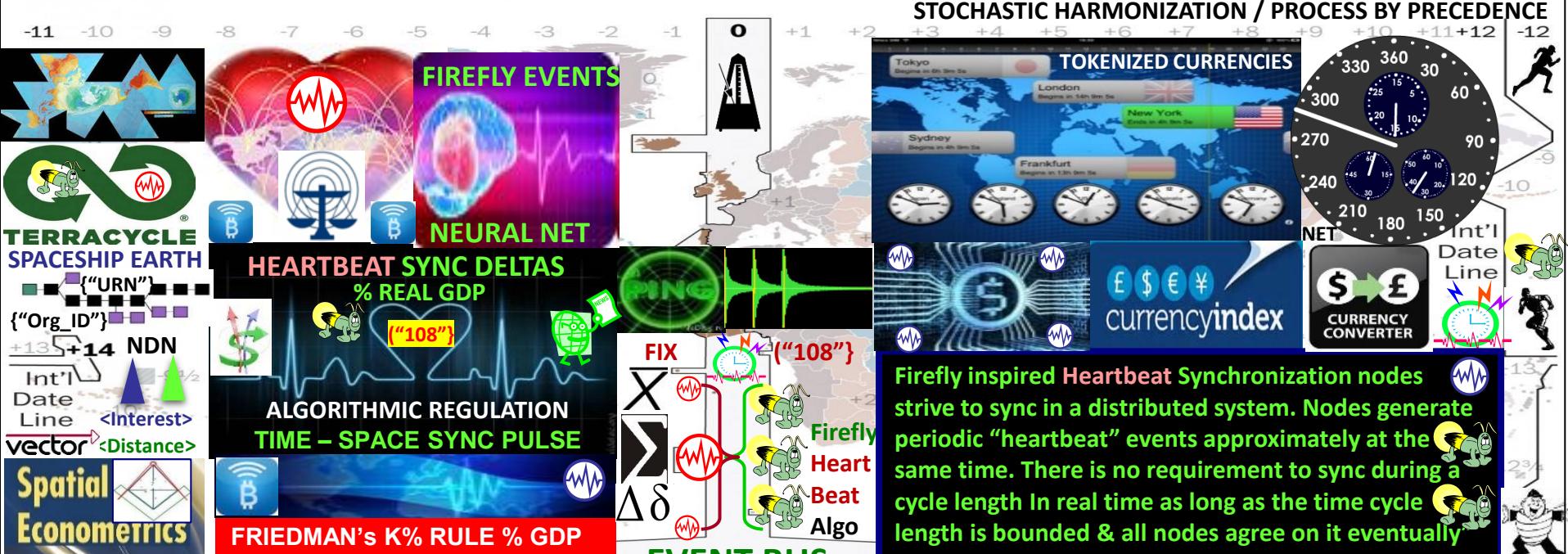
ETHEREUM: Decentralized Autonomous Organizations

DAO

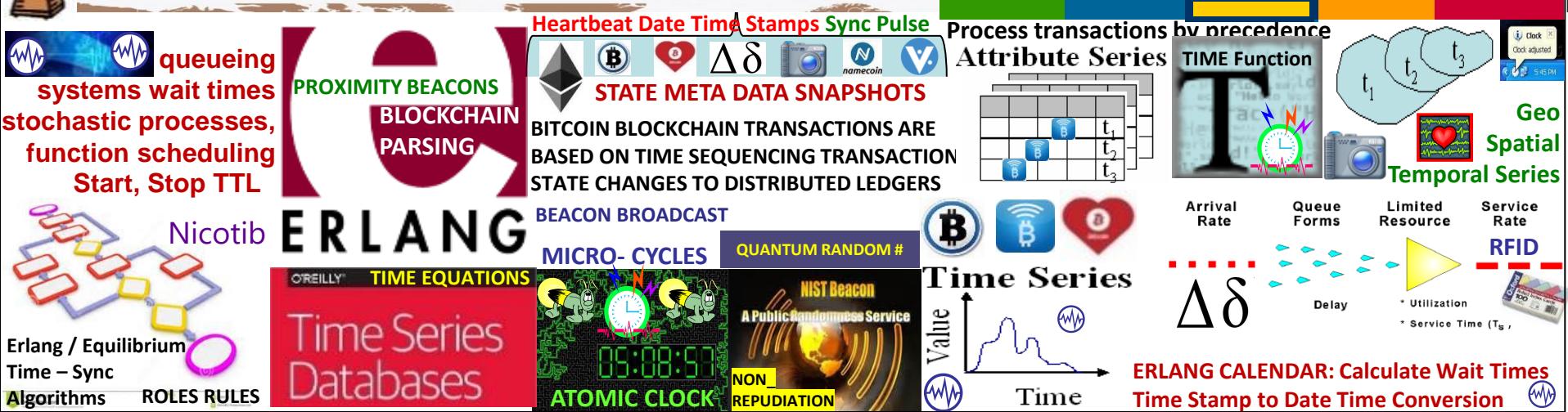
VOTE ON BLOCKCHAIN

FEDERATED ID

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



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



Structured Data Exchange



SYNTAX LEXICON
ROSETTA STONE

Coder's Guide lexicon.

STRUCTURED
<CONTENT>
EXCHANGE
TEMPLATES

MIL STD 2525ABC

ASSET TOKENS

"SYMBOLS RULE THE WORLD"

11.8 - Kinematic
11.8.1 - Pos
11.8.1.1 -
11.8.1

STRATML XAML

BINARY XML
XBRL
THE BUSINESS REPORTING STANDARD

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

DDL DATA
DEFINITION
LANGUAGE

TOSCA
Confidence
Bearing Angle
Bearing Angle Rate
Covariance Matrix

Signal operating instructions (SOI): technical control coordination of signaling, telemetry Current situational awareness, data dictionary, network identification, channels, network directory, brevity code-words, signals. Units maintain 2 SOI copies: PEACE TIME version "Go-To-War" version = **BIZ COA (s) <Org_ID1><Org_ID2><Org_ID3>**



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

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

MTL Machine Trust Language



{"URN"} {"TRANSACTION ID"}

MESSAGE TEXT FORMAT :

SEG RPT OCC CLASSNAME SETID SEQ FIELD OCCURRENCE SET FORMAT NAME

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

TOKENIZED ECONOMY BREVITY CODE OPSCOSE MAPPET TO SYMBOLS



INDEX REFERENCE #:

M015 STATUS :

EFFECTIVE: 14-DEC-99 PURCHASE CODES



FEDERATED PEGS



{"URN"}



{"ASSET_CLASS"}



{"ASSET_TYPES"}



ISO 10383 – MIC



Market Identifier Codes



DAO



{"URN"}



{"Org_ID"}



Heartbeat Message



STOCK



NDN



NAMED DATA



EXCHANGE



NETWORKING



MIC CODES



PRECEDENCE



PROCESSING



FILTERS



BLOCKTIME



ARBITRAGE



ERLANG



TIME

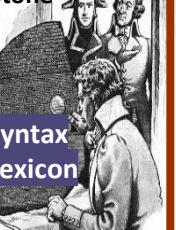
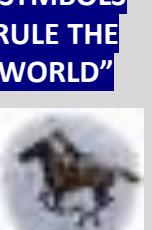
EQUATIONS



WOMAN WITH GLASSES



CLOCK

FROM	TO				CODE GUIDE	
	GCCS-A	TAIS	ASAS	AMDPCS	AFATDS	MCS
ASAS	C002 C203 F002 F014 F015 F541 S201 S309	C002 C203	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			
AMDPCS	TOKENS OPSCODE BREVITY CODES					
AFATDS	F002 F014 F015 F541 S201					  INFOCON A.I. 5 4 3 2 1 INFORMATION CONDITION
MCS	 SIOP 	A423 C203 C505 F002 F014 F015 F541 S201	A423 A659 C002 C203 C400 C443 C447 C488 C501 C503 C504 C505 C506 C507 C508 E400 F002 F014 F015 F541 F658 F756 G489 K01.1 S201 S303 S507	A423 A659 A656 A690 C002 C203 C400 C505 F002 F014 F015 F541	 Rosetta Stone  Syntax Lexicon  Coder's Guide	 M2M  "SYMBOLS RULE THE WORLD" 

MESSAGE CATALOG

300 + Use Cases

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

Information Elements Roles

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



FFUDN: Field Format Unit Designator

EFIRN Field Format Index Reference #

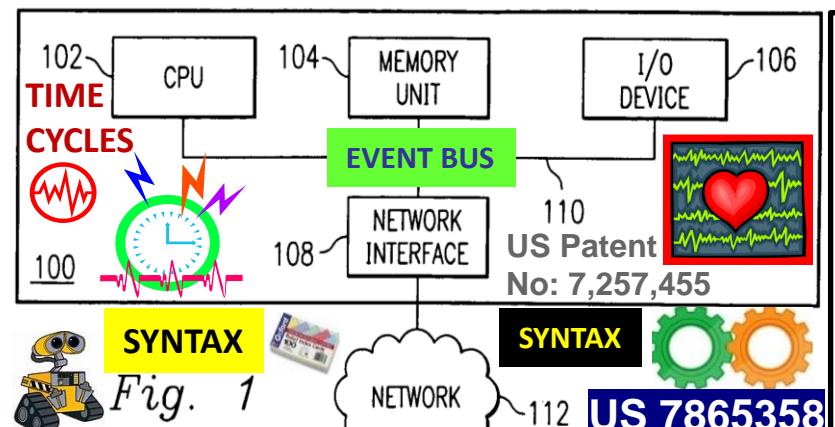
Structured military messaging ID's messages, message sets, data element, symbol fields </108>



PROCESS MESSAGE BY PRECEDENCE UNIVERSAL EVENT / ALERT MESSAGE BUS

OPERATIONAL NODES / ACTIVITIES

DATA		SYSTEM FUNCTIONS		PERFORMANCE	
11.4 - Classification		11.8 - Kinematics			
11.4.1 - Category		11.8.1 - Pos / Vel / Acc (PVA)			
11.4.1.1 - Confidence Level		11.8.1.1 - Acceleration			
11.4.1.2 - Estimate Type		11.8.1.1.1 - Angular			
11.4.1.2.1 - Alternative		1.1.2 - Linear			
11.4.1.2.2 - Evaluated D		2 - Estimate Type			
11.4.1.3 - Value		PURCHASE	CODES	1.2.1 - Estimated	
SYMBOL	Friend	Neutral	Hostile	1.2.2 - Observed	1.2.3 - Predicted
2525C	Partner			1.2.4 - Smooth	1.2.5 - Probabilistic
11.4.1.3.4 - Substance					
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					

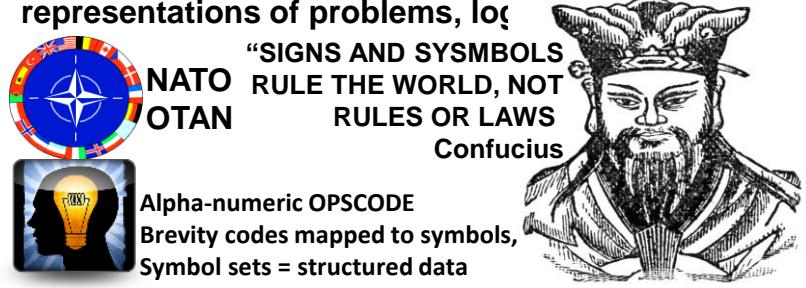


Machine-based system for transforming data from a source form to a target form, a tool is provided for sharing information established in developing a transformation model. The shared information may relate to rules for mapping source collection terms to standardized terms, rules for ordering or **SYNTAX**,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

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

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

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



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

Williamsport PA
Little League
Baseball Capital of
the World

818

TASK	
PK	<u>TK_OID</u> {"Org_ID"}
FK1	TK_NAME
FK2	TK_DESCRIPTION
	TK_CONDITION
	TK_CMOID
	TK_CLOUD (FUNCTION)

816

METHOD	
PK, FK3	<u>MT_OID</u> {"Org_ID"}
FK1	MT_NAME
FK2	MT_DESCRIPTION
	MT_CMOID
	MT_CLOUD (BEHAVIOR)
	LS_SEQUENCE

810

CLASS	
PK	<u>CL_OID</u>
	CL_NAME

BIZ COA 1,2,3

AU
Ar

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



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

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

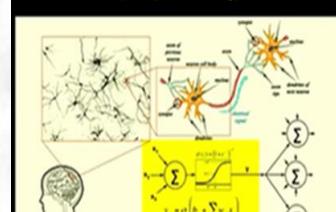
Off-Site Connector



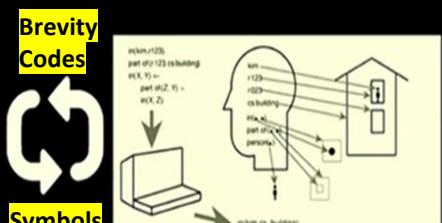
Neuro-Symbolic AI

Symbolic (human-readable) representations

Symbolic Al



Breaking the world into symbols (rather than



Incorporate common sense reasoning and
knowledge about the world

Symbolic artificial intelligence: collection of all methods in artificial intelligence

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

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

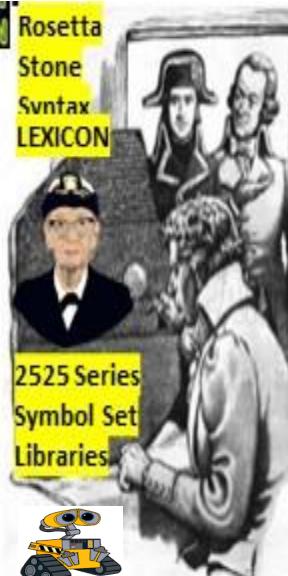
This claim implies both that human thinking is a kind of symbol manipulation (because a symbol system is necessary for intelligence) and that machines can be intelligent (because a symbol system is sufficient for intelligence).[3] The idea has philosophical roots in Hobbes (who claimed reasoning was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

Source: Wikipedia: https://en.wikipedia.org/wiki/Physical_symbol_system

data from a first form to a second form

CONDITION

Rosetta
Stone
Syntax
LEXICON



2525 Series
Symbol Set
Libraries



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



Alpha-numeric OPS CODE
Brevity codes mapped to symbols,
Symbol sets = structured data

FRZ T CP CLOUD FRS T LN PAREN

ABCA OPS CODE BREVITY CODES

Neuro-Symbolic AI

Symbolic (human-readable)
representations

Neural Networks
(Deep Learning)



Brevity
Codes



Symbols



Symbol

Symbolic AI



Incorporate common sense reasoning and

Breaking the world into symbols (rather than
sets 2525)

Situational Awareness Reference Architecture (SARA)

Identity, Inventory, Activity, and Sharing

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



IDENTITY: <UUID> = Devices, sensors
Federation Gateway <ORG_ID> Organizations

<ELEMENTS>

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

STRATEGIC MARKUP

StratML

LANGUAGE

Industrial Control System Information Sharing and Analysis Center

INVENTORY: Uniform Resource Name <URN>

<URN><URN> <NEWS>
<URN><URN> <COMMODITY><WATER><ENERGY><AVAILABLE UNITS>
<URN><URN> vector <GEO-SPATIAL TEMPORAL INTENSITY METRICS / METERS>

UNIFIED EVENT / ALERT TRIGGER / THRESHOLDS

ACTIVITY: <EVENT><ALERT> <TIME_STAMP><ORG_ID><URN>

<GEO_LOC_GPS><STATUS>
<Halt><Moving><Stale><Ready>

CONTENT LEXICON
ROSETTA STONE

SHARING:

COMMON <TAGS>

<Organizational_ID>

Resource Names <URN>

<Time_Stamps>

<State-Meta_Data>

<DATA_CLASS_TYPE>

<Heartbeat_snapshots>

<TAG>LIBRARY
TEMPLATES



NAMED DATA
<Content> Centric
NETWORKING



AVALANCHE

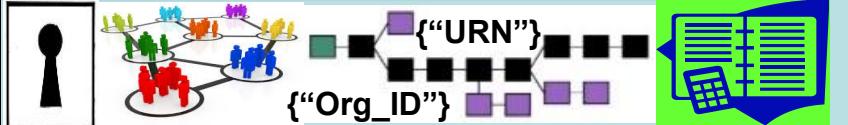
WELCOME TO THE FS-ISAC SECURITY AUTOMATION GROUP. OUR VISION IS
A FEDERATED NETWORK OF STIX-BASED REPOSITORIES SHARING INTELLIGENCE IN
REAL-TIME. AVALANCHE: STRENGTH IN NUMBERS, SECURELY SHARE INTELLIGENCE

NIST CYBER SECURITY FRAMEWORK

FROM	F002	F003	F004	TAB	ASAB	AMOPCS	AFATOPS	MCB
ABAD	F013	F014	F015	F014	F001	C001	F001	E001
	F016	F017	F018	F017	F002	C002	F002	E002
	F019	F020	F021	F020	F003	C003	F003	E003
	F022	F023	F024	F023	F004	C004	F004	E004
	F025	F026	F027	F026	F005	C005	F005	E005
	F028	F029	F030	F029	F006	C006	F006	E006
	F031	F032	F033	F032	F007	C007	F007	E007
	F034	F035	F036	F035	F008	C008	F008	E008
	F037	F038	F039	F038	F009	C009	F009	E009
	F040	F041	F042	F041	F010	C010	F010	E010
	F043	F044	F045	F044	F011	C011	F011	E011
	F046	F047	F048	F047	F012	C012	F012	E012
	F049	F050	F051	F050	F013	C013	F013	E013
	F052	F053	F054	F053	F014	C014	F014	E014
	F055	F056	F057	F056	F015	C015	F015	E015
	F058	F059	F060	F059	F016	C016	F016	E016
	F061	F062	F063	F062	F017	C017	F017	E017
	F064	F065	F066	F065	F018	C018	F018	E018
	F067	F068	F069	F068	F019	C019	F019	E019
	F070	F071	F072	F071	F020	C020	F020	E020
	F073	F074	F075	F074	F021	C021	F021	E021
	F076	F077	F078	F077	F022	C022	F022	E022
	F079	F080	F081	F080	F023	C023	F023	E023
	F082	F083	F084	F083	F024	C024	F024	E024
	F085	F086	F087	F086	F025	C025	F025	E025
	F088	F089	F090	F089	F026	C026	F026	E026
	F091	F092	F093	F092	F027	C027	F027	E027
	F094	F095	F096	F095	F028	C028	F028	E028
	F097	F098	F099	F098	F029	C029	F029	E029
	F100	F101	F102	F101	F030	C030	F030	E030
	F103	F104	F105	F104	F031	C031	F031	E031
	F106	F107	F108	F107	F032	C032	F032	E032
	F109	F110	F111	F110	F033	C033	F033	E033
	F112	F113	F114	F113	F034	C034	F034	E034
	F115	F116	F117	F116	F035	C035	F035	E035
	F118	F119	F120	F119	F036	C036	F036	E036
	F121	F122	F123	F122	F037	C037	F037	E037
	F124	F125	F126	F125	F038	C038	F038	E038
	F127	F128	F129	F128	F039	C039	F039	E039
	F130	F131	F132	F131	F040	C040	F040	E040
	F133	F134	F135	F134	F041	C041	F041	E041
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	F139	F140	F141	F140	F043	C043	F043	E043
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	F178	F179	F180	F179	F056	C056	F056	E056
	F181	F182	F183	F182	F057	C057	F057	E057
	F184	F185	F186	F185	F058	C058	F058	E058
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	F274	F275	F276	F275	F088	C088	F088	E088
	F277	F278	F279	F278	F089	C089	F089	E089
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	F304	F305	F306	F305	F098	C098	F098	E098
	F307	F308	F309	F308	F099	C099	F099	E099
	F310	F311	F312	F311	F100	C100	F100	E100
	F313	F314	F315	F314	F101	C101	F101	E101
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	F346	F347	F348	F347	F112	C112	F112	E112
	F349	F350	F351	F350	F113	C113	F113	E113
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	F355	F356	F357	F356	F115	C115	F115	E115
	F358	F359	F360	F359	F116	C116	F116	E116
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	F382	F383	F384	F383	F124	C124	F124	E124
	F385	F386	F387	F386	F125	C125	F125	E125
	F388	F389	F390	F389	F126	C126	F126	E126
	F391	F392	F393	F392	F127	C127	F127	E127
	F394	F395	F396	F395	F128	C128	F128	E128
	F397	F398	F399	F398	F129	C129	F129	E129
	F400	F401	F402	F401	F130	C130	F130	E130
	F403	F404	F405	F404	F131	C131	F131	E131
	F406	F407	F408	F407	F132	C132	F132	E132
	F409	F410	F411	F410	F133	C133	F133	E133
	F412	F413	F414	F413	F134	C134	F134	E134
	F415	F416	F417	F416	F135	C135	F135	E135
	F418	F419	F420	F419	F136	C136	F136	E136
	F421	F422	F423	F422	F137	C137	F137	E137
	F424	F425	F426	F425	F138	C138	F138	E138
	F427	F428	F429	F428	F139	C139	F139	E139
	F430	F431	F432	F431	F140	C140	F140	E140
	F433	F434	F435	F434	F141	C141	F141	E141
	F436	F437	F438	F437	F142	C142	F142	E142
	F439	F440	F441	F440	F143	C143		

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

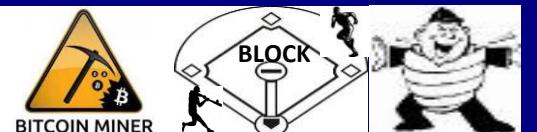
Net joins, drops, splits, merges, moves
Agile, adhoc NETOPS Vs acquisition preserves the **CHANNEL**

Federation
Gateway



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>

STOCK EXCHANGE
MIC MARKET IDENTIFIER
CODES / BREVITY CODES



EVENT BUS

Signalling, Telemetry

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

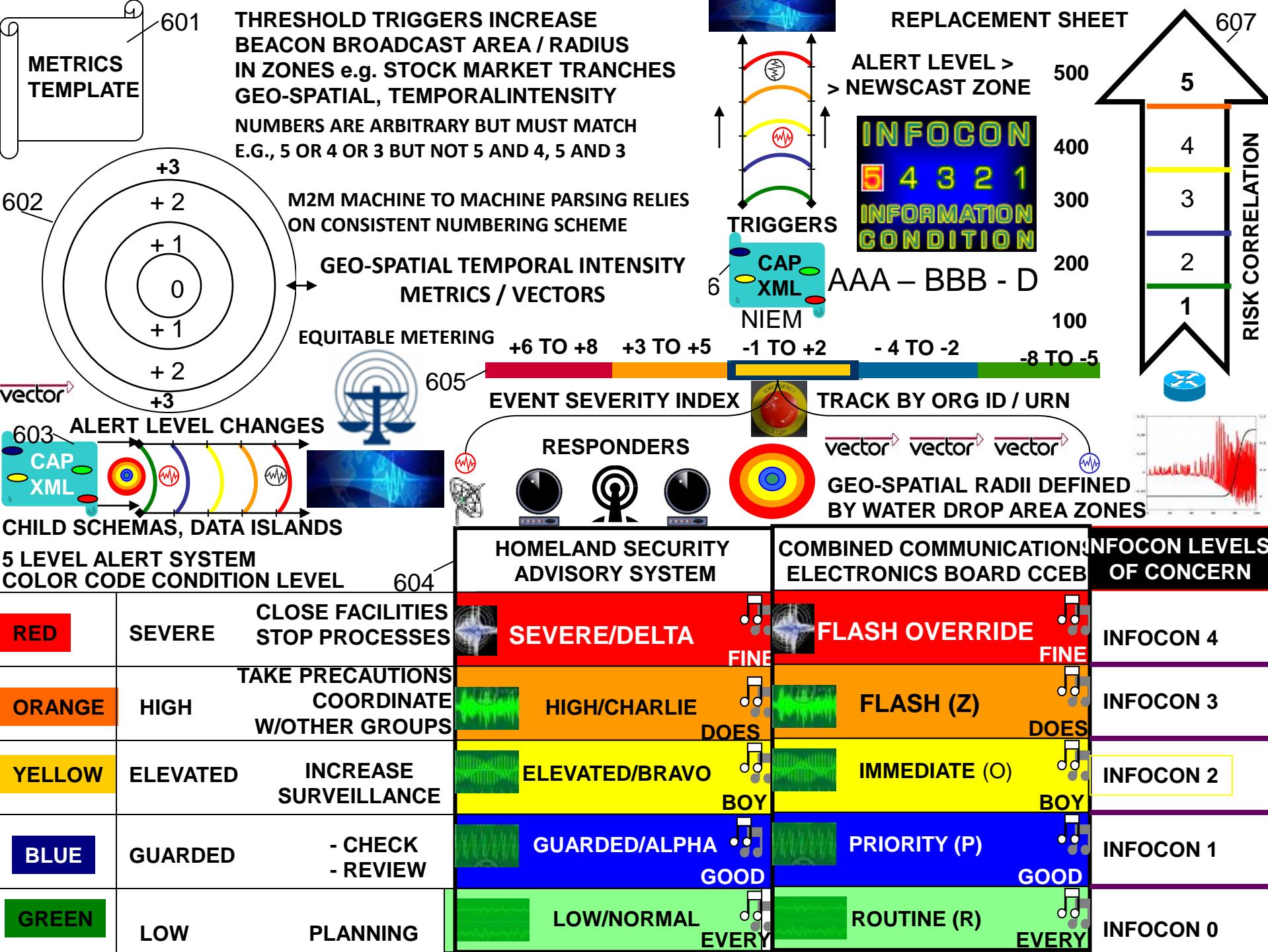


{"DUNS #"} {"Org_ID"} Heartbeat Snaps
QR CODE MICRO-CYCLES
{"URN"} {"URN"} {"URN"}



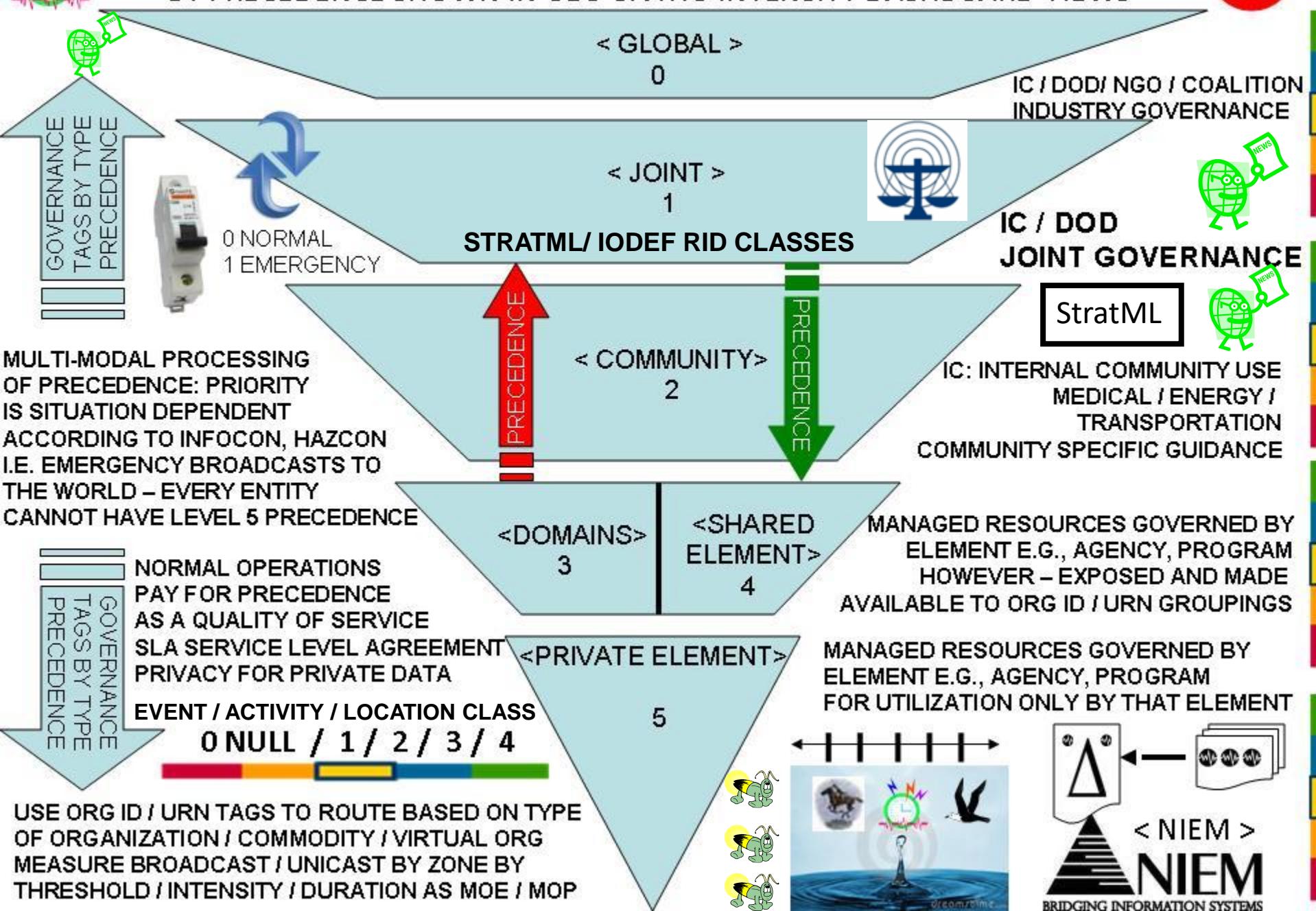
FEDERATE: COMMON GOALS SYNCHRONIZED IN SPACE - TIME







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





Firefly - Heartbeat Algo



University of Bologna Italy / Hungary

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



ECO ECONOMIC HEARTBEAT



("108")



K%



ECONOMIC MACRO CYCLES

TIME-SPACE SYNC

K% GDP ECONOMIC PULSE FEDCOIN WORLDCOIN

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

Temple of Man



LUXOR
EGYPT

FIREFLY inspired Heartbeat Sync Algo

PRECEDENCE UTZ SYNC SYNC
PROCESSING PULSE DELTAS



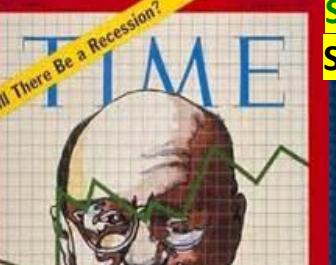
NEURAL NET EMULATION
BLOCKCHAIN PARSG Erlang TIME EQUATIONS
{"Org_ID"}
{"URN"}

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



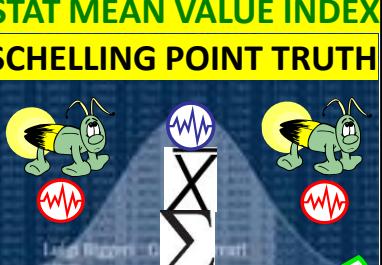
TERRA TRC
LEAD ECONOMIC INDICATORS
COMMODITY PRICE INDEX

currencyindex



Will There Be a Recession?
Economist Milton Friedman

FRIEDMAN's K% RULE
ETF



STAT MEAN VALUE INDEX
SCHELLING POINT TRUTH
Price Indexes in Time and Space
Methods and Practice

ALGORITHMIC REGULATION
TOKEN ECONOMICS

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



SYNC TO CLOSEST HEARTBEAT
{"URN"} {"URN"} {"URN"}
HEARTBEAT EVENT FLASH MESSAGE BUS

UTZ STOCHASTIC HARMONIZATION
Universal Metrics / Meters
 $\Sigma \Delta \delta$

Geo-spatial Temporal Syntax-Semantic Sync & Consensus
Fix ("108") {"Org_ID"} MFID EVENTS
CURRENCY PAIR SAMPLING
ON / OFF SHORE
SYNC DELTA STATE META DATA SNAPSHOTS

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.

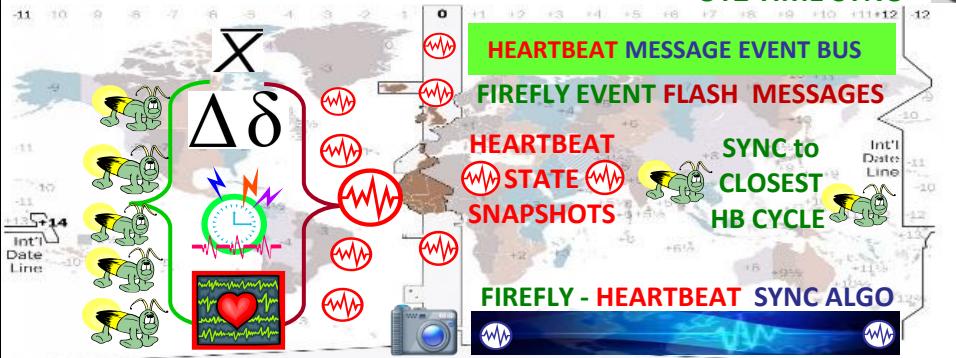
DEMURRAGE PARKING Logistic Fee Incentives
{\$\$}
MICRO Payments

(\$\$)
All things Net, Net of \$\$\$ formed by Time Epoch Cycles
EVENT STATE SNAP SYNTAX NONCE HASH EVENT STATE SNAP SYNTAX NONCE HASH EVENT STATE SNAP
cycle n n + 1 n + 2 $\Delta \delta$

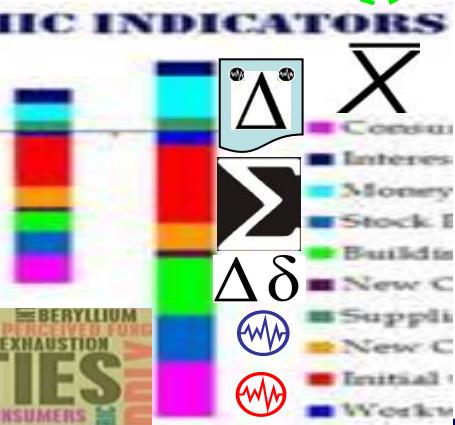
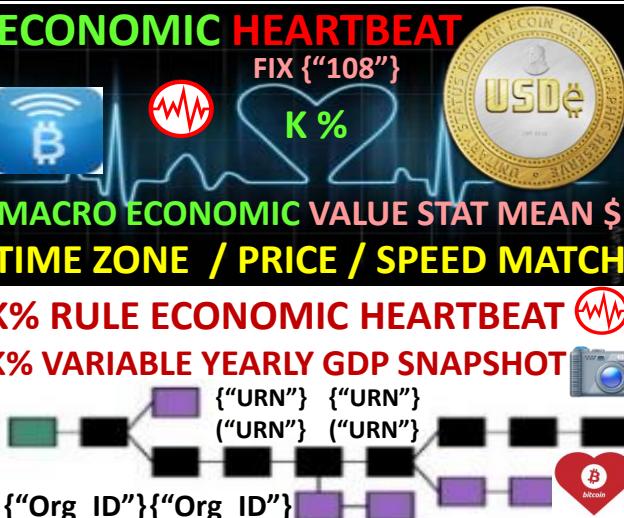
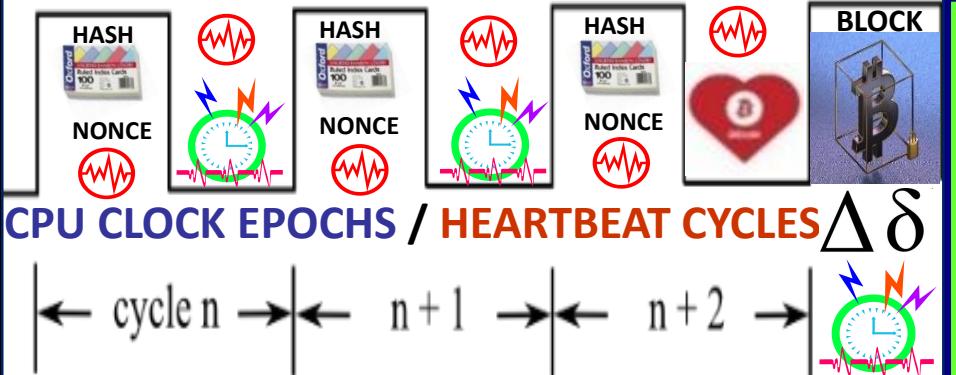
"Heartbeat Synchronization nodes in a distributed system generate periodic local heartbeat events approximately at the same time. It differs from classical clock sync in that nodes are not interested in counting cycles and agreeing on the ID of the current clock cycle. No rule governs the length of a cycle with respect to real time as long as the length is bounded & 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.



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

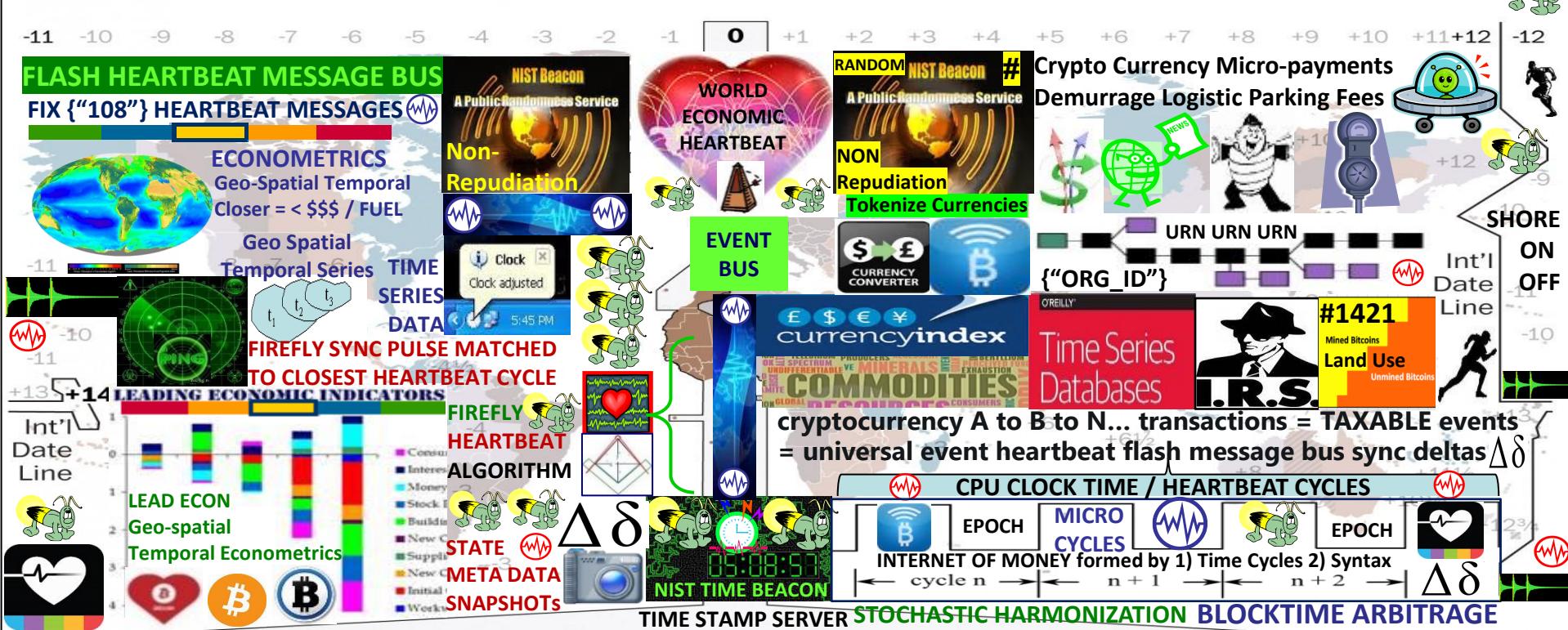


"Heartbeat Synchronization strives to have nodes in a distributed system generate periodic local "heartbeat" events approximately at the same time. It differs from classical clock sync in that Nodes are not interested in counting cycles and agreeing on the ID of the current clock cycle. There is no requirement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





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.

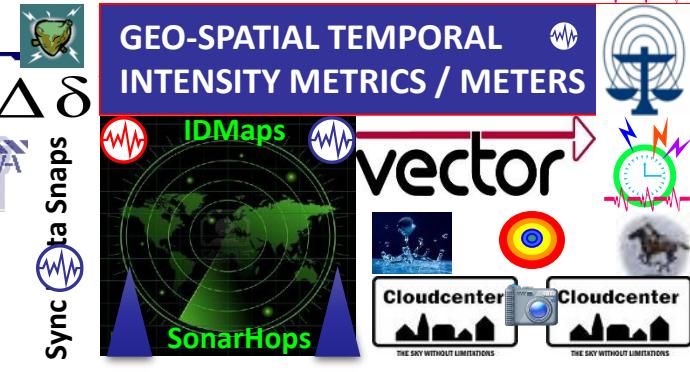
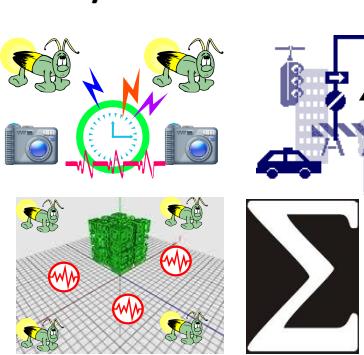
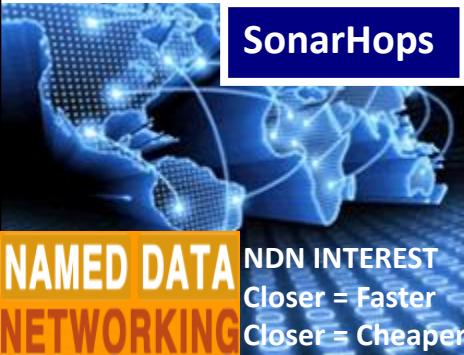




IDMaps: Global Internet Host Distance Estimation Service



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



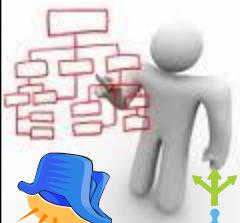
IDMaps scalable Internet-wide architecture measures, disseminates distance information
`/localhost/nfd/fib/add-nexthop`



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

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

Name Prefix
<Org_ID> Trie (NPT)



NDN NAMES

NDN NAMED DATA NETWORK RIB / FIB Datasets event notification

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



TRIANGULATION



NDN INTEREST LENGTH = DISTANCE BY HOPS

NDN INTEREST

IS DATA FRESH ?



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

Datasets and Event Notification

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



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



MICRO-CYCLES



HEARTBEAT STATE META DATASNAPSHOTS



GEO-SPATIAL TEMPORAL INTENSITY METRICS, METERS, VECTORS



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



Geo-Spatial Temporal Intensity NOVEL METRICS / METERS:



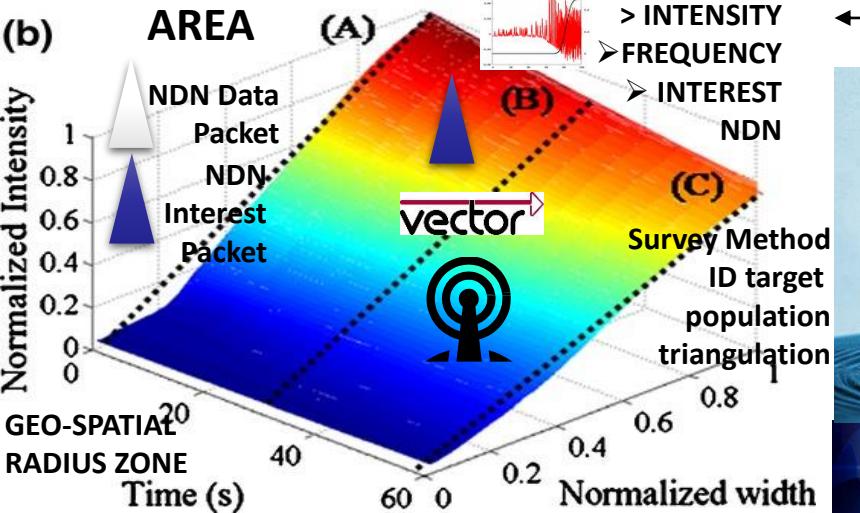
Paul Revere = linear, sequential



TCP/IP hop by hop counts, by hop controls



Water Drop = AREA / INTENSITY Cyclic Frequency



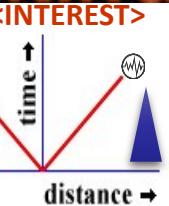
NAMED DATA NETWORKING

</IoT>
MQTT



NIST TIME BEACON

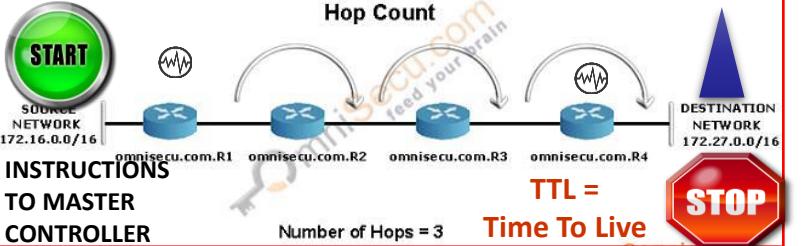
05:08:50



ARRESTED-D

IEEE 802.15.4
OASIS MQTT

TELEMETRY TRANSPORT



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

IDMAPS
SONARHOPS
INTERNET
TRIANGULATION



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

.0001 .05 .01 .1 0 5 15 30 99

vector WirelessHART

time synchronized,
self-organizing,
mesh Net

ALERT LEVEL >
> NEWSCAST ZONE



SINE-WAVE

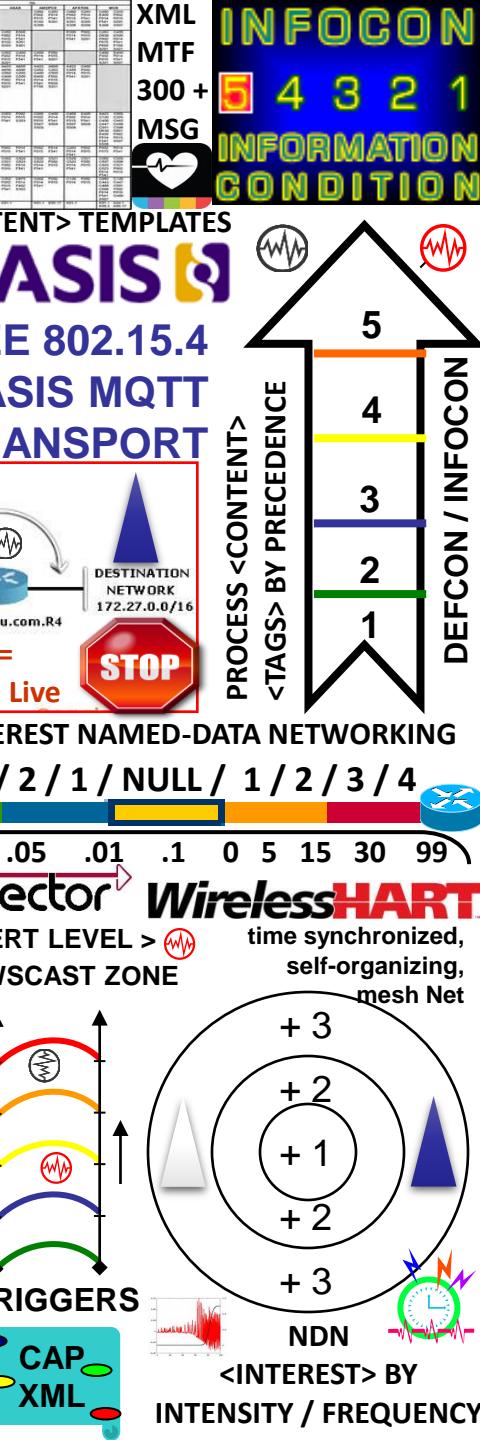
TRIGGERS

CAP XML

NDN

<INTEREST> BY

INTENSITY / FREQUENCY



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”

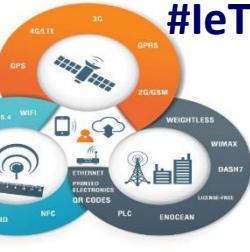
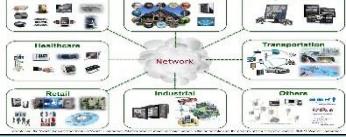
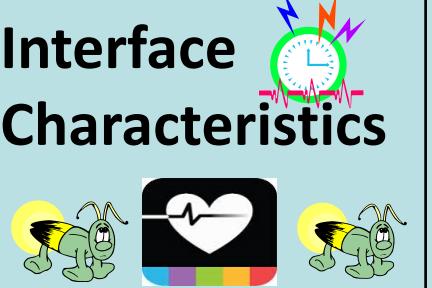
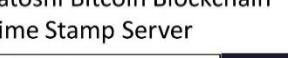
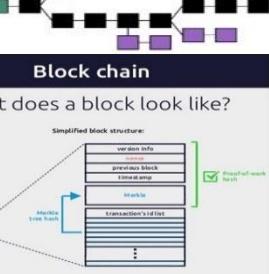
The four dimensions of Big Data

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

Position of a point in space relative to another point



Interface Name	HEARTBEAT Administration Interface [SCOP]		
Documentation URL	http://scop.sourceforge.net/ http://linuxvirtualserver.org/software/index.html		
API Information	 #leT	#Big_Data	Functionality Areas   <p>Cloud Interface Management configuration, start, stop cloud services, edit configuration (heartbeat messages)</p>
Programmable Money World Computer / Blockchain	 	API Operation Count	 <p>LOCATE <CONTENT> IDMAPS / SonarHOPS 4 / 3 / 2 / 1 / NULL / 1 / 2 / 3 / 4 0001 .05 .01 .1 0 5 15 30 90</p>
NIST TIME BEACON	 	Web service access type Network Effects / A.I.	Web application, front end to [network, device, system, blockchain] heartbeat
Interface Characteristics		LANGUAGE / PLATFORM BINDINGS	 <p>PHP Java Erlang...</p> 
<p>"The external environment could update <u>resources</u> at random... One solution is a heartbeat: defining a default lease duration delaying updates until the next cycle"</p>		<p>SCOP is a web application, PHP based front-end to heartbeat, IP Virtual Server ipvs and Idirectord [e.g., check interval @ 5 seconds] SCOP can start/stop services, view/ edit configuration files e.g., heartbeat message state management snapshots, backups, take a service online/offline, add/ remove virtual/real servers, services etc.</p>	
  <p>QubitCoin Interval: Every 30 Seconds</p>		 <p>Satoshi Bitcoin Blockchain Time Stamp Server</p> <p>A. Timestamp Server: The solution we propose begins with a timestamp server. A timestamp server works by taking the current time, generating a unique identifier, and publishing the hash, such as in a newspaper or a timestamp [25]. The timestamp process that the data must have existed at the time of the timestamp is called a timestamp. This timestamp is then added to the block, forming a chain, with each additional timestamp preceding the previous one.</p> <p>THE SOLUTION WE PROPOSE BEGINS WITH A TIME STAMP SERVER</p>	 <p>Block chain</p> <p>What does a block look like?</p> <p>Simplified block structure:</p> <ul style="list-style-type: none"> Header Timestamp Previous Block Hash Block Data Block Hash <p>EPOCH CYCLES E0 E1 E2 E3...</p> <p>MICRO CYCLES</p> <p>MACRO CYCLES</p>

SOFTWARE DEFINED NETWORKING

NETOPS

Command Syntax

REST State Transfer

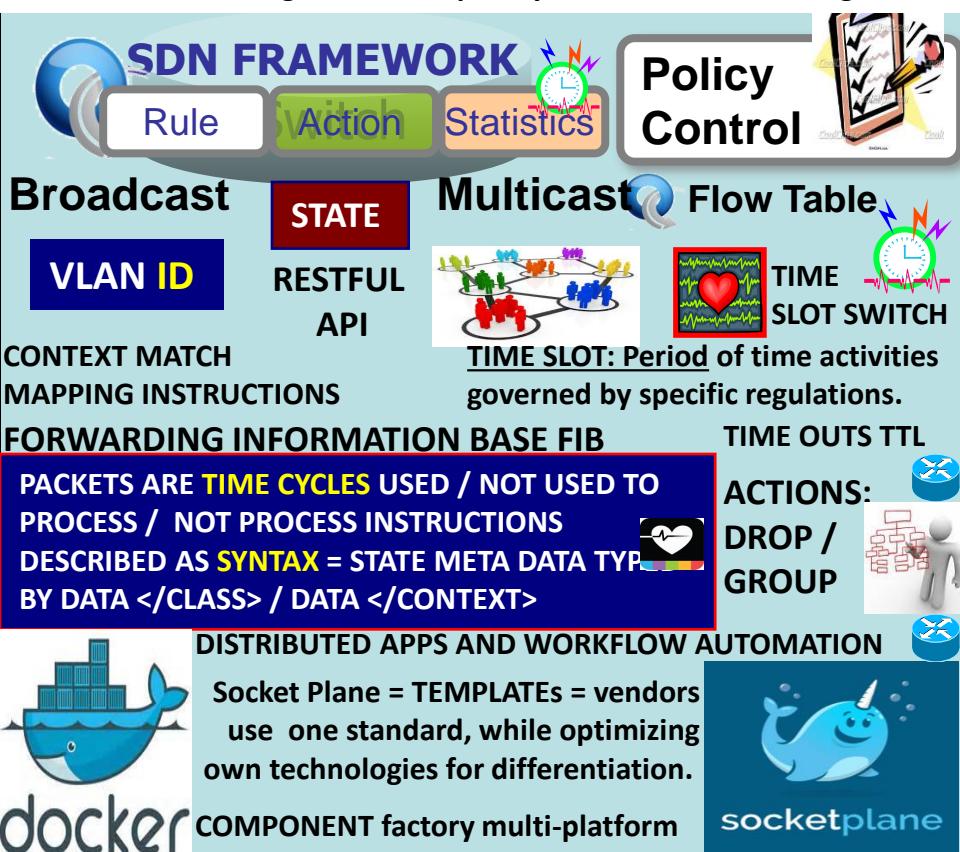
COMMAND SYNTAX
STATE TRANSFER
Unicast / Multicast
Flow Tables / Workflow
Dynamic Network
Configuration Management

NET CENTRIC WARFARE
SYSTEM OF SYSTEMS TELEMETRY

COMMON COMPONENTS, BUILDING BLOCKS USED WITHIN FEDERATION PROMOTING COMMON GOALS, PROCESSES

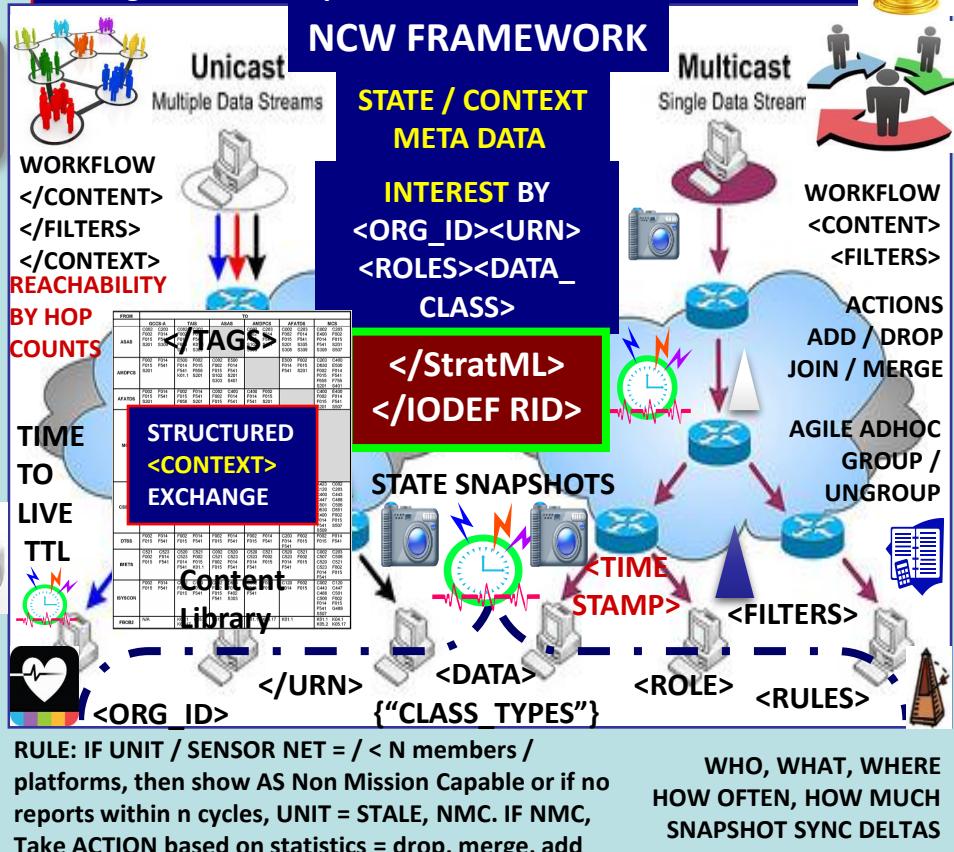
- SDN is a *framework* to allow network administrators to *automatically* and dynamically manage and control a *large number* of network devices, *services*, topology, traffic paths, and packet handling (quality of

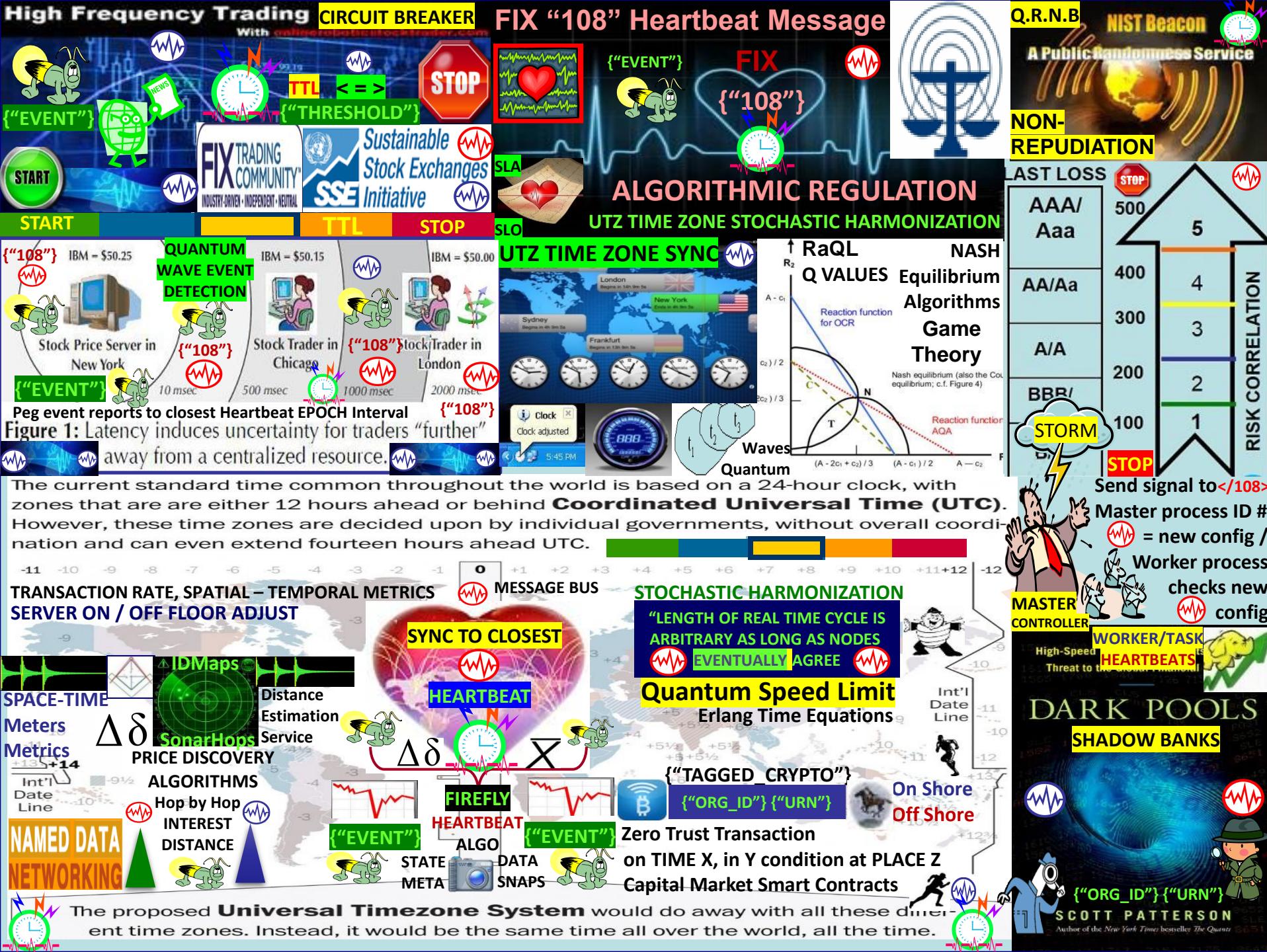
DevOps model and tools to enable scale, programmable agility, and policy-driven automation, and provides network virtualization to mask network configuration complexity with set of networking APIs



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

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





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

GIZMAG: New NASA network poised to bring internet to entire solar system SCt 573 ALICE CORP VS CLS BANK PHYSICAL MEMES

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



TIME / DISTANCE SERVICE LEVEL
AGREEMENT SLA / O Operations

IEEE 802.15.4 OASIS MQTT

TELEMETRY TRANSPORT

IEEE 802.1AG HOP BY HOP
DETECTION

IEEE 802.11
HOP BY HOP CONTROL



Unused Resources / Unmet Needs

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

DISTANCE
INFO SERVICE

Time Series

Value
Time

vector

602



UNUSED RESOURCES
UNMET NEEDS

WATER DROP IN POND MEME IS
SONAR NAVY METAPHOR / MEME

NDN </INTEREST>
NDN {"DISTANCE"}

NAMED DATA
NETWORKING

IEEE C37.118
Harmonization
& Sync heartbeat
update Interval

CLOSER SOURCE
CHEAPER RATE

603



TCP/IP HOP BY HOP COUNT

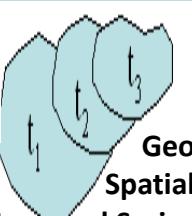
Energy Attenuates over Distances



PAUL REVERE
LINEAR, SEQUENTIAL

RADIUS
WATER DROP IN POND MEME

Attribute Series



INTEREST
DISTANCE

Temporal Series

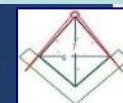
Micro Grids Closer - Cheaper



BLOCKCHAIN
MICROGRIDS

Spatial
Econometrics

Spaceship
Earth
Signals &
Telemetry
Annex



TIME-SPACE BEACON

INFOCON

5 4 3 2 1

METRICS / METERS
TRADE WITH EARTH

??? SIRIUS DISCLOSURE

MOON =

HELIUM 3

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

MAIN ASTEROID BELT

MARS

MERCURY

VENUS

EARTH

STOCHASTIC

HARMONIZATION

Farther = More Cost

➢ Fuel, Resources

Service Level Agreements

43 22 13 0 1.5 2.7 5.2

Light minutes

Astronomical units

FIREFLY-HEARTBEAT

ALGORITHM

UNIVERSAL

EVENT MESSAGE BUS

ERLANG

TIME- SPACE METRICS

43 22 13 0 1.5 2.7 5.2

Light minutes

Astronomical units

FIREFLY - HEARTBEAT ALGORITHM MESSAGE EVENT BUS

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Light minutes

Astronomical units

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Astronomical units

43 22 13 0 1.5 2.7 5.2

Light minutes

Astronomical units

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Light minutes

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Astronomical units

43 22 13 0 1.5 2.7 5.2

Light minutes

Astronomical units



Blockchain

BLUEPRINT FOR A NEW ECONOMY



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



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

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



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



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



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



Functional Sequential Erlang

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

SORTING ALGO'S

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



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

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



Rho ratio *Arrival Rate* $\Delta\delta$
Service Rate per unit time

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

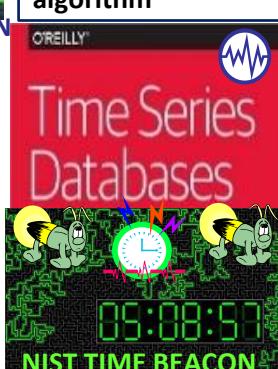


distributed "noSQL" database, embedded right into Erlang,
supports indexing, replication, transactions, and fail-over

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

Mnesia database ("Organization_ID") Global name resolution

FROM	TO/CC-A	THREE	ADAM	AMERICA	AFARON	WIC
XBRL	/ CDL / DAML					
ALPHA	NUMERIC					
BREVITY	CODES					
AZURE	BLETCHLEY					
STRUCTURED						
MILITARY	MESSAGE					
TEMPLATE	FORMS					
LOGIC	/ FILTERS					

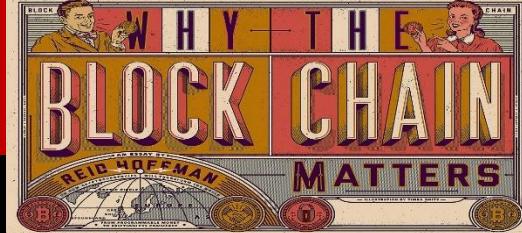


HEART BEACON CYCLE: ALL THINGS INTERNET ARE PROGRAMMED USING TIME CYCLES USED / NOT USED TO PROCESS / NOT PROCESS SYNTAX

TradeNet

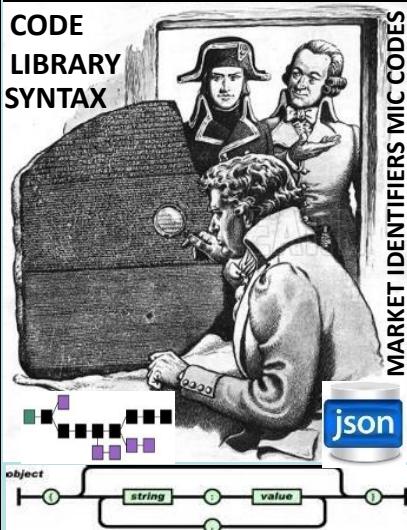


Programmable Money \$\$\$



RIED HOFFMAN 15 May 2015 [LINK](#)

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



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,..



MONEYBALL ECONOMICS



STATE META DATA



SNAPSHOTS



WIRED



WILEY

Commodities

Time Series Analysis

Forecasting and Control



Fourth Edition

George E. P. Box

Gwilym M. Jenkins

Gregory C. Reinsel

RIED IN PROBABILITY AND STATISTICS



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

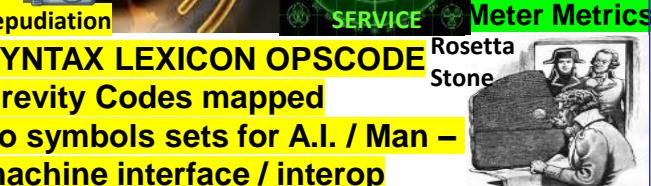


INFOCON
5 4 3 2 1
INFORMATION
CONDITION



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





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



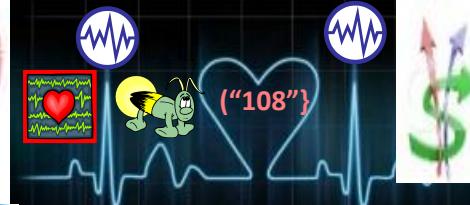
- Creates an online store for users to sell goods for Bitcoin
- Connects these stores directly to each other on a global network
- Users browse individual stores, search for products across whole network
- A buyer directly connects, purchases good from the merchant using Bitcoin
- Bitcoin payments via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

OPENBAZAAR.ORG
BLOCKCHAIN ARBITRAGE



CLOSER = < \$
CLOSER = < CO2

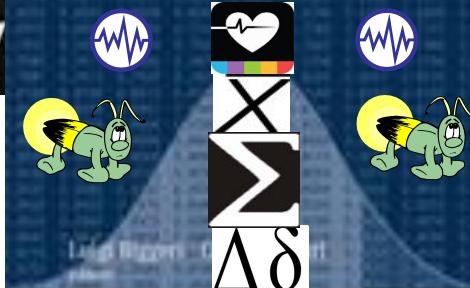
SLA
COMMODITIES
ECONOMIC HEARTBEAT



STAT MEAN VALUE PULSE
REAL WORLD ASSETS RWA

STAT MEAN VALUE INDEX

CONTRIBUTIONS TO STATISTICS



Price Indexes in
Time and Space
Methods and Practice

SchellingPoint

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

PROJECT PHILOSOPHY: *MAKE TRADE FREE*

Mission: *shift trade to a decentralized platform*



Demurrage TERRATRC TRADE
Fees REFERENCE CURRENCY
“Money of Peace”



Free, open markets: Commodity / Currency Index

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

• Privacy </Org_ID>



HASH Values
Nonce Values </Org_ID>



COMMODITIES

PRODUCERS CONSUMERS

INFORMATION PRODUCTION CONSUMPTION

TRANSPORTATION

MANUFACTURING

WAREHOUSING

LOGISTICS

MANAGEMENT

FINANCIAL

REGULATORY

ENVIRONMENTAL

TECHNOLOGY

DATA

INFORMATION

KNOWLEDGE

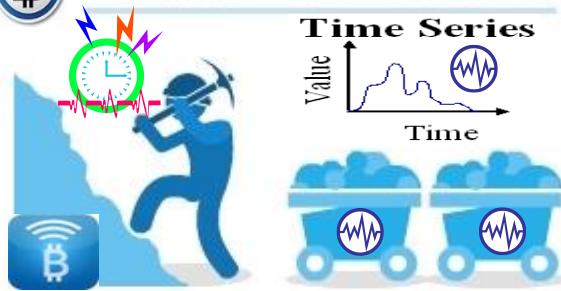
EXPERIENCE

PERSONNEL

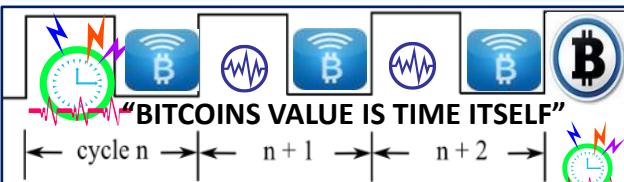
MANUFACTURE

</

PROOF-OF-WORK



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



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

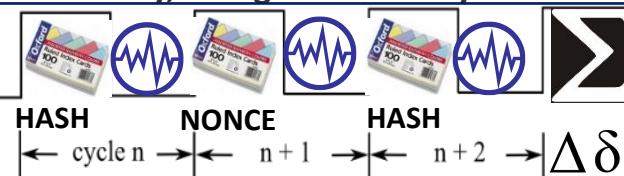


THROTTLE equivalent to difficulty. State
•target = maximum value of 8 bytes Snap
(2^{64}) divided by the difficulty.

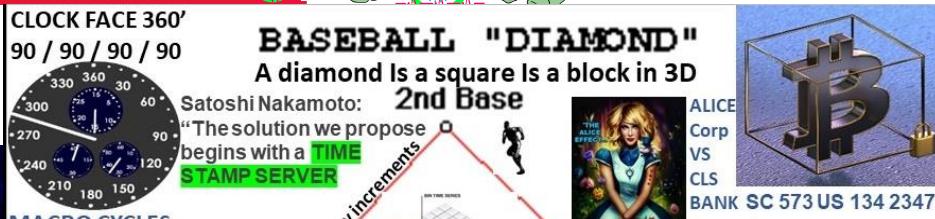
NONCE increments from 0..N until the target is met.



GUESS stores the guess
Effectively, it begins at infinity.



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



MESSAGE example:
Hash string
•Hash Table

300+Message Templates

FROM	ODERA	TABE	AAAB	APICL	AFATOB	WTR
ANPDR	CG201	CG202	CG203	CG204	CG205	CG206
ANPDR	CG207	CG208	CG209	CG210	CG211	CG212
ANPDR	CG213	CG214	CG215	CG216	CG217	CG218
ANPDR	CG219	CG220	CG221	CG222	CG223	CG224
ANPDR	CG225	CG226	CG227	CG228	CG229	CG220
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ANPDR	CG223	CG224	CG225	CG226	CG227</	



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.

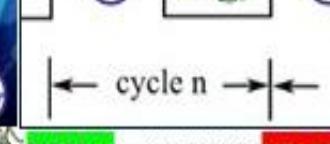
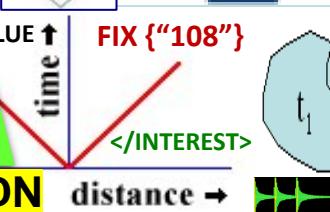
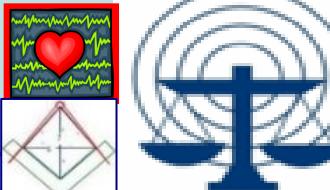


TIME – SPACE MEASUREMENTS OF TOKENIZED COMMODITIES, SECURITIES... STOCHASTICALLY HARMONIZED ACROSS UTZ Universal Time Zone



The Volumetric Weight is often referred to as dimensional weight

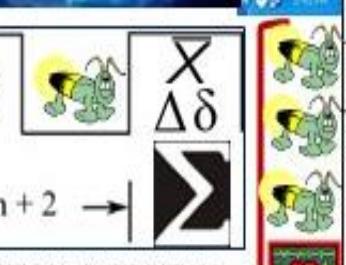
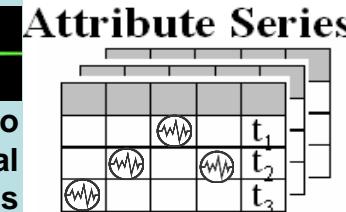
$$\text{Volumetric Weight} = [\text{Width} \times \text{Length} \times \text{Height}]$$



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



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



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

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.



ALERT LEVEL >

> NEWSCAST ZONE

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



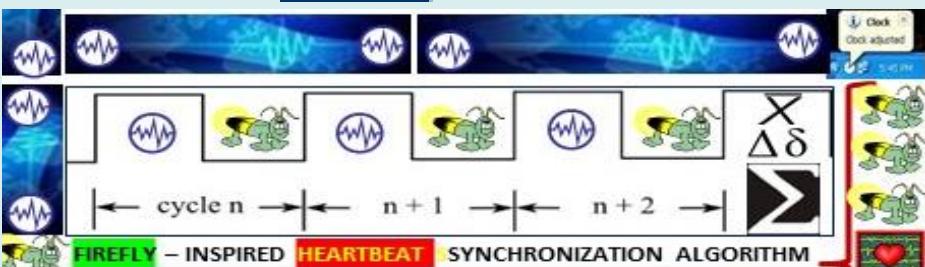
DISTRIBUTED AUTONOMOUS ORGANIZATIONS DAO

Heart Beacon Cycle

FEDERATE / TRADE FEDERATIONS

Linear Sequential Meme

....-1 / 0 / +1... $\Delta \delta$ > Σ



The current standard time common throughout the world is based on a 24-hour clock, with time zones that are either 22 hours ahead or behind Coordinated Universal Time (UTC). However, these time zones are decided upon by individual governments, without overall coordination and can cover up to fourteen hours ahead UTC.



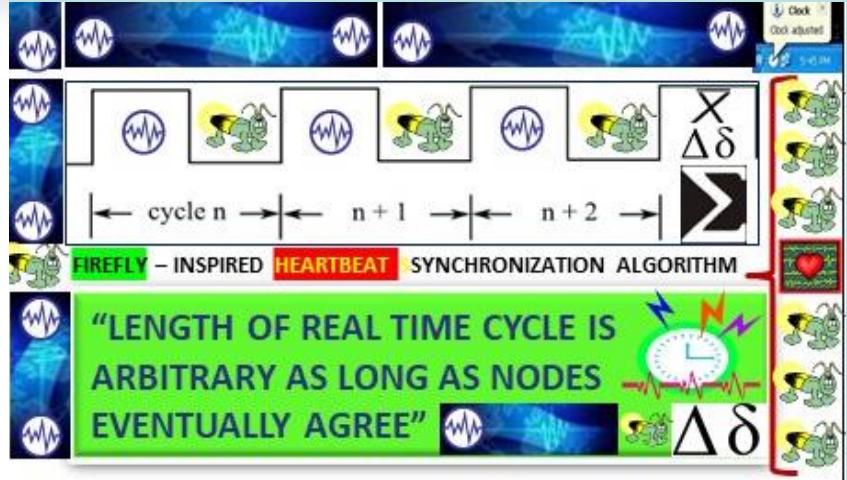
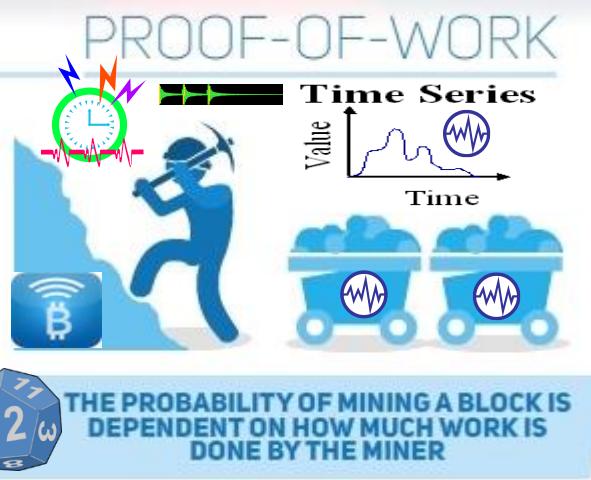
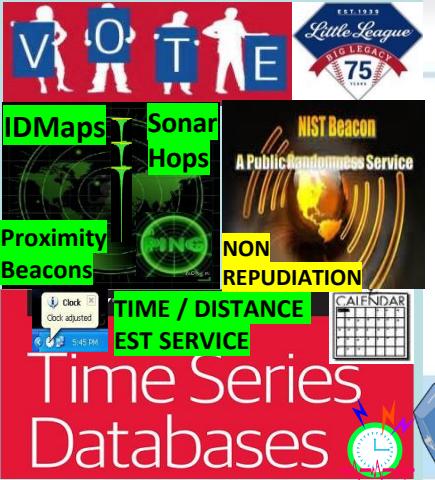


Adaptive
Procedural
Checklist

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

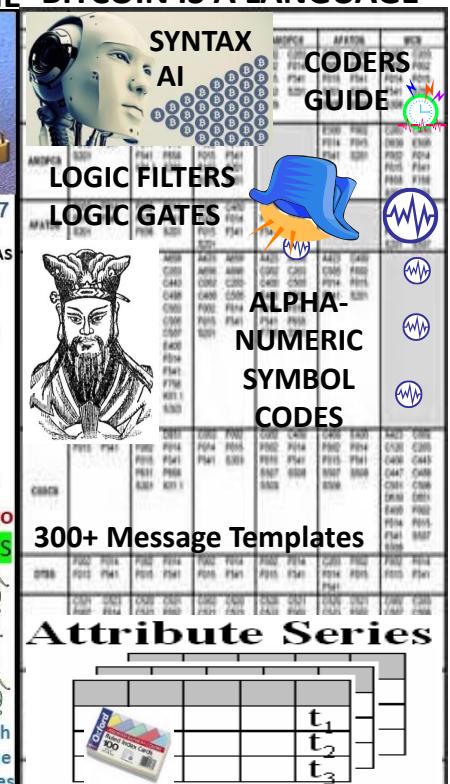
Example of Proof-of-Activity (PoA)

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.

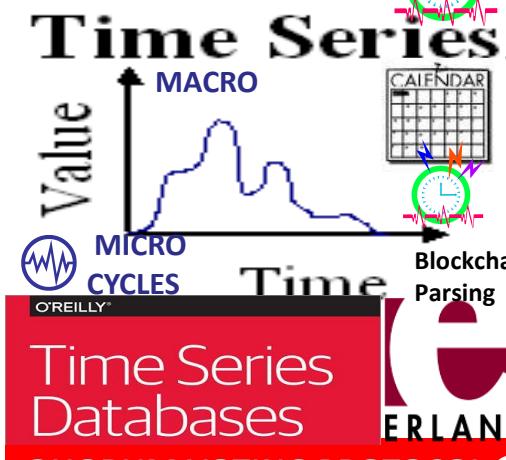


SAWTOOTH LAKE POETIC CONSENSUS PROOF OF ELAPSED TIME: POET

"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



QUORUM VOTING PROTOCOL

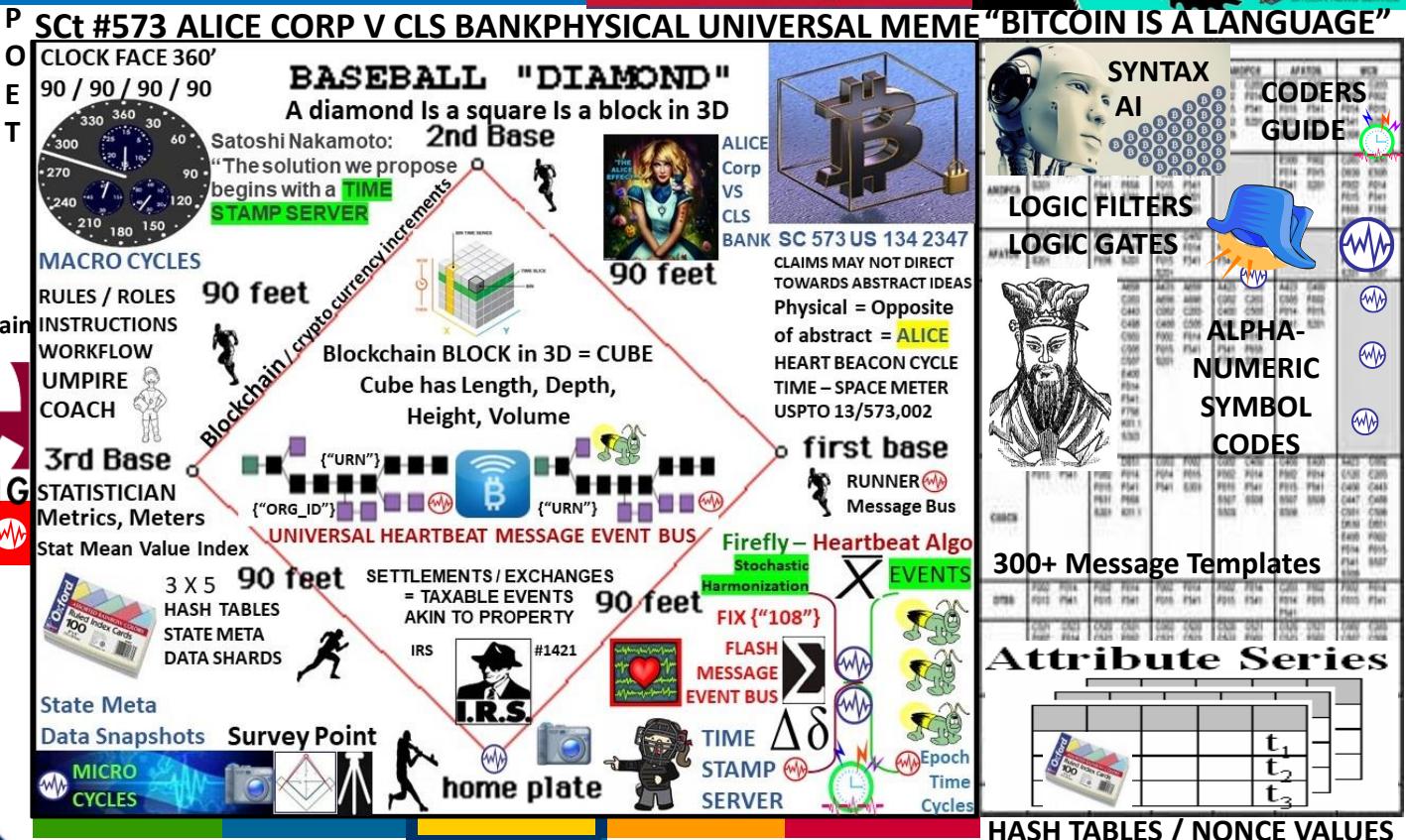
Voting Based Selection: stake size & block generators selected by votes

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

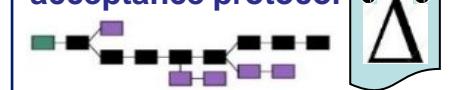


Robert's Rules quorum = minimum # of voting members who must be present at meetings to conduct business of the group

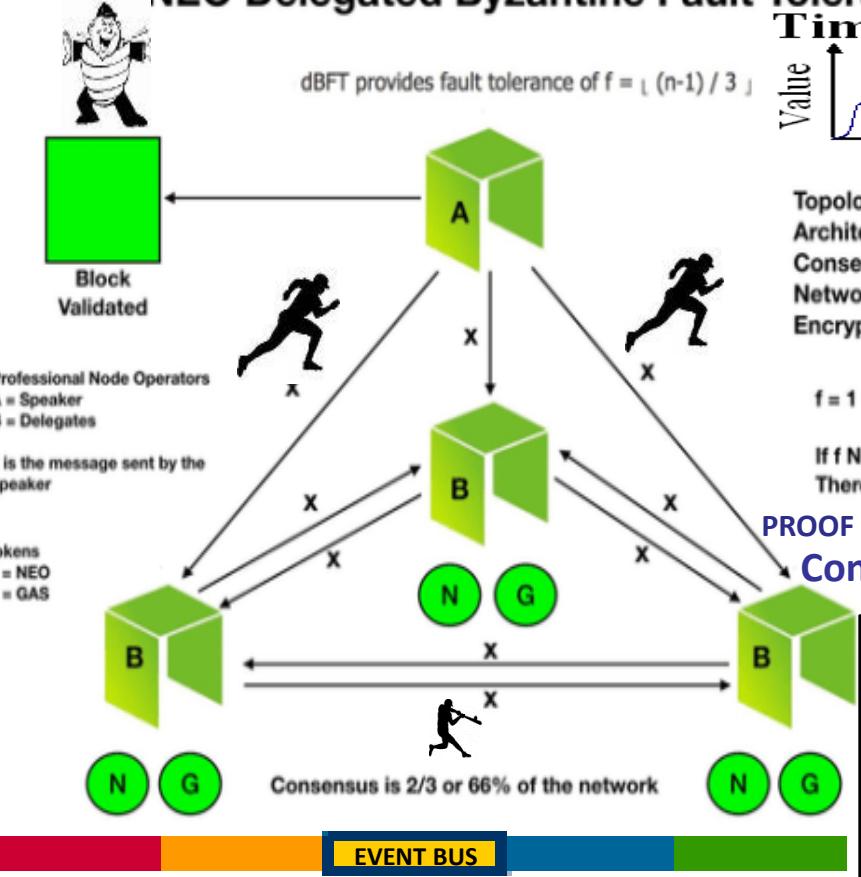
TOURNAMENT LEAGUE BOARD



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

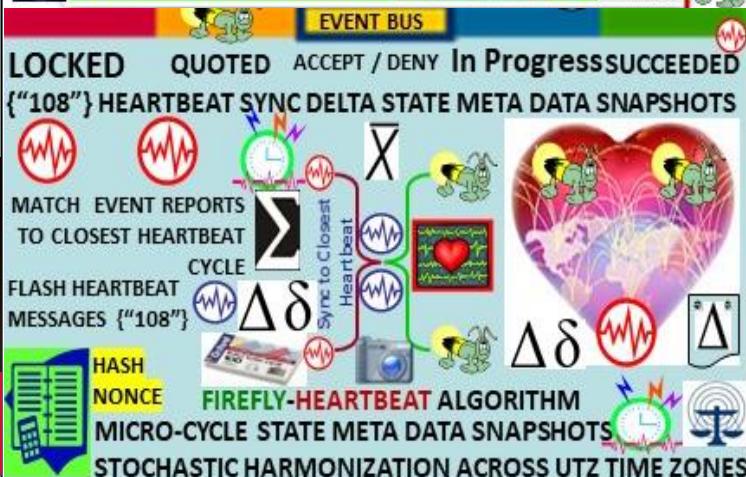
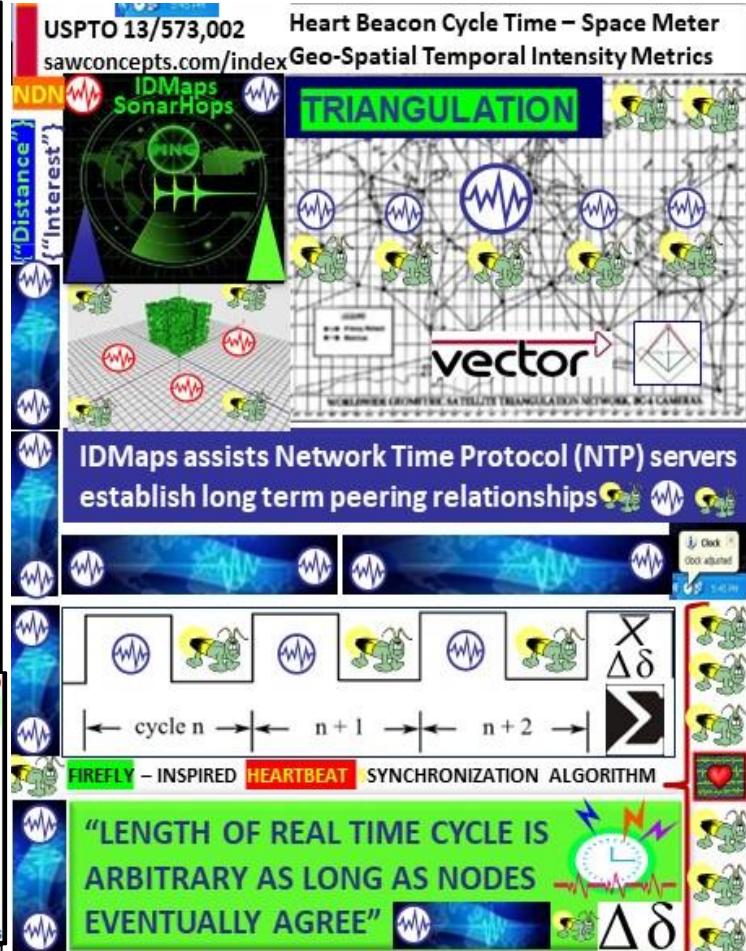


NEO Delegated Byzantine Fault Tolerance (dBFT)



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

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





HASHGRAPH
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 0 / 1

Famous witness Election

Vote See

Strongly see Supermajority Decide

Round created Round received

Consensus timestamp Consensus order $\Delta\delta$

Synchronous



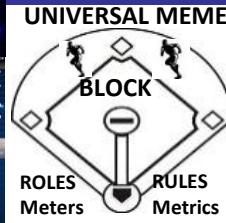
Asynchronous



Micro-Cycle
State Meta
Data Snapshots

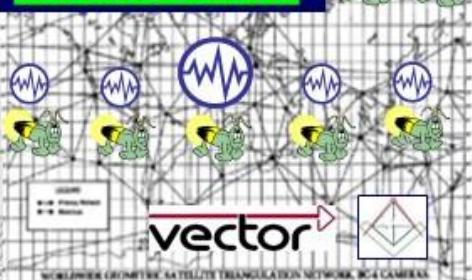
Hash
Nonce

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



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

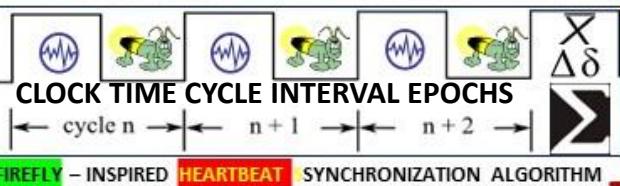
TRIANGULATION



vector

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

FIREFLY HEARTBEAT Synchronization Algorithm



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

Proof of Burn



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

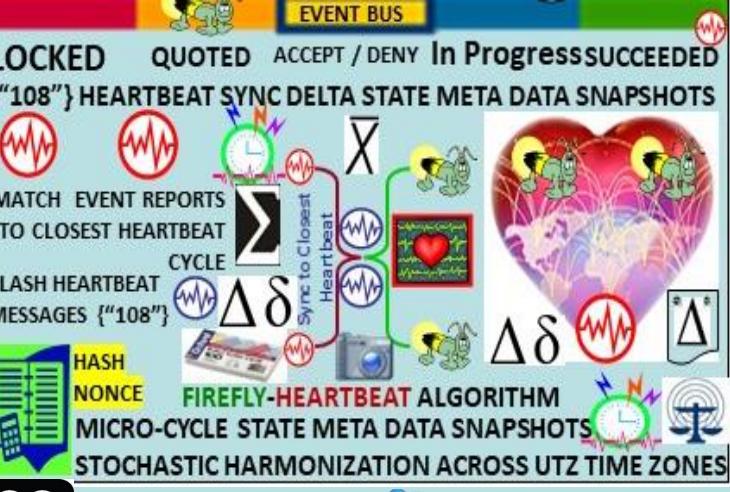
Iain Stewart, the inventor of the POB algorithm, uses an analogy to describe the algorithm: burnt coins are like mining rigs. In this analogy, a miner burns their coins to buy a virtual mining rig that gives them the power to mine blocks. The more coins burned by the miner, the bigger their virtual mining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



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

Phase 2: Shared file stores data for 5 tags:
(1) Active ID
(2) Heartbeat 1.
(3) Heartbeat 2.
(4) Device Status 1.
(5) Device Status 2.

SLA/O

Token Award

TAG

IF1_Heartbeat (IF-Node1)

IF2_Heartbeat (IF-Node2)

IF1_DeviceStatus (IF-Node1)

IF2_DeviceStatus (IF-Node2)

IF1_State (IF-Node1)

IF2_State (IF-Node2)

Volume / Size + / - Of rig

{“Org_ID”} ActivID

{“UUID”} IF1_DeviceStatus (IF-Node1)

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IF1_State (IF-Node1) $\Delta\delta$

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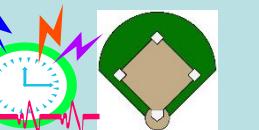
Phase 2: Shared file stores data for

Proof of Capacity PoC



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

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



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



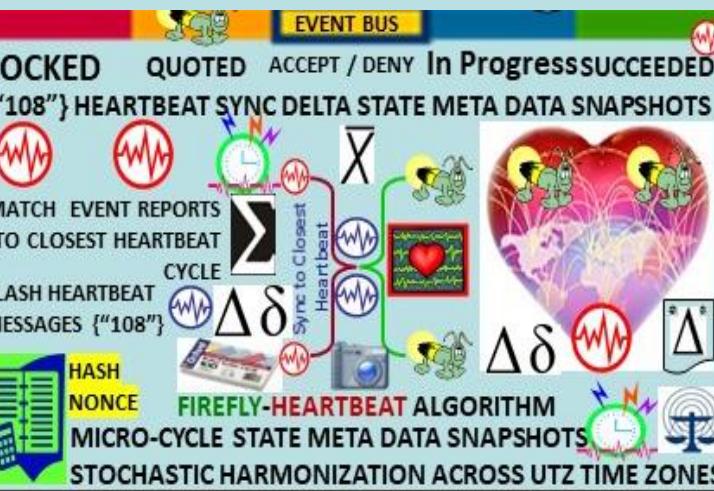
The larger the hard drive, the > possible solution values one can store on the hard drive, the more chances a miner has to match required hash value from his list, resulting in more chances to win the mining reward.



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



Bitcoin purchase akin to property

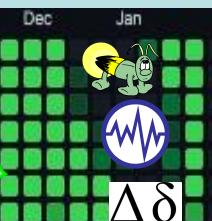


PoST Proof-of-Spacetime (PoST)

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

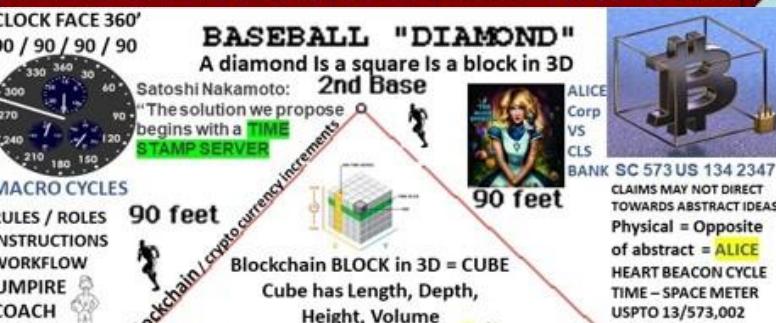


PoST users / nodes must prove that they are spending a certain amount of space for storage.



DISTRIBUTED AUTONOMOUS ORGANIZATIONS DAO

Heart Beacon Cycle FEDERATE / TRADE FEDERATIONS



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

PROXIMITY BEACONS BLOCKCHAIN PARSING

Nicotib Erlang O'REILLY TIME EQUATIONS

TIME SERIES Databases

ATOMIC CLOCK NIST Beacon A Public Beacons Service

NON REPUDIATION

QUANTUM RANDOM #

BEACON BROADCAST

MICRO- CYCLES

ARRIVAL RATE

QUEUE FORMS

LIMITED RESOURCE

SERVICE RATE

RFID

Erlang / Equilibrium Time – Sync Algorithms

ROLES RULES

ERLANG CALENDAR: Calculate Wait Times

Time Stamp to Date Time Conversion

* Utilization * Service Time (T_s)

Proof of Authority



{"GROUP ID"}
{"Org_ID"}

Not pay to play, Node identity is kept as stake

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



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

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

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



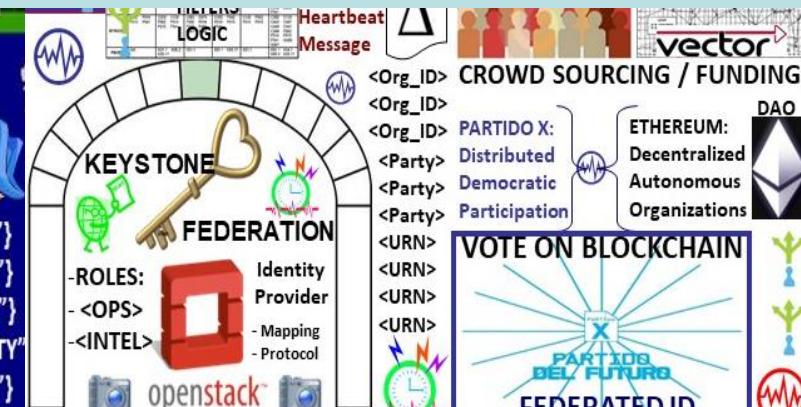
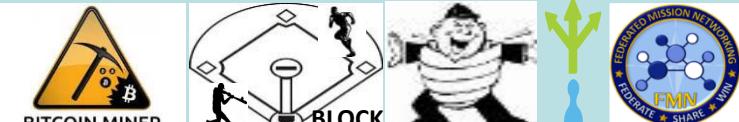
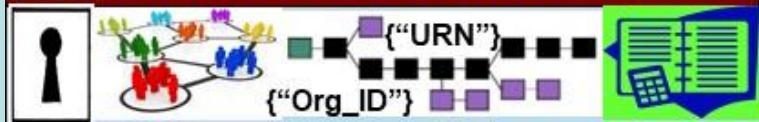
Net joins, drops, splits, merges, moves

Agile, adhoc NETOPS Vs acquisition preserves the

DISTRIBUTED AUTONOMOUS ORGANIZATIONS DAO

Heart Beacon Cycle

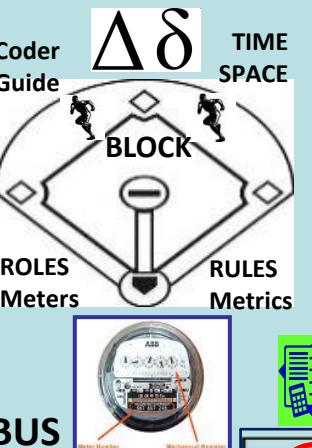
FEDERATE / TRADE FEDERATIONS



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

KEY BLOCKS:

- NO CONTENT = NULL
- LEADER ELECTION



MVP

EVENT BUS

MICRO BLOCKS:

- ONLY CONTENT
- NO CONTENTION



NDN

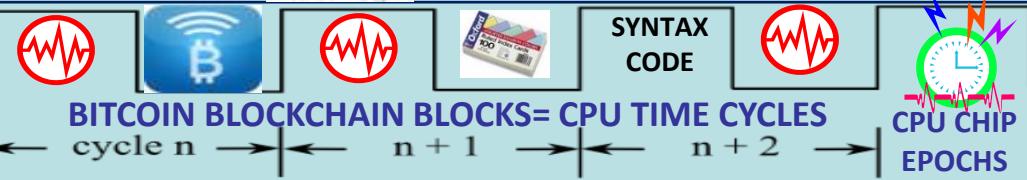
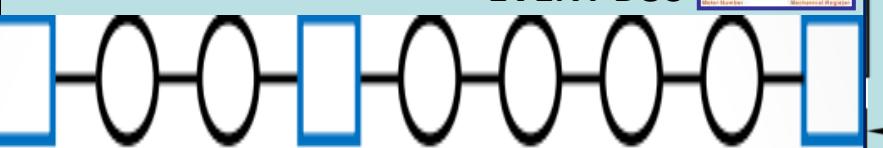
XBRIL / CDL / DAML
STOCK MIC CODES

STRUCTURED
MILITARY MESSAGE
TEMPLATE FORMS
LOGIC / FILTERS



SYNTAX
LEXICON LIBRARY

CPU CHIP
EPOCHS



long exponential intervals (10 min)

COMMAND SYNTAX
RESTFUL State Transfer

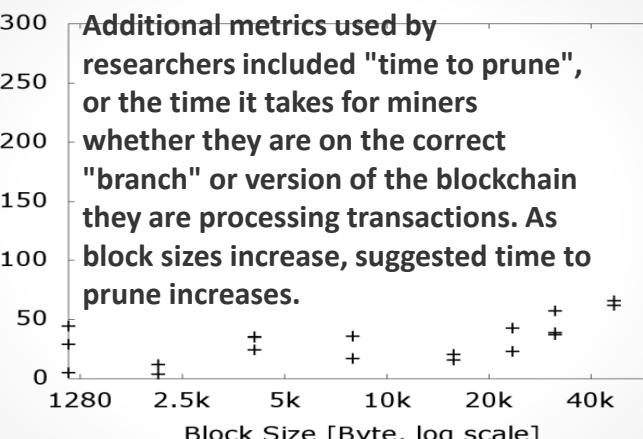


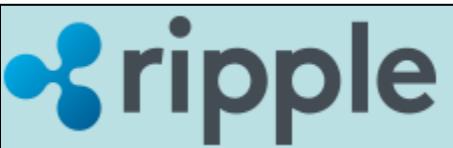
Subjective Time to Prune



short deterministic intervals (10 sec)

MICRO-CYCLES





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

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

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

Provides information about total
costs of the transaction



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



Bitcoin Address Shortener

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

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

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

GET IT ON Google play

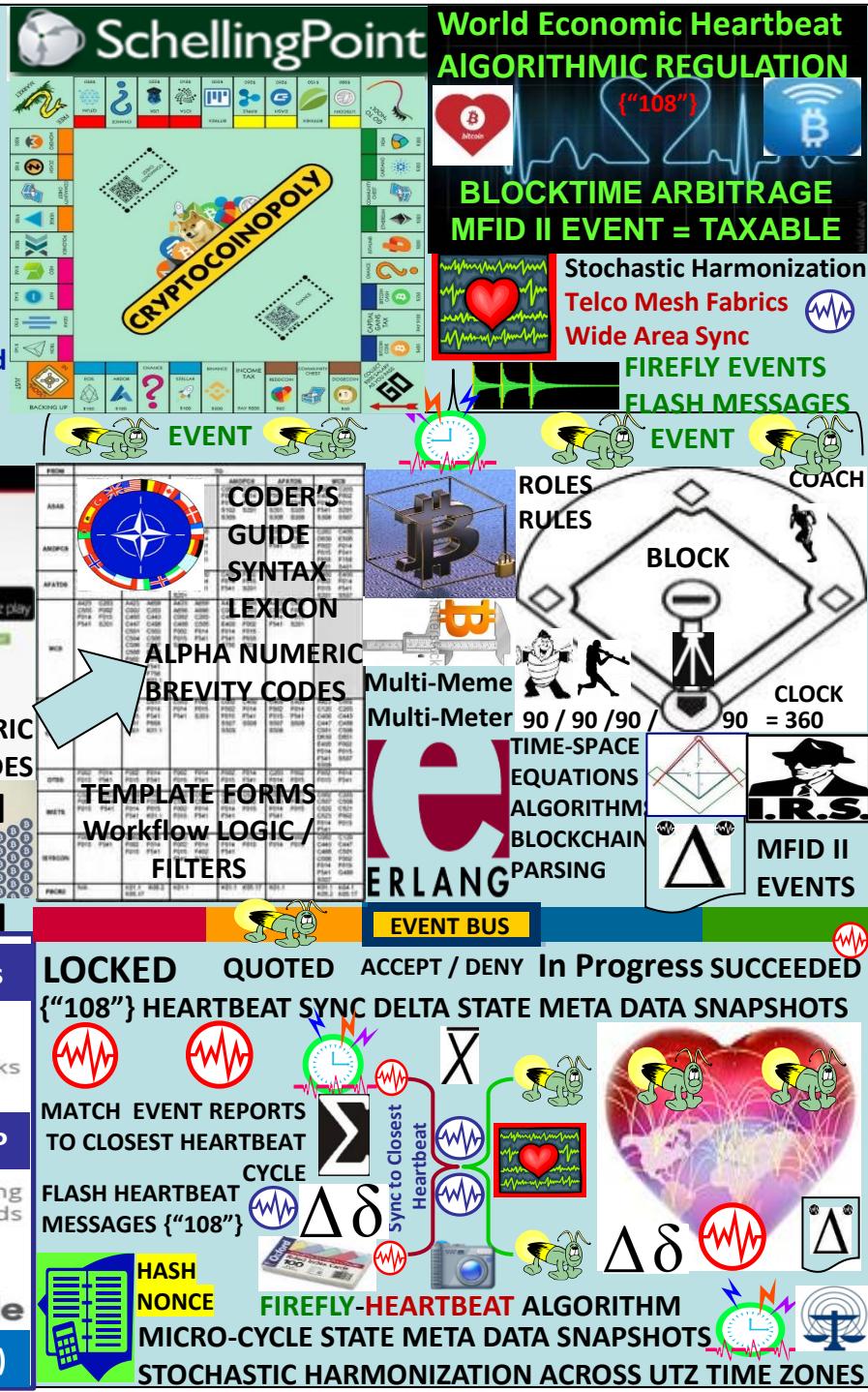
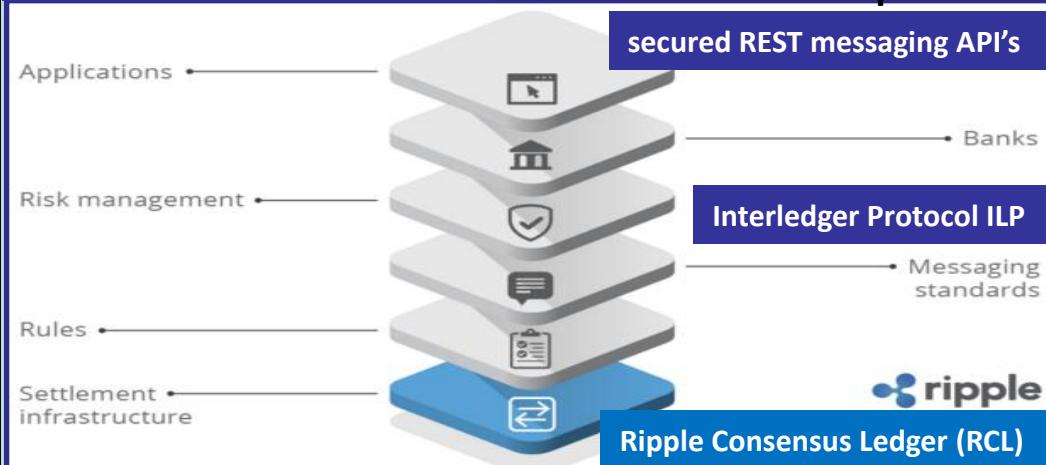
ALPHA NUMERIC BREVITY CODES A.I

To retrieve addresses us computer, use [Blockchain.info](#)

Clock adjusted

Blockchain.info

Neutral transaction protocol



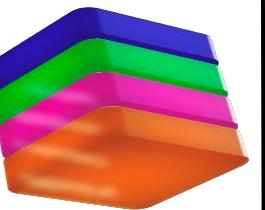


PROTON A CHAIN Virtual Machine

CONTRACT C CHAIN Smart contract

PLATFORM P CHAIN Meta Data

EXCHANGE X CHAIN Cross blockchain



Universal @names Identity / Governance / Resources / Staking

Snowball Consensus

Algorithm

preference := pizza

consecutiveSuccesses := 0

while not decided:

ask k random people preference

if >= α give the same response:

 preference := response with >=

α

 if preference == old preference:

 consecutiveSuccesses++

 else:

 consecutiveSuccesses = 1

 else:

 consecutiveSuccesses = 0

 if consecutiveSuccesses > β:
 decide(preference)

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

Delegated Proof
of Stake {"Org_ID"}



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



DAG Acyclic Graph Parameters:

n: number of participants

k (sample size): between 1 and n

α (quorum size): between 1 and k

β (decision threshold): >= 1

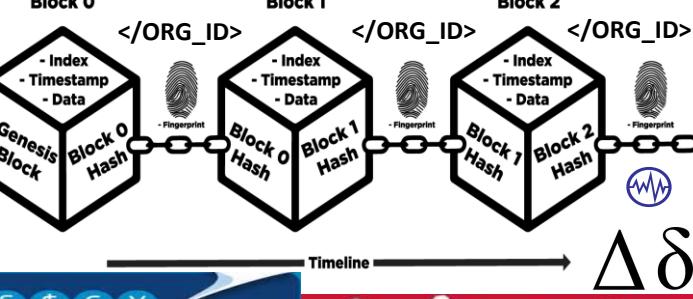
ALL THINGS NET, NET OF \$\$\$

1) EPOCH TIME INTERVALS

2) SYNTAX (not) used in epochs



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



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



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





UNICOIN

Digital Capital Exchange

Unicorn: IMF CBDC legal tender settlement coin

Universal Monetary Unit (UMU), a.k.a Unicorn: store of value cryptography, artificial intelligence (A.I.) Goals: continuous purchasing demand, minimal price volatility, and annual asset pricing targets.

The primary value of any commodity is its utility value.

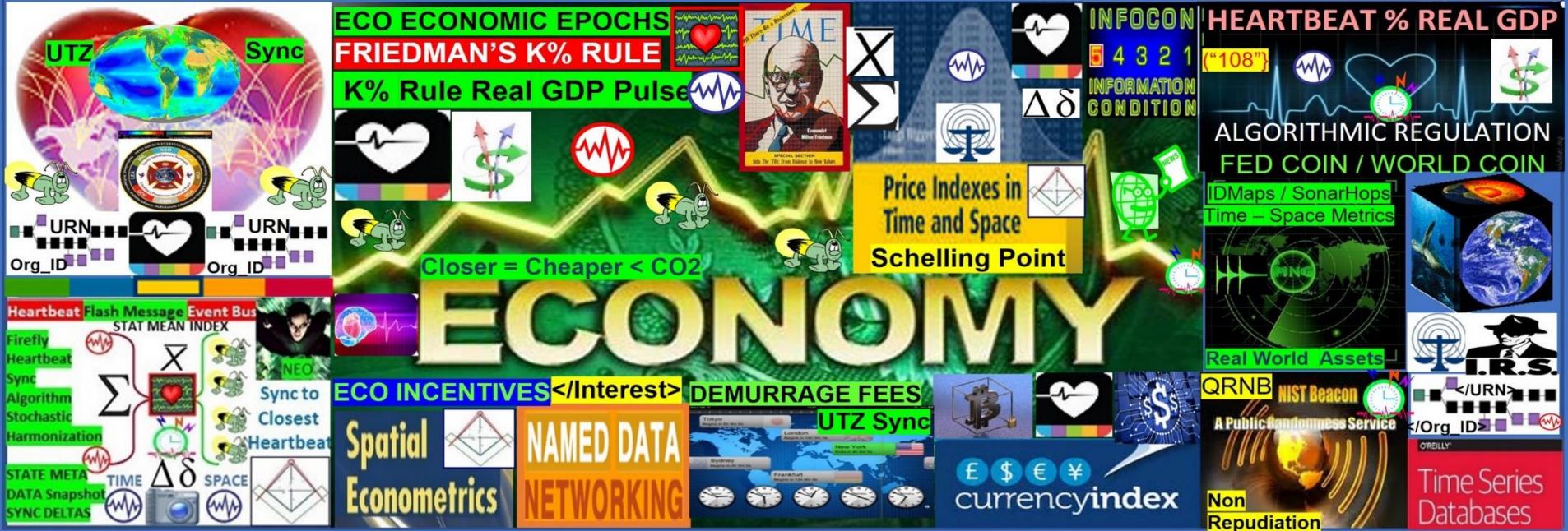
Utility = pay for goods, services, and debts, preserve value over a long period of time. Employs machine learning trading bots. UMPC will establish yield payout rates for wallet holders to stake Unicorn in the Staked Proof of Trust (SPOT) consensus protocol. PoT consensus selects

validators I.A.W contribution to the DeFI network

The DCMA – Digital Public Monetary System

KYC Entity	Ledgers	FX Rates	SPOT Protocol
Create	Create	Stake	
Modify	Modify	Cashout	
Suspend	Suspend	Reject	
KYC People	CBDC	Balances	Authorizations
Create	Create	Activity	Grant Authorization
Modify	Modify	Deposit	Revoke Authorization
Suspend	Suspend	Withdraw	
Issuers	Pause	Money Services	
Create	Unpause	Transfer	
Modify	Mint		
Suspend	Burn		
Post Rates	Redeem		
Branches	Swap	Escrow	Rates
Create	Supply	Create Escrow	Create Rate
Modify	Price	Accept Escrow	Modify Rate
Suspend		Cancel Escrow	Suspend Rate
Wallets			
Agents	Agents	Milestones	Limits
Create	Create	Create Milestone	Create Limit
Modify	Modify	Modify Milestone	Modify Limit
Suspend	Suspend	Cancel Milestone	Suspend Limit
		Release Milestone	
		Sanctions	
		Create Sanction	
		Modify Sanction	
		Suspend Sanction	

Figure 9: Unicorn Global Localization of a CBDC Public Monetary System





UNICOIN

Digital Capital Exchange

CBDC legal tender settlement coin

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KYC People	Balance	Withdraw	
	CBDC		Authorizations
	Create	Money Services	Grant Authorization
	Modify	Transfer	Revoke Authorization
Issuers	Suspend		
	Pause	Escrow	Rates
	Unpause	Create Escrow	Create Rate
	Mint	Accept Escrow	Modify Rate
Post Rates	Burn	Cancel Escrow	Suspend Rate
	Redeem	Release Escrow	
	Swap		Limits
			Create Limit
Branches	Supply	Milestones	Modify Limit
	Price	Create Milestone	Suspend Limit
		Modify Milestone	
		Cancel Milestone	
Agents		Release Milestone	Sanctions
	Wallets		Create Sanction
	Create		Modify Sanction
	Modify		Suspend Sanction
Suspend	Suspend		
	Pause		
	Unpause		
	Attach		

Figure 9: Unicorn Global Localization of a CBDC Public Monetary System





UNICOIN

Digital Capital Exchange

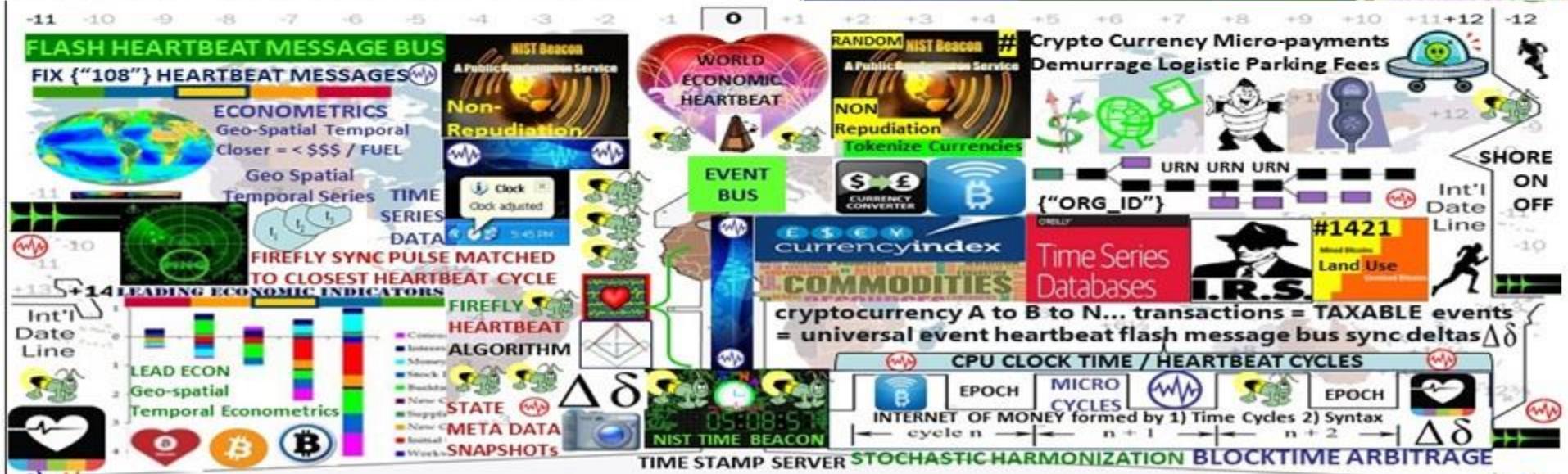
Unicoin: IMF CBDC legal tender settlement coin

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Ü



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.

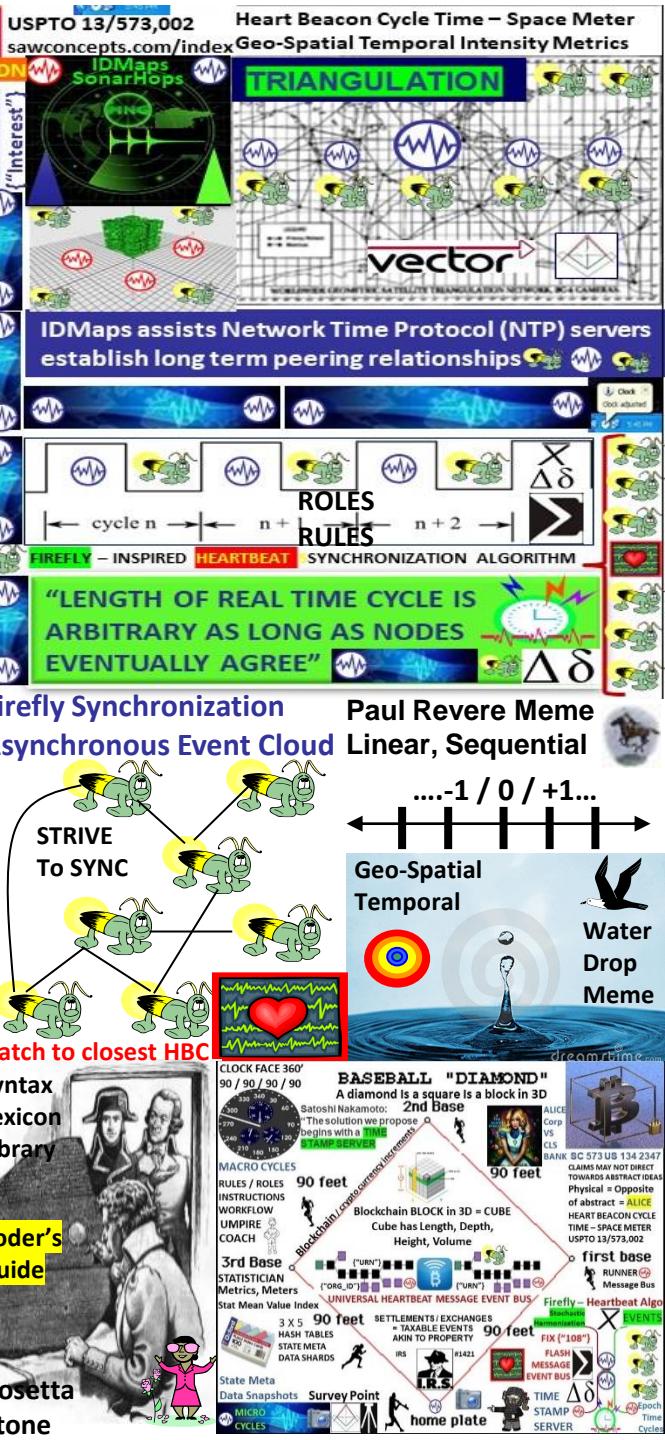
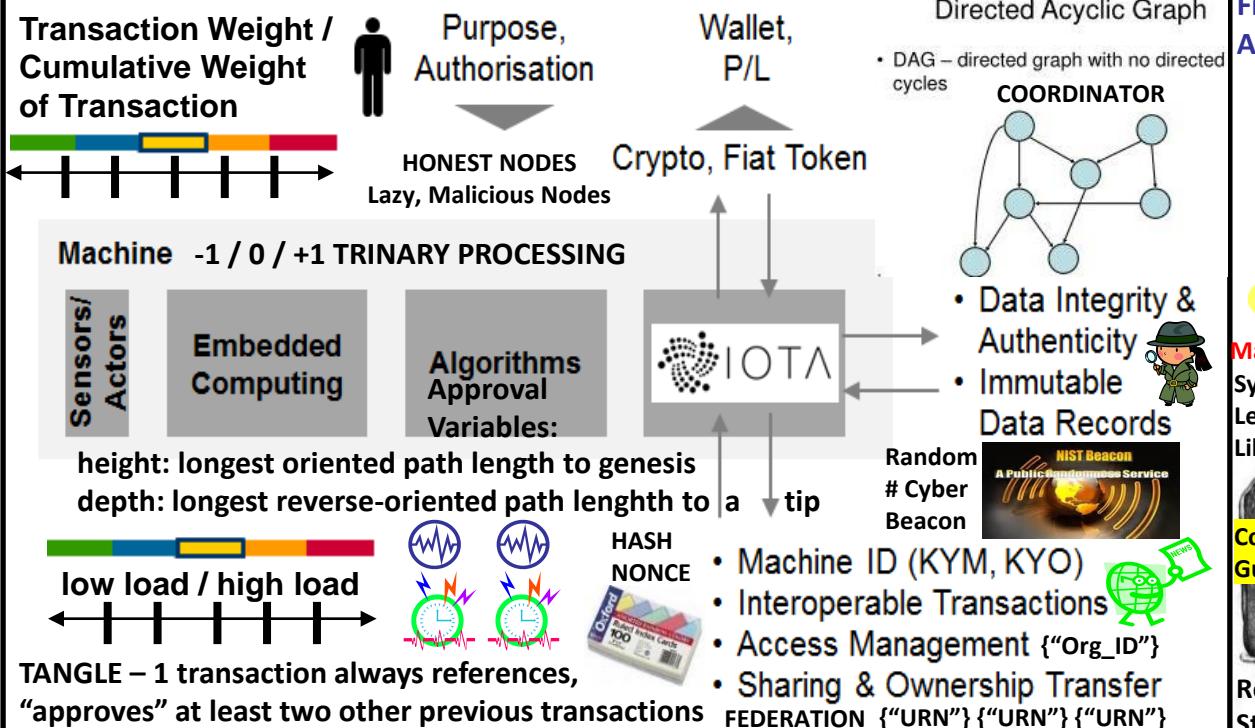


IOTA: Internet Of Things IOT distributed ledger with microtransactions without fees

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

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

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





ZEPPELIN OPEN, GLOBAL ECONOMY

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

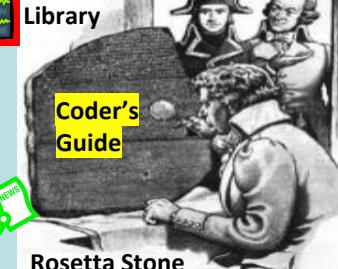
zeppelinOS, operating system for smart contracts
"the rate of innovation in building decentralized applications is limited by the manual and duplicative efforts developers must make to ensure basic usability and security."



WORLD ECONOMIC HEARTBEAT

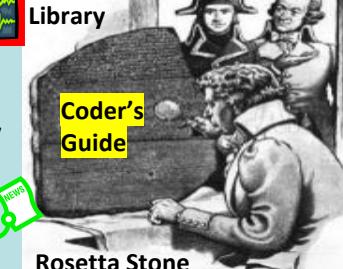
HEART BEACON CYCLE TIME – SPACE METER ECO-ECONOMETRICS ON THE BITCOIN BLOCKCHAIN

Syntax Lexicon Library
300 + Templates

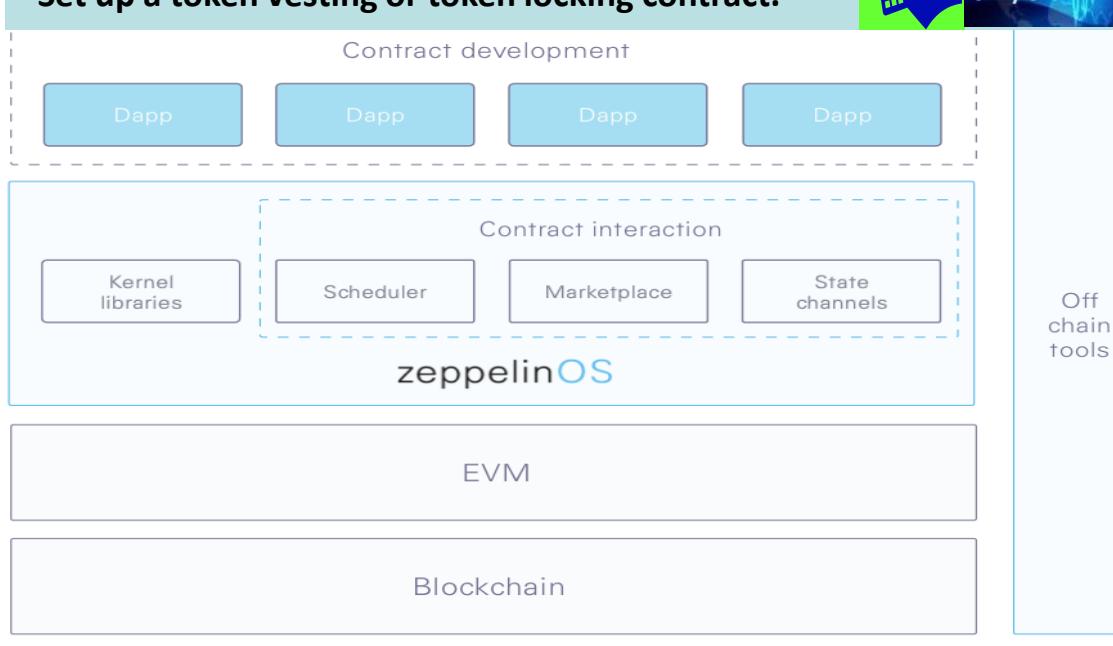
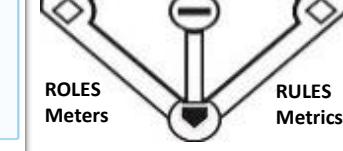


STRUCTURED DATA EXCHANGE

Category	Sub-Category	Details
ASAS	ASAS	PSS01, PSS02, PSS03, PSS04, PSS05, PSS06, PSS07, PSS08, PSS09, PSS10, PSS11, PSS12, PSS13, PSS14, PSS15, PSS16, PSS17, PSS18, PSS19, PSS20, PSS21, PSS22, PSS23, PSS24, PSS25, PSS26, PSS27, PSS28, PSS29, PSS30, PSS31, PSS32, PSS33, PSS34, PSS35, PSS36, PSS37, PSS38, PSS39, PSS40, PSS41, PSS42, PSS43, PSS44, PSS45, PSS46, PSS47, PSS48, PSS49, PSS50, PSS51, PSS52, PSS53, PSS54, PSS55, PSS56, PSS57, PSS58, PSS59, PSS60, PSS61, PSS62, PSS63, PSS64, PSS65, PSS66, PSS67, PSS68, PSS69, PSS70, PSS71, PSS72, PSS73, PSS74, PSS75, PSS76, PSS77, PSS78, PSS79, PSS80, PSS81, PSS82, PSS83, PSS84, PSS85, PSS86, PSS87, PSS88, PSS89, PSS90, PSS91, PSS92, PSS93, PSS94, PSS95, PSS96, PSS97, PSS98, PSS99, PSS999
ANOPIC	ANOPIC	PSS01, PSS02, PSS03, PSS04, PSS05, PSS06, PSS07, PSS08, PSS09, PSS010, PSS011, PSS012, PSS013, PSS014, PSS015, PSS016, PSS017, PSS018, PSS019, PSS020, PSS021, PSS022, PSS023, PSS024, PSS025, PSS026, PSS027, PSS028, PSS029, PSS030, PSS031, PSS032, PSS033, PSS034, PSS035, PSS036, PSS037, PSS038, PSS039, PSS040, PSS041, PSS042, PSS043, PSS044, PSS045, PSS046, PSS047, PSS048, PSS049, PSS050, PSS051, PSS052, PSS053, PSS054, PSS055, PSS056, PSS057, PSS058, PSS059, PSS060, PSS061, PSS062, PSS063, PSS064, PSS065, PSS066, PSS067, PSS068, PSS069, PSS070, PSS071, PSS072, PSS073, PSS074, PSS075, PSS076, PSS077, PSS078, PSS079, PSS080, PSS081, PSS082, PSS083, PSS084, PSS085, PSS086, PSS087, PSS088, PSS089, PSS090, PSS091, PSS092, PSS093, PSS094, PSS095, PSS096, PSS097, PSS098, PSS099, PSS0999
APAFTR	APAFTR	PSS01, PSS02, PSS03, PSS04, PSS05, PSS06, PSS07, PSS08, PSS09, PSS010, PSS011, PSS012, PSS013, PSS014, PSS015, PSS016, PSS017, PSS018, PSS019, PSS020, PSS021, PSS022, PSS023, PSS024, PSS025, PSS026, PSS027, PSS028, PSS029, PSS0200, PSS0201, PSS0202, PSS0203, PSS0204, PSS0205, PSS0206, PSS0207, PSS0208, PSS0209, PSS0210, PSS0211, PSS0212, PSS0213, PSS0214, PSS0215, PSS0216, PSS0217, PSS0218, PSS0219, PSS0220, PSS0221, PSS0222, PSS0223, PSS0224, PSS0225, PSS0226, PSS0227, PSS0228, PSS0229, PSS02200, PSS02201, PSS02202, PSS02203, PSS02204, PSS02205, PSS02206, PSS02207, PSS02208, PSS02209, PSS02210, PSS02211, PSS02212, PSS02213, PSS02214, PSS02215, PSS02216, PSS02217, PSS02218, PSS02219, PSS02220, PSS02221, PSS02222, PSS02223, PSS02224, PSS02225, PSS02226, PSS02227, PSS02228, PSS02229, PSS02230, PSS02231, PSS02232, PSS02233, PSS02234, PSS02235, PSS02236, PSS02237, PSS02238, PSS02239, PSS02240, PSS02241, PSS02242, PSS02243, PSS02244, PSS02245, PSS02246, PSS02247, PSS02248, PSS02249, PSS02250, PSS02251, PSS02252, PSS02253, PSS02254, PSS02255, PSS02256, PSS02257, PSS02258, PSS02259, PSS02260, PSS02261, PSS02262, PSS02263, PSS02264, PSS02265, PSS02266, PSS02267, PSS02268, PSS02269, PSS02270, PSS02271, PSS02272, PSS02273, PSS02274, PSS02275, PSS02276, PSS02277, PSS02278, PSS02279, PSS02280, PSS02281, PSS02282, PSS02283, PSS02284, PSS02285, PSS02286, PSS02287, PSS02288, PSS02289, PSS02290, PSS02291, PSS02292, PSS02293, PSS02294, PSS02295, PSS02296, PSS02297, PSS02298, PSS02299, PSS022999
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CORCH	CORCH	PSS01, PSS02, PSS03, PSS04, PSS05, PSS06, PSS07, PSS08, PSS09, PSS010, PSS011, PSS012, PSS013, PSS014, PSS015, PSS016, PSS017, PSS018, PSS019, PSS020, PSS021, PSS022, PSS023, PSS024, PSS025, PSS026, PSS027, PSS028, PSS029, PSS030, PSS031, PSS032, PSS033, PSS034, PSS035, PSS036, PSS037, PSS038, PSS039, PSS0300, PSS0301, PSS0302, PSS0303, PSS0304, PSS0305, PSS0306, PSS0307, PSS0308, PSS0309, PSS0310, PSS0311, PSS0312, PSS0313, PSS0314, PSS0315, PSS0316, PSS0317, PSS0318, PSS0319, PSS0320, PSS0321, PSS0322, PSS0323, PSS0324, PSS0325, PSS0326, PSS0327, PSS0328, PSS0329, PSS03200, PSS03201, PSS03202, PSS03203, PSS03204, PSS03205, PSS03206, PSS03207, PSS03208, PSS03209, PSS03210, PSS03211, PSS03212, PSS03213, PSS03214, PSS03215, PSS03216, PSS03217, PSS03218, PSS03219, PSS03220, PSS03221, PSS03222, PSS03223, PSS03224, PSS03225, PSS03226, PSS03227, PSS03228, PSS03229, PSS03230, PSS03231, PSS03232, PSS03233, PSS03234, PSS03235, PSS03236, PSS03237, PSS03238, PSS03239, PSS03240, PSS03241, PSS03242, PSS03243, PSS03244, PSS03245, PSS03246, PSS03247, PSS03248, PSS03249, PSS03250, PSS03251, PSS03252, PSS03253, PSS03254, PSS03255, PSS03256, PSS03257, PSS03258, PSS03259, PSS03260, PSS03261, PSS03262, PSS03263, PSS03264, PSS03265, PSS03266, PSS03267, PSS03268, PSS03269, PSS03270, PSS03271, PSS03272, PSS03273, PSS03274, PSS03275, PSS03276, PSS03277, PSS03278, PSS03279, PSS03280, PSS03281, PSS03282, PSS03283, PSS03284, PSS03285, PSS03286, PSS03287, PSS03288, PSS03289, PSS03290, PSS03291, PSS03292, PSS03293, PSS03294, PSS03295, PSS03296, PSS03297, PSS03298, PSS03299, PSS032999



STOCHASTIC HARMONIZATION for TELCO Mesh Fabrics







EGAAS
ELECTRONIC GOVERNMENT AS A SERVICE

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

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

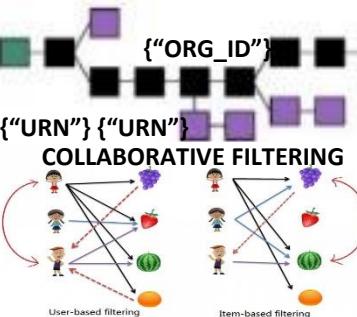
WORLD ECONOMIC Heartbeat

{“108”}

ALGORITHMIC REGULATION
HEARTBEAT SYNC DELTAS

INFOCON

TERRACYCLE



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. INCENTIVIZE ECO-FRIENDLY TRANSACTIONS

Neural Net $-1.1 \quad -1.0 \quad 0 \quad 0.1 \quad 0.2 \quad 0.3 \quad 0.4 \quad 0.5 \quad 0.6 \quad 0.7 \quad 0.8 \quad 0.9 \quad 1.0 \quad 1.1 \quad 1.2$

ENVIRONMENT FRIENDLY ECO INCENTIVES CLOSER - LESS FUEL ON

ENVIRONMENT FRIENDLY ECO-INCENTIVES CLOSER - LESS FUEL G7 CLOSER

CLOSER = FASTER Carbon

Named Data Networking STOCHASTIC HARMONIZATION Unused Resources

INTEREST] NDN STAT MEAN

 Sync CO₂ Credits Unmet Needs Line

[TOP](#) [CREDITS](#) [ITEM NEEDS](#) OFF

10 | Page

INTO Date FIREFLY HEARTBEAT Closest Meme

Line ALGORITHM HEARTBEAT Motor

SIREENY EVENT BUS FLASH HEARTBEAT <img alt="Delta icon" data-bbox="12978 948 12998 97

IREFLY EVENT BUS FLASH EPOCH PING SHORE

HEARTBEAT {108"} MESSAGES STATE META DATA SNAPSHOTSHORE

The proposed **Universal Timezone System** would do away with all these different time zones.

ent time zones. Instead, it would be the same time all over the world, all the time.





"EARTHDAY EVERYDAY ON THE BITCOIN BLOCKCHAIN"
"GIVE A HOOT, DON'T POLLUTE" Woodsy The Owl

GNOSIS

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

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

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

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

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

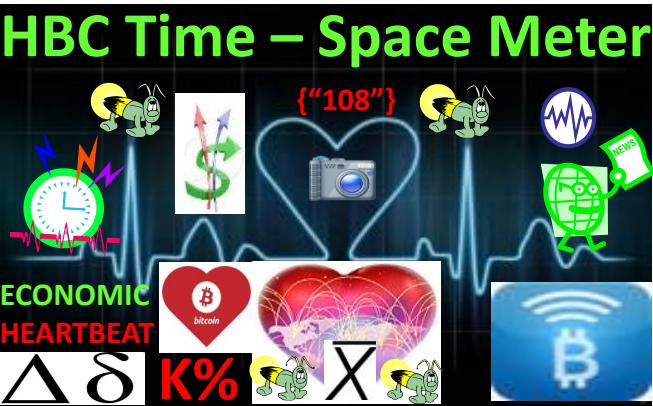


"Our mission is to build an accessible prediction market platform enabling free flow of useful information / the "Google" of Customized Information Searching"

Futarchy PREDICTION MARKETS
GnosisAMA

Gnosis trading interface alpha
WIZ token fee payment
INFORMATION ARBITRAGE ECONOMICS

TERRACYCLE Price Oracle

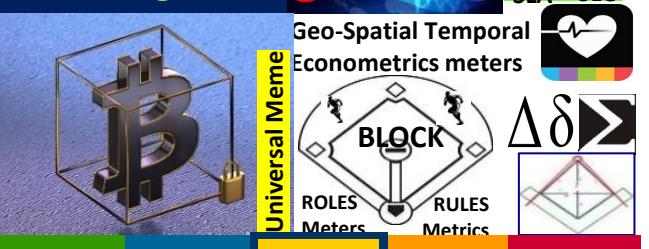


THE TERRA (TRC)

Trade Reference Currency



Demurrage Fees



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





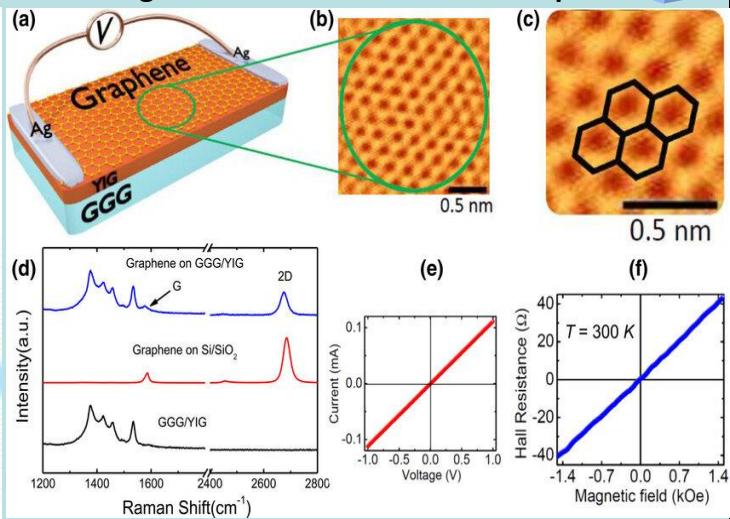
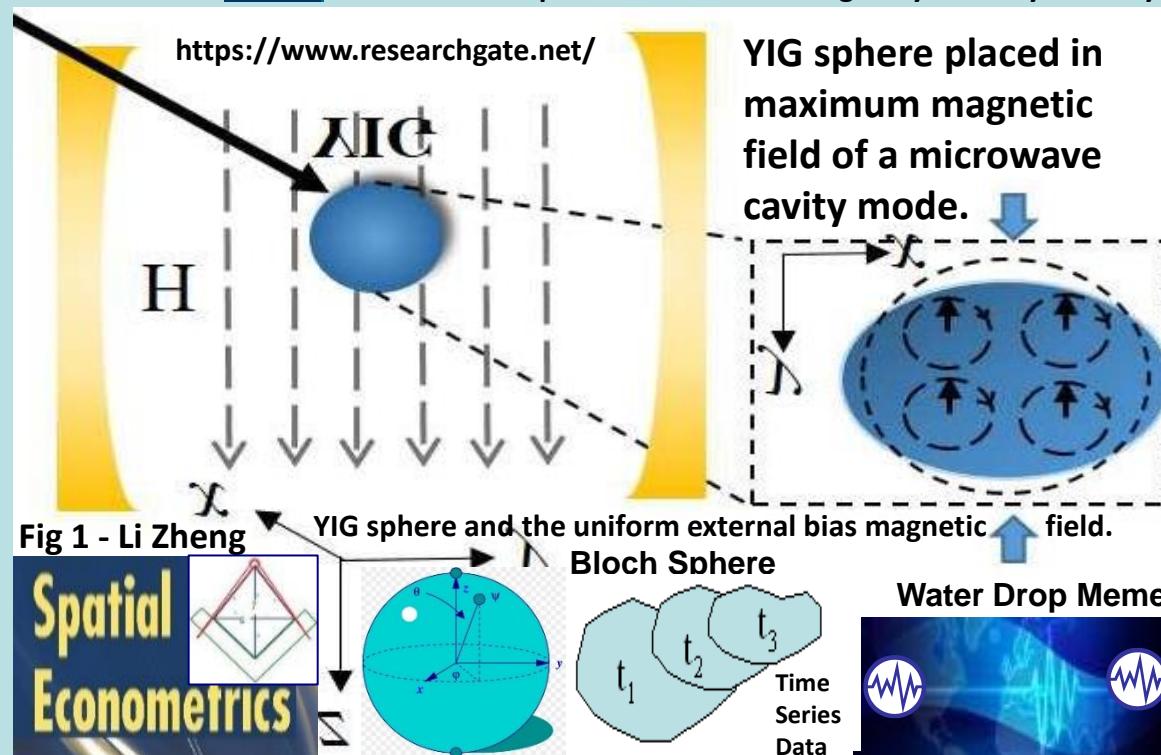
TESLA Harmonic Sphere Flux Resonator

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

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

Yttrium iron garnet spheres serve as magnetically tunable filters and resonators for microwave frequencies. YIG filters are used for their high Q factors, typically between 100 and 200.

Sphere made from a single crystal of synthetic yttrium iron garnet acts as a resonator. Wikipedia



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

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

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

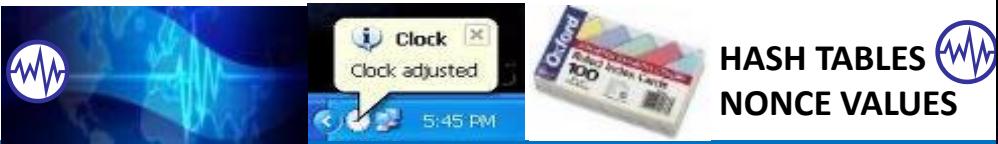




Bitcoin Classic seeks to mitigate the problem of more transactions, which are causing transaction backlogs and increased transaction costs, by increasing the block size - the number of kilobytes in a block of transactions - from 1MB to 2MB.



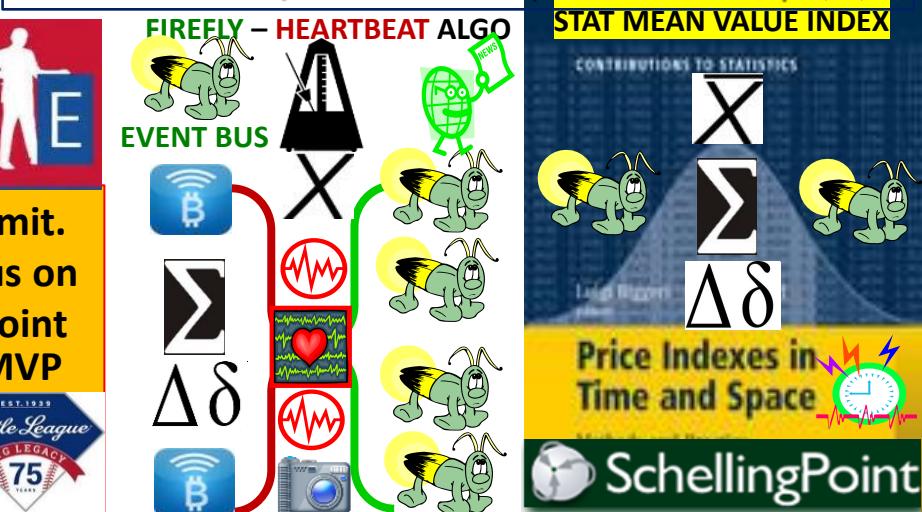
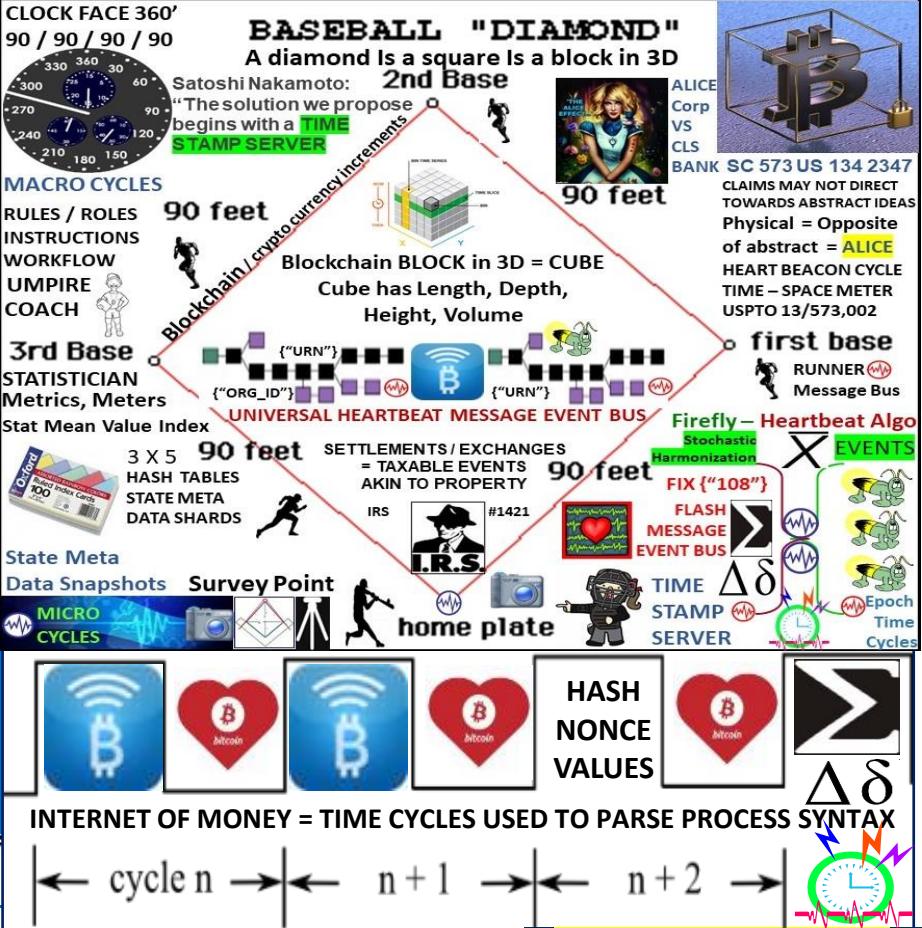
ALL THINGS INTERNET FORMED W 1) TIME EPOCHS 2) SYNTAX



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



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



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

AZURE: Core/Kernel/Universal Protocol 

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

Unspent Transaction Output protocols UTXO

Crypto Tokenized Assets Digital Bearer Bonds
unique identity for owned artifacts

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

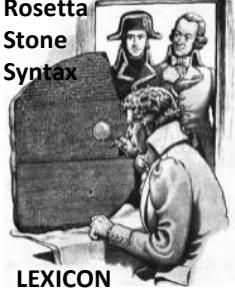
Blockchain middleware: identity and operations management, data,
intelligence services like analytics and machine learning. New middleware
works with existing Azure services, like Active Directory and Key Vault

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

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

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

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

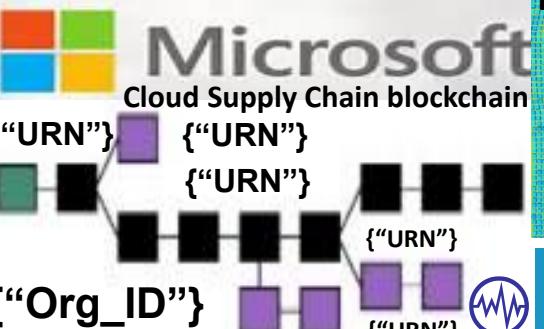


ALPHA NUMERIC BREVITY CODES SYMBOL CODES	
STRUCTURED MILITARY MESSAGE TEMPLATE FORMS LOGIC / FILTERS	

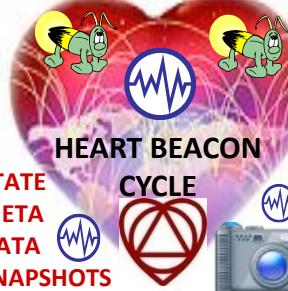
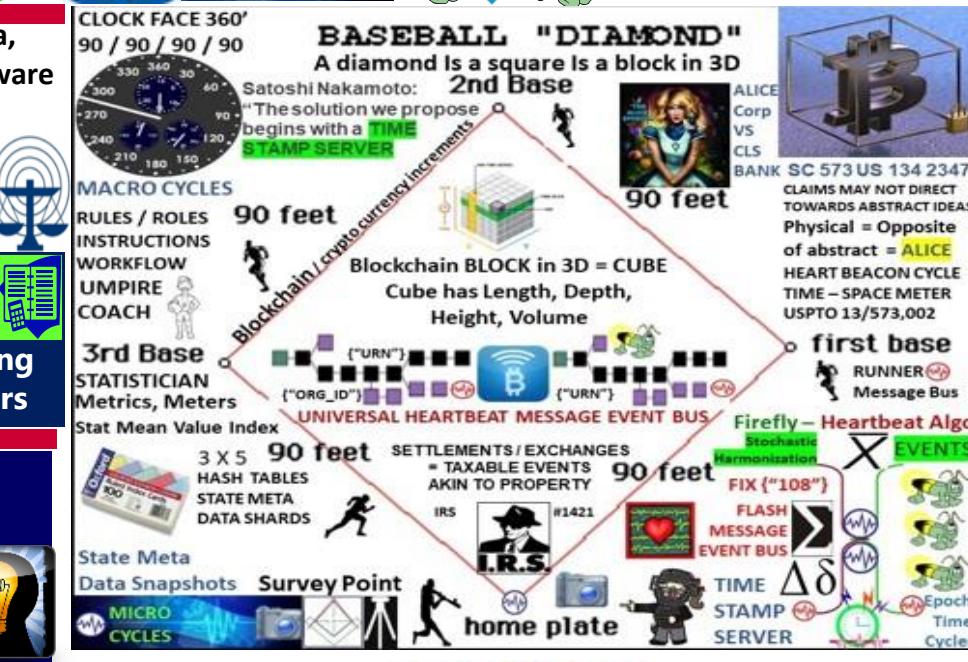
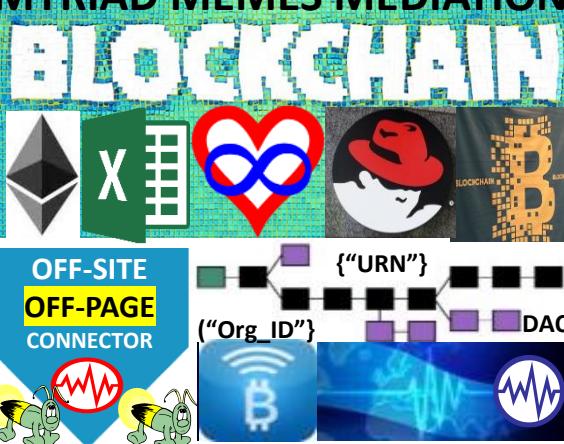
The current standard time common throughout the world is based on a 24-hour clock, with zones that are either 12 hours ahead or behind Coordinated Universal Time (UTC). However, these time zones are decided upon by individual governments, without overall coordination and can even extend fourteen hours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



MULTI-MEME MULTI-METER

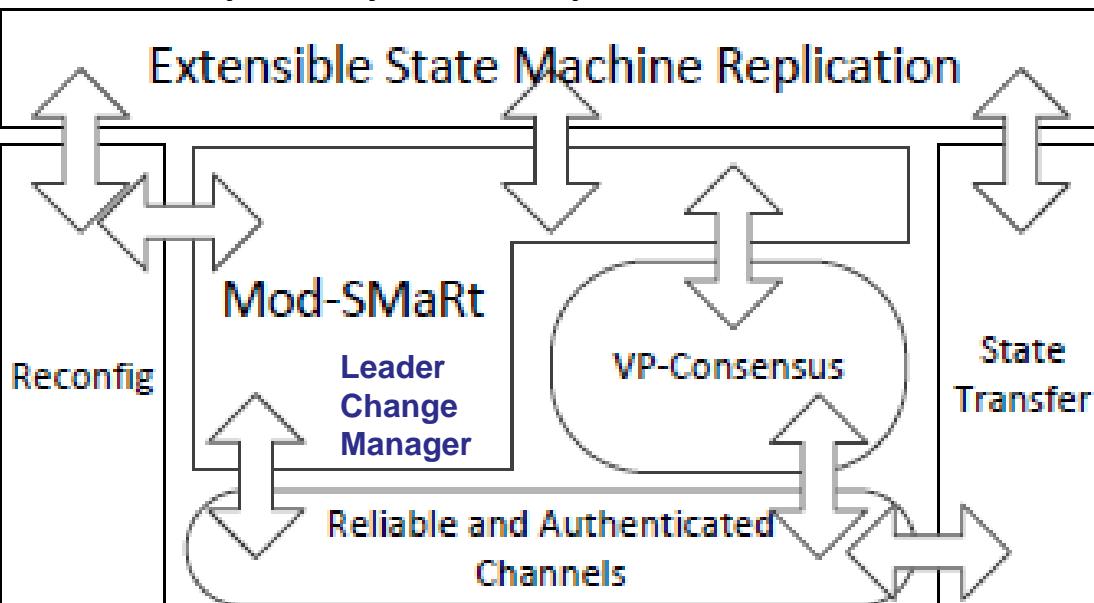


MYRIAD MEMES MEDiation



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

USCt ALICE CORP V CLS BANK

PHYSICAL = OPPOSITE OF ABSTRACT



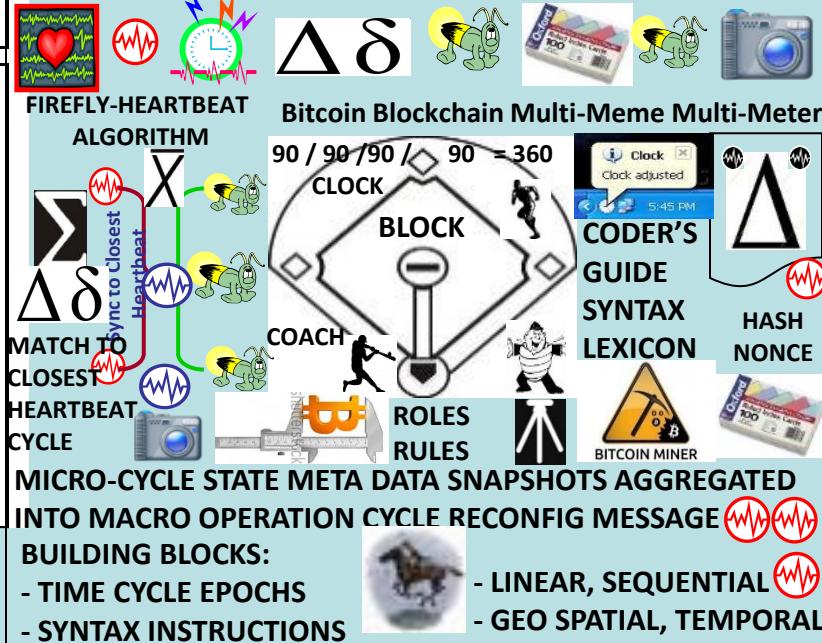
DERIVED FROM BATTLEFIELD DIGITIZATION DISTRIBUTED AUTONOMOUS ORGANIZATION DAO SYSTEM OF SYSTEMS

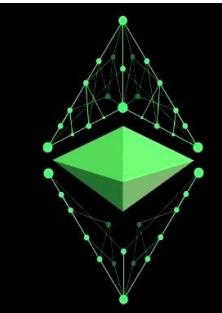
FEDERATED ID / ORGANIZATIONAL IDENTIFIER {"ORG_ID"}

ADDS, JOINS, DROPS, MOVES TO / FROM DAO

CHANGES IN STATE VIEWED IN "APPLIQUE' OVERLAY VIEWS

00.99 HEARTBEAT SYNC DELTA STATE META DATA SNAPSHOTS





ETHER: Compensate Resource Contribution

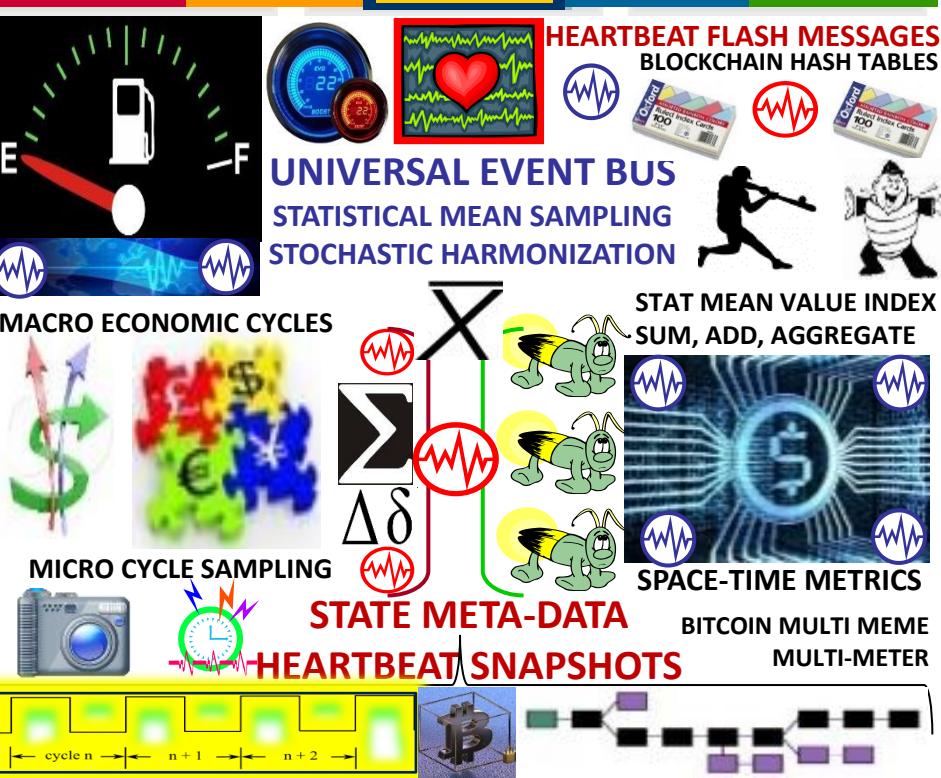
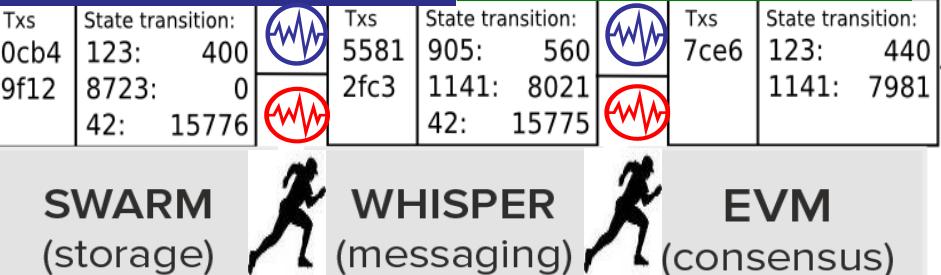
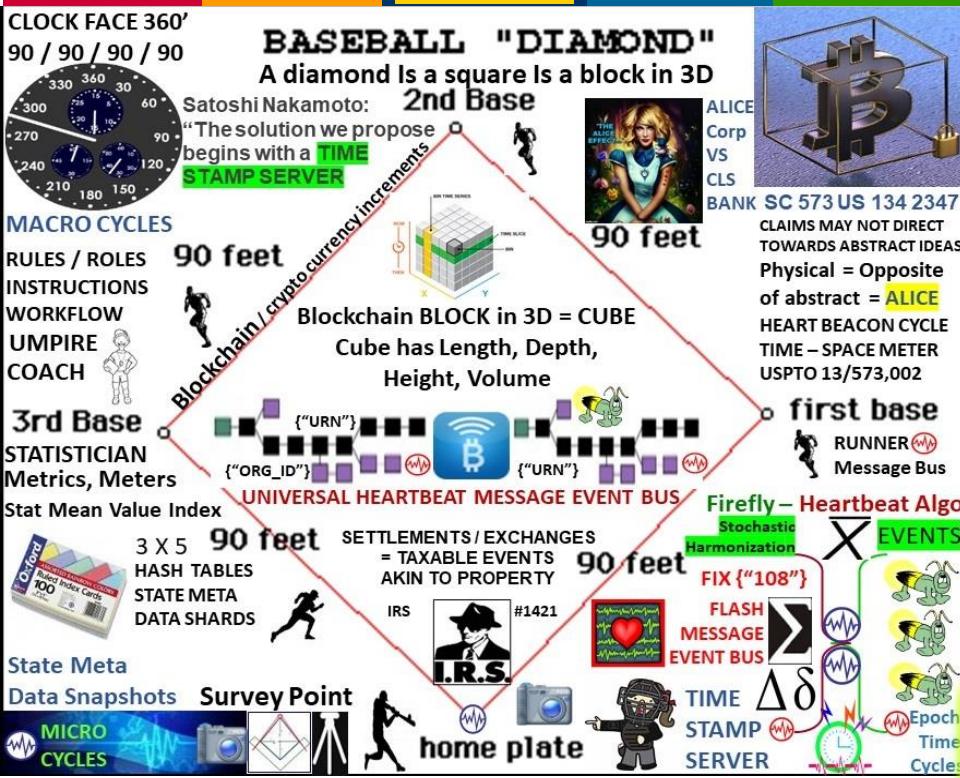
Gas: price to
Run contract
transactions

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



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

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

FIREFLY-HEARTBEAT FLASH Msg EVENT BUS



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



3 x 5 HASH TABLES STATE META DATA SHARDS

3 x 5 INDEX CARDS

QUANTUM RANDOM #

3 x 5

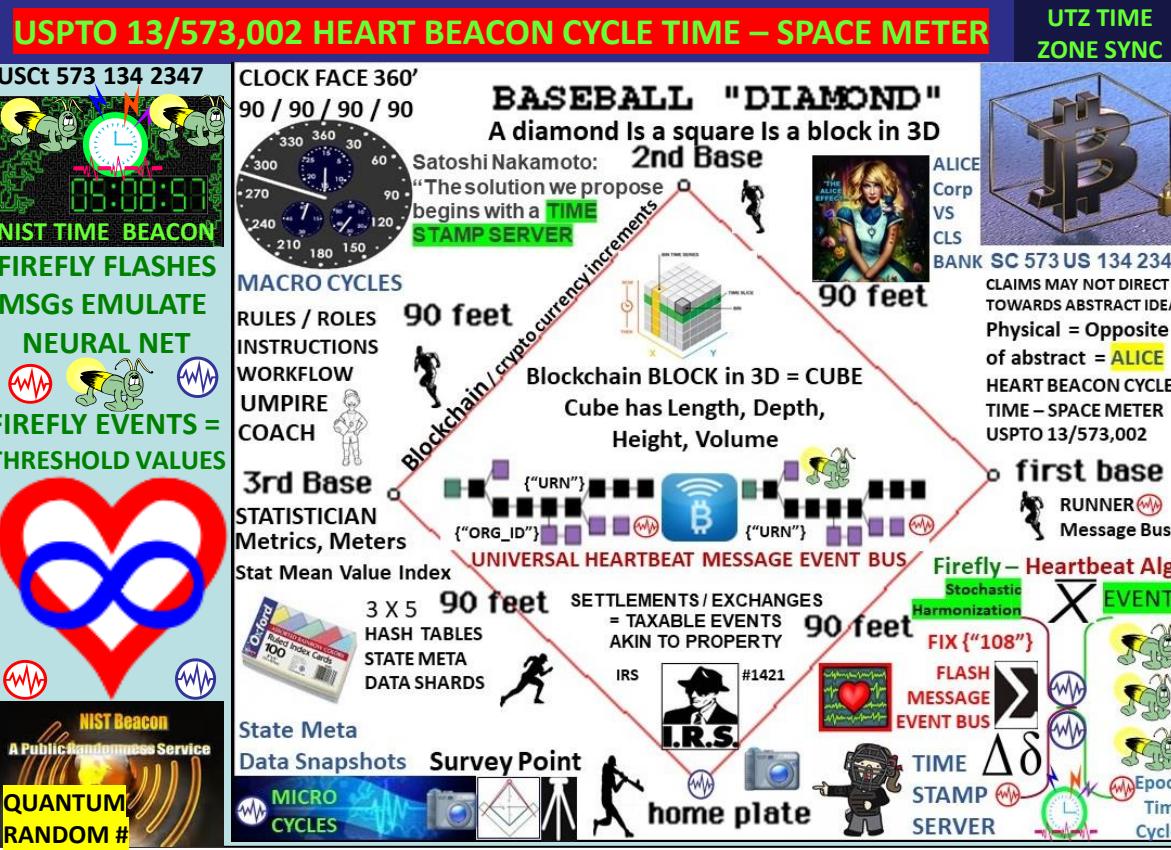
3 x 5 INDEX CARDS

INDEX CARD="SHARD"

HBC "ORG_ID" {"URN"} CLASS ASSET TYPE {"UUID"} DEVICE TYPE

UTZ TIME ZONE SYNC

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



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

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

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

ALICE Corp VS CLS BANK SC 573 US 134 2347

CLAIMS MAY NOT DIRECT TOWARDS ABSTRACT IDEAS

Physical = Opposite of abstract = ALICE

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

first base
RUNNER Message Bus

Settlements / Exchanges = TAXABLE EVENTS AKIN TO PROPERTY

IRS #1421

Fix "108"

FLASH MESSAGE EVENT BUS

Time Stamp Server

Time Cycles

Epoch Time Cycles



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

ERLANG API FOR BLOCKCHAIN



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

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

CROSS – CHAIN ATOMIC SWAPS

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



Aeons: energy for applications implemented on the platform.

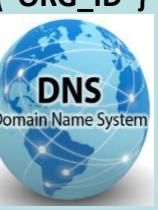
ACCOUNTS & IDENTITY: æternity's accounts are permission-less, but allow customization via schema.org's semantic web scheme. Create & own (**federated group**) / individual identities on the æternity network



("ORG_ID")

("ORG_ID")

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



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

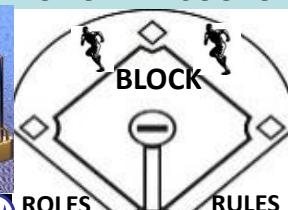
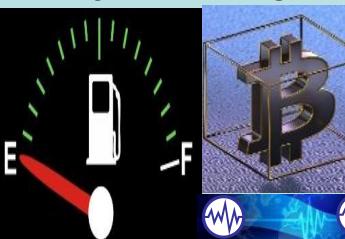
AETERNITY CROSS-CHAIN ATOMIC SWAPS CORRESPOND TO HEART BEACON CYCLE'S USE OF BATTLEFIELD DIGITIZATION DERIVED HEARTBEAT SYNC DELTAS



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

TOKENS REPRESENT REAL WORLD VALUE URN RESOURCES

ETHEREUM USES GAS GUAGE MEME INDICATING THRESHOLD MET / NOT MET



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

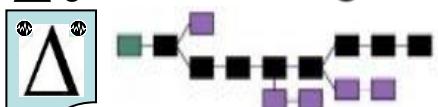
Federation Gateway
("ORG_ID")



HYPER LEDGER OPEN SOURCE BLOCKCHAIN

Core APIs, & SDKs

$\Delta\delta$ Shared Ledger



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



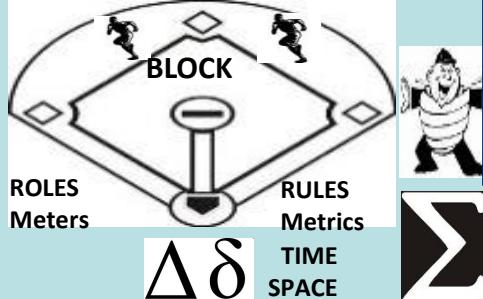
METRICS (“Organization ID”) METERS

FEDERATION Federation *Gateway*

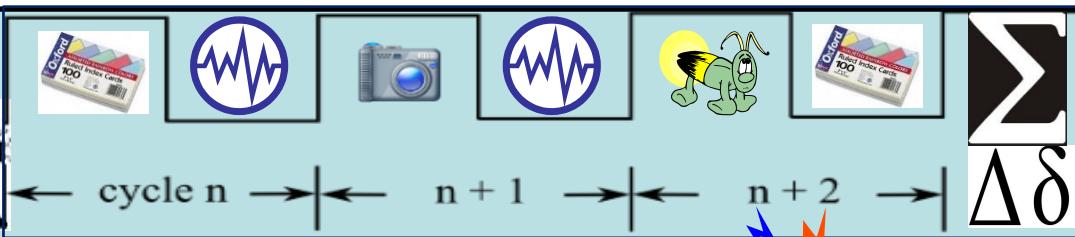
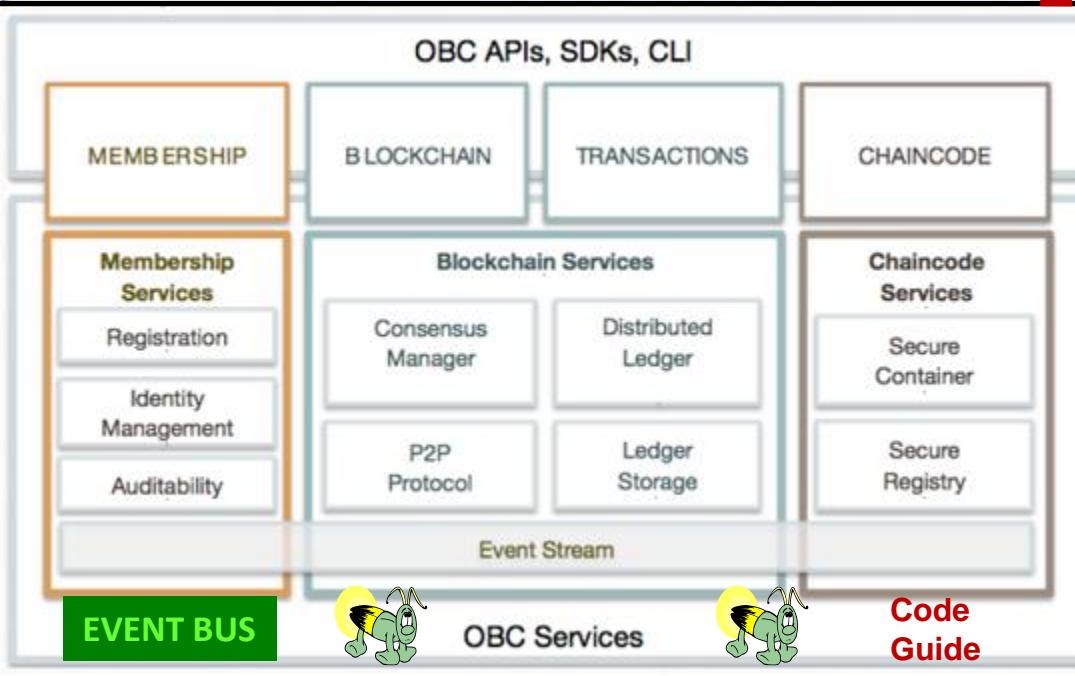
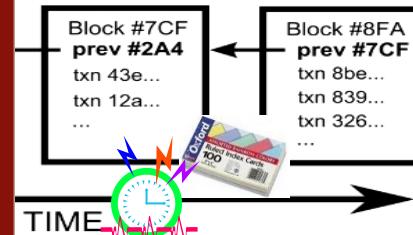
RESTFUL SYNC DELTA CHANGE MANAGEMENT MICRO-MACRO CYCLE



BLOCKTIME ARBITRAGE



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



MICRO-MACRO CYCLE SCHEDULE



FFIRNS
FFUDNS

Alpha-Numerics

ROSETTA STONE

ASAR		XBRL / CDL / DAML STOCK MIC CODES											
AFNFC		STRUCTURED MILITARY MESSAGE TEMPLATE FORMS LOGIC / FILTERS											
AFMTR		SYNTAX SYMBOL LIBRARY											
CDSCB	F002	F003	F004	F005	F006	F007	F008	F009	F010	F011	F012	F013	F014
OTRS	F015	F016	F017	F018	F019	F020	F021	F022	F023	F024	F025	F026	F027
WETS	F028	F029	F030	F031	F032	F033	F034	F035	F036	F037	F038	F039	F040
PRON	F041	F042	F043	F044	F045	F046	F047	F048	F049	F050	F051	F052	F053
ASAR	F054	F055	F056	F057	F058	F059	F060	F061	F062	F063	F064	F065	F066
AFNFC	F067	F068	F069	F070	F071	F072	F073	F074	F075	F076	F077	F078	F079
AFMTR	F080	F081	F082	F083	F084	F085	F086	F087	F088	F089	F090	F091	F092
CDSCB	F093	F094	F095	F096	F097	F098	F099	F100	F101	F102	F103	F104	F105
OTRS	F106	F107	F108	F109	F110	F111	F112	F113	F114	F115	F116	F117	F118
WETS	F119	F120	F121	F122	F123	F124	F125	F126	F127	F128	F129	F130	F131
PRON	F132	F133	F134	F135	F136	F137	F138	F139	F140	F141	F142	F143	F144

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

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

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.

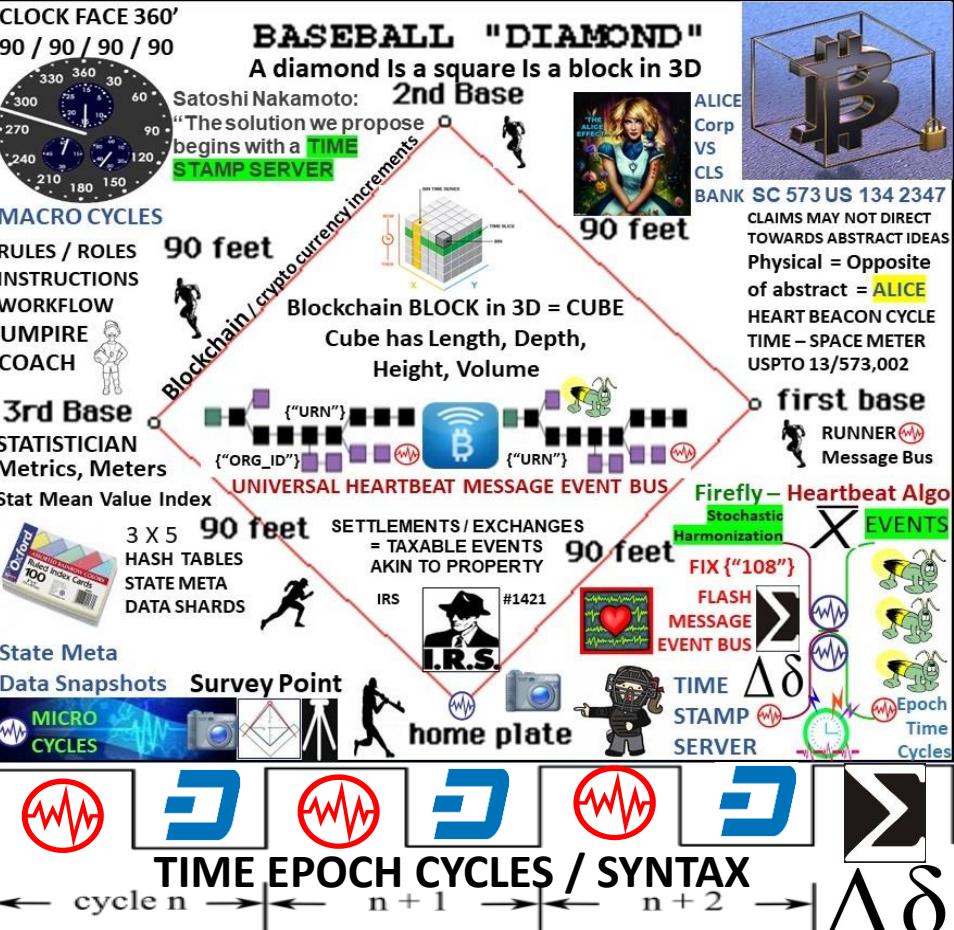
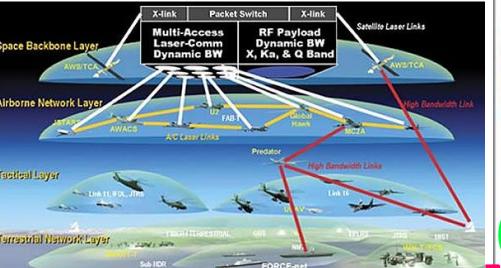
"Its makeup is thus: the block reward is divvied up in three parts. The first 45 percent goes to [Dash's miners](#). Another 45 percent goes to its Masternodes. And 10 percent is set aside to fund whatever other jobs or expenditures the Dash network deems necessary"

InstantX: To solve the problem of lag time in transactions, Masternodes are able to instantly lock transactions 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



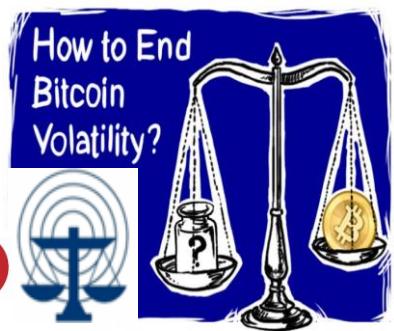
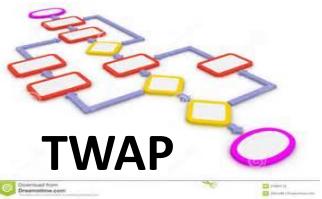
Firefly - Heartbeat synchronization: nodes in a distributed system generate periodic, local "heartbeat" events approximately at the same time with a goal of all nodes starting / ending cycles at the same time eventually = HB CYCLE



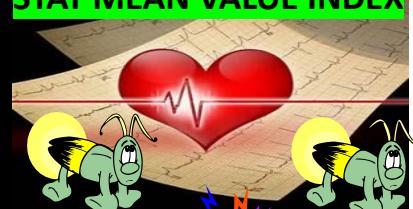
TWAP Algorithm Manages Bitcoin Price Volatility Algorithm



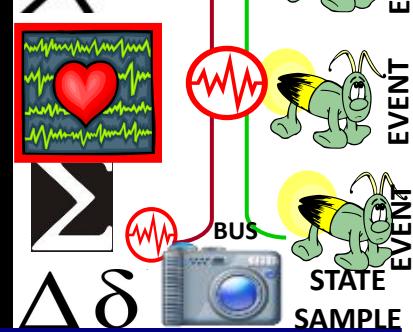
TWAP GOAL: provide a Time Weighted Average Price Benchmark



FIREFLY HEARTBEAT ALGO
STAT MEAN VALUE INDEX



EPOCH TIMES
STATE META DATA SNAPSHOTS



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

STATE SAMPLE

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



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

Key Features:

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



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

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

All rates time-stamped in UTC.



Ability to look up by time-stamp.

Ability to look up by block-height.

Asset Classes: Digital Currencies

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

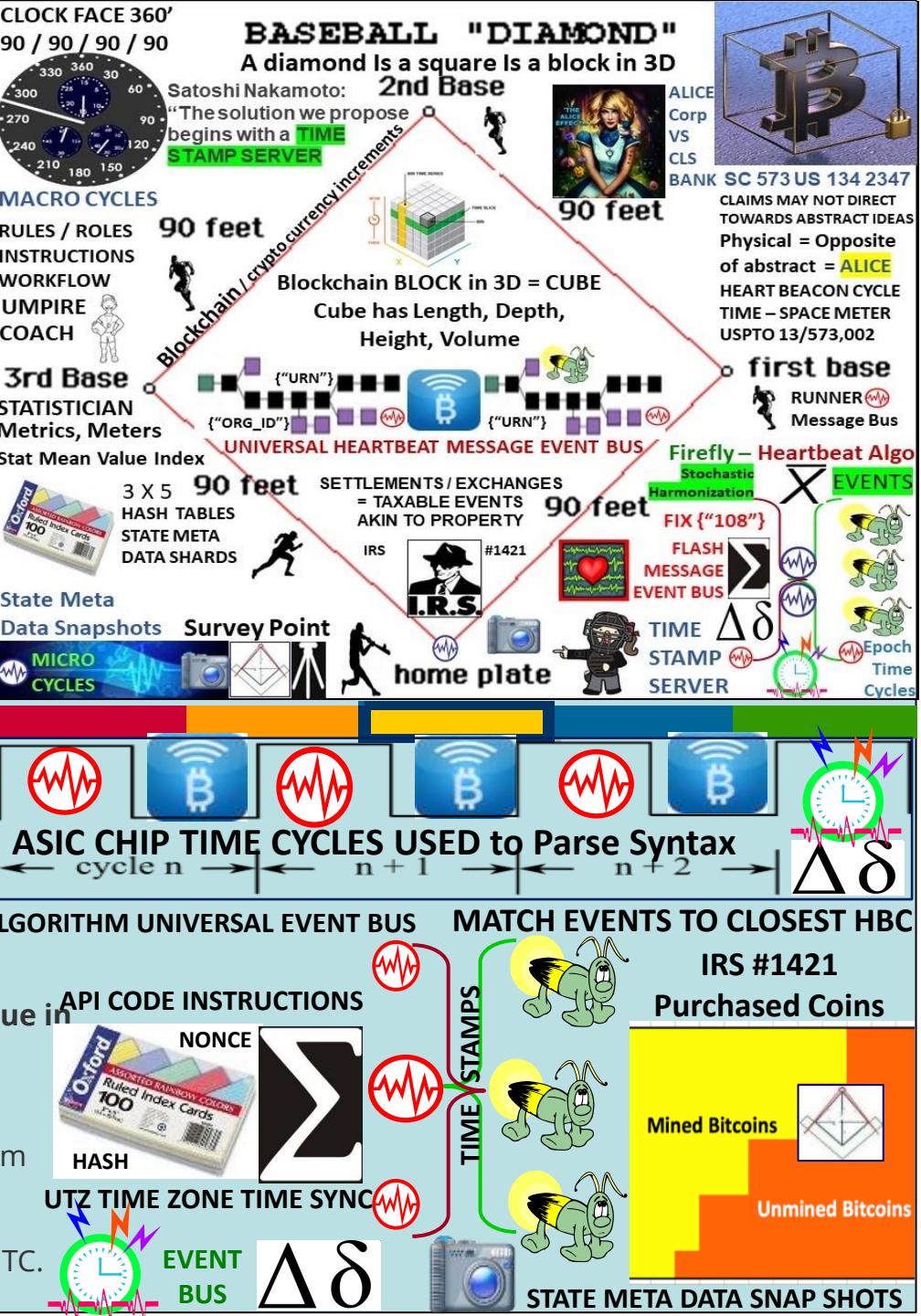
Transaction ID, Block ID, time-stamp, BWAP per block, Value in USD. BTC per transaction, bitcoin transaction fees per transaction.

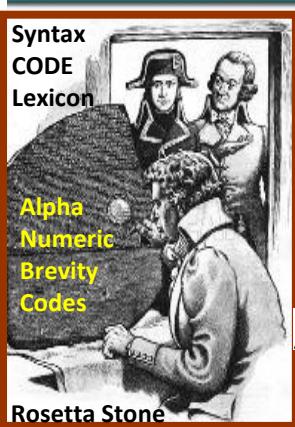
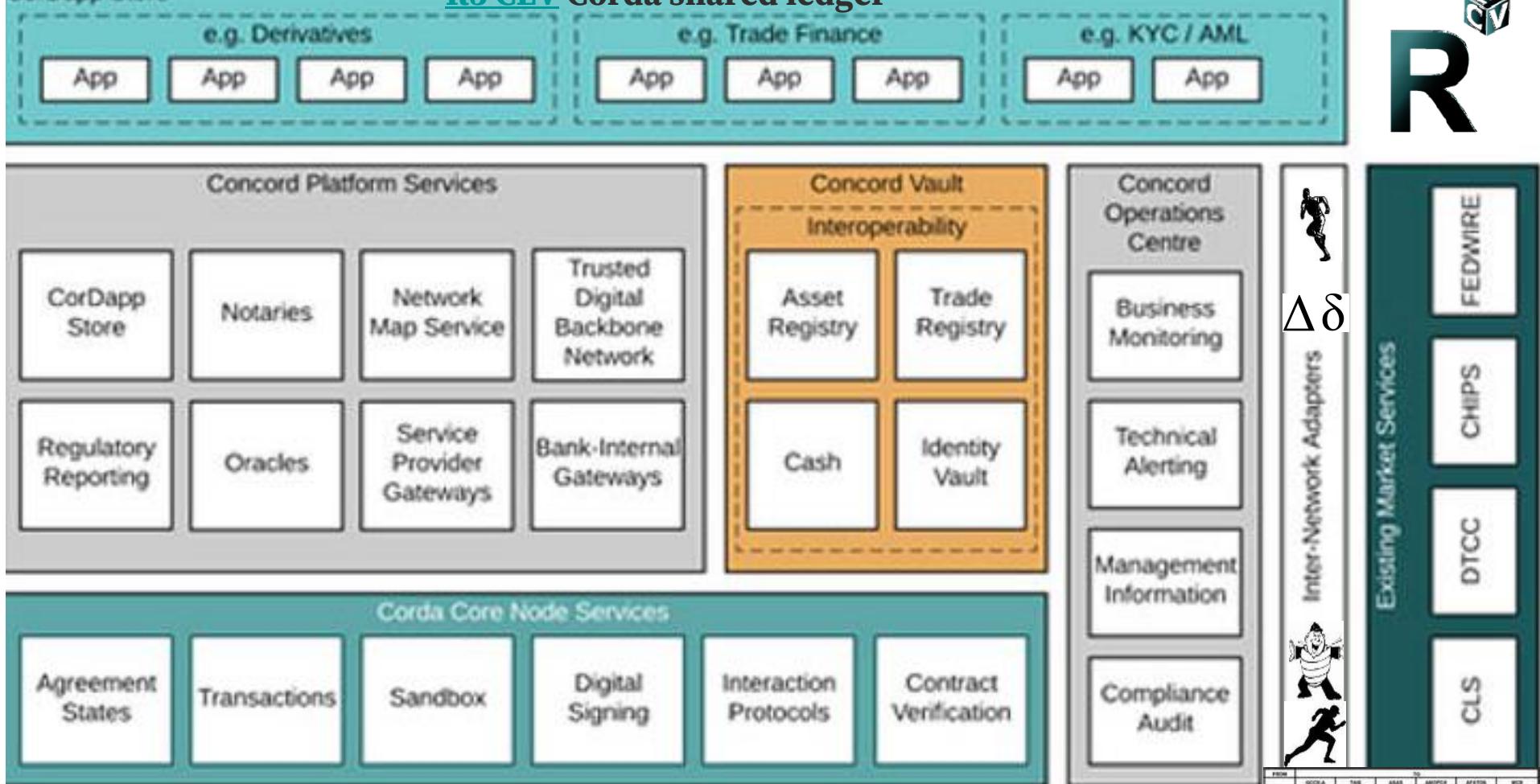
"Blocks are a measure of time":

The Bitcoin Blockchain 'B-WAP'

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

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





UNIVERSAL EVENT BUS



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

NAME	QCC0A	TAB1	ASAB	AMPCB	AFATB	WCB
ABAB	F002	F003	F004	F005	F006	F007
AMPCB	F008	F009	F010	F011	F012	F013
AFATB	F014	F015	F016	F017	F018	F019
WCB	F020	F021	F022	F023	F024	F025

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



XBRL / CDE / DAML STOCK MIC CODES

STRUCTURED MILITARY MESSAGE TEMPLATE FORMS LOGIC / FILTERS



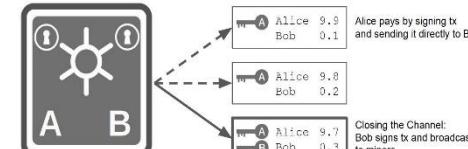
300+ Use Case Templates



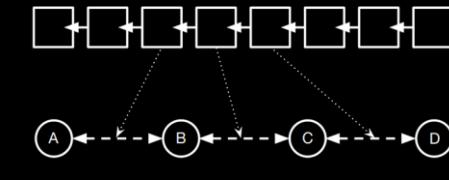
**transactions sent over / off chain
micropayment channels**

Micropayment Channels

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



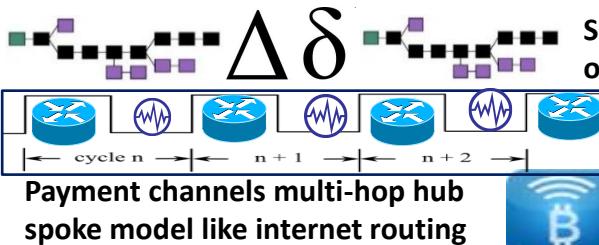
LIGHTNING



Millions of Transactions. Milliseconds of Delay.

Hashed TIME LOCK contracts component for global consensus

OP_CHECKLOCKTIMEVERIFY During Macro Cycle w/ Random # BEACON



Payment channels multi-hop hub
spoke model like internet routing

FIREFLY – HEARTBEAT ALGORITHM



FIREFLY – HEARTBEAT

CLOCK FACE 360'
90 / 90 / 90 / 90



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

home plate

FLASH MESSAGE EVENT BUS

TIME STAMP SERVER

Epoch Time Cycles

Server nodes, miners
only keep recent blocks



Sync Delta
State Meta
Data Snaps



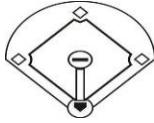
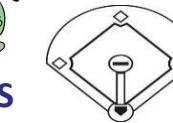
EVENT REPORTING
ACROSS TIME-SPACE



MESSAGE EVENT BUS



SEGREGATED WITNESS SegWit



OUT OF BAND / CHANNEL

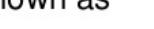
HASH TABLES



MESSAGES



Digital Signature



Segregated witness = Separated signatures

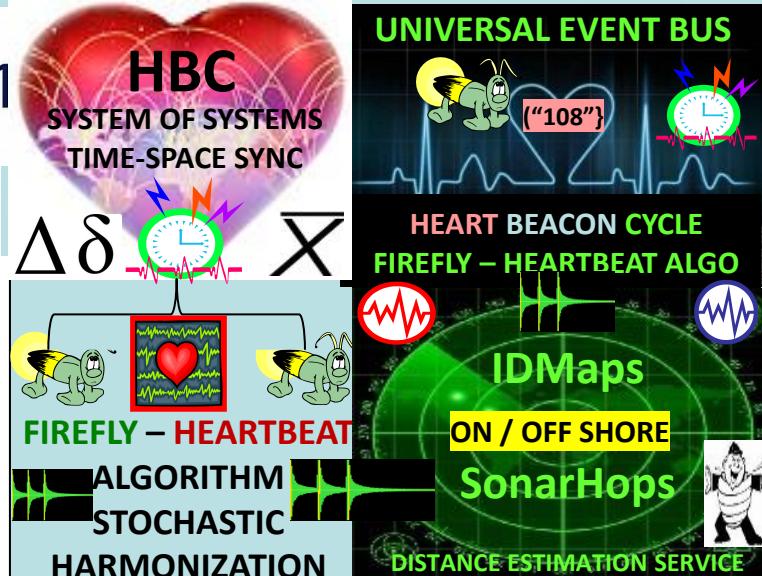
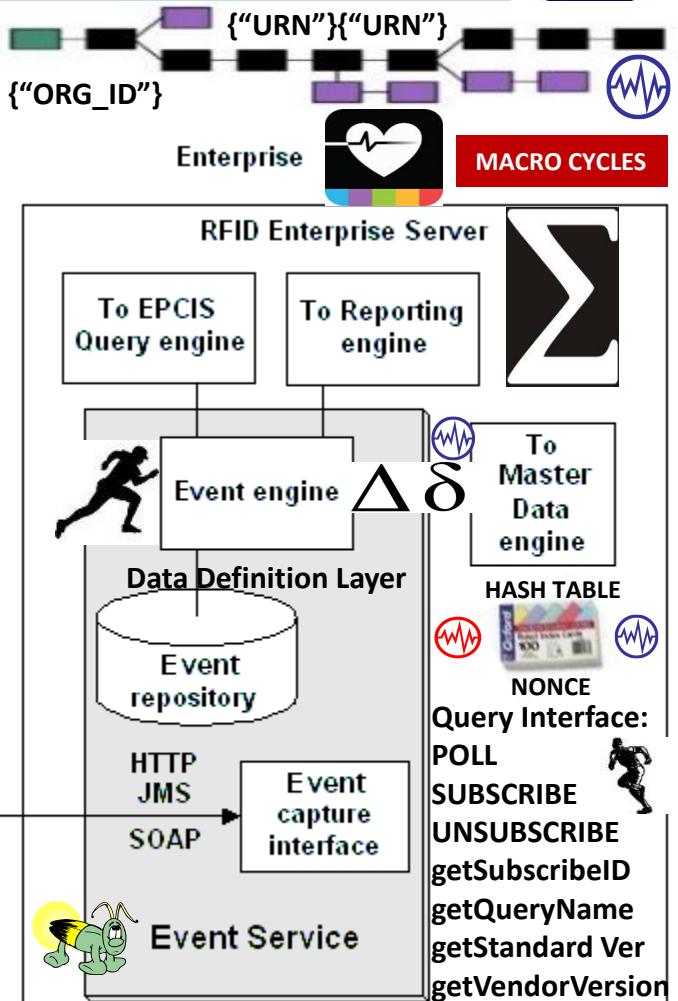
- signatures are cryptographic proofs also known as witnesses
 - moving signatures out of transactions
 - keeping a separate repository of the signatures
 - making them optional in propagation and storage
 - signature are the biggest part of transactions
 - can be implemented as a soft-fork vs a hard-fork

Electronic Product Code Information Services (EPCIS)

GS1 Standard for creating, sharing visibility event data



HBC
SYSTEM OF SYSTEMS
TIME-SPACE SYNC



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

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

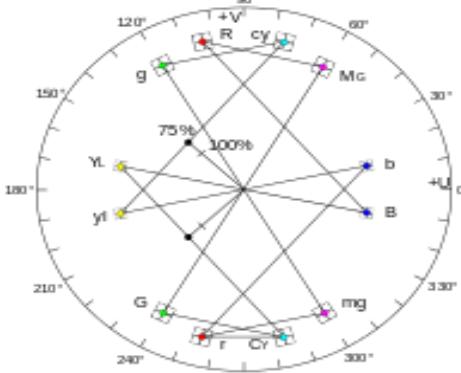
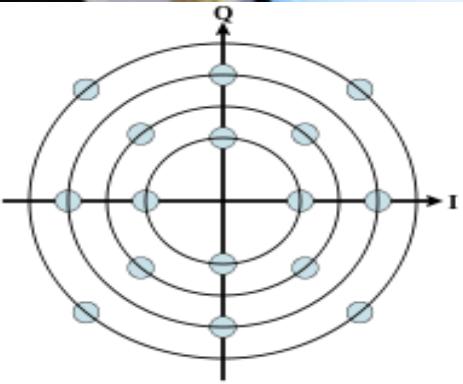
location where object(s) are expected to be following the Why Information about the business context, including:
a Identifier that indicates the business step taking place



Richard Lighthouse Tonight on LNM Radio
Time Travel & The Blinking Universe



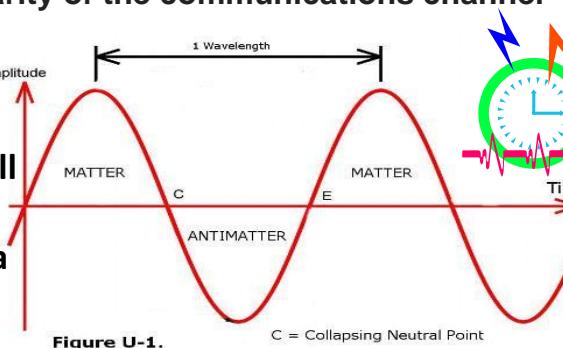
www.RLighthouse.com



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”

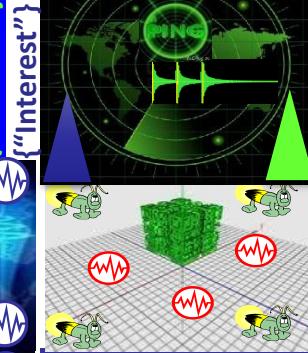


Sine wave of our blinking universe. The 4 fundamental forces will all be found to vary continuously when sampled at 2x the blinking frequency, per Nyquist-Shannon theory



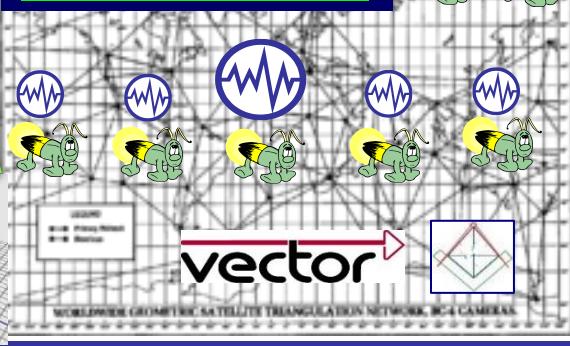
USPTO 13/573,002
sawconcepts.com/index

NDN
IDMaps
SonarHops

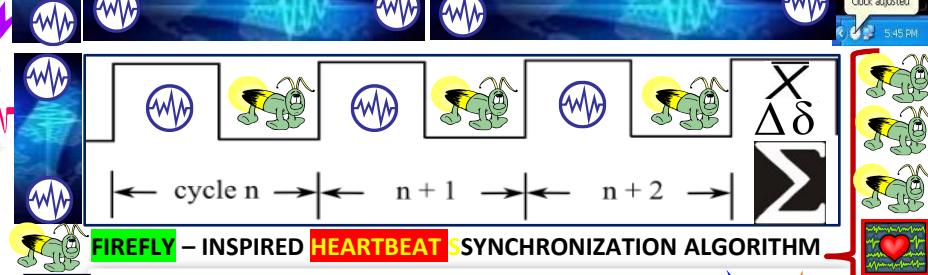


Heart Beacon Cycle Time – Space Meter
Geo-Spatial Temporal Intensity Metrics

TRIANGULATION



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”





TERRA
TRC



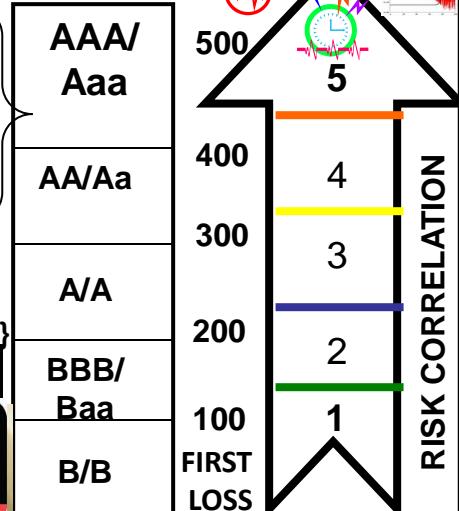
ECONOMIC HEARTBEAT



HB MSG </108>
PROTOCOL

INDUSTRY-DRIVEN MESSAGING STANDARD

LAST LOSS



RISK CORRELATION



GDP
> \$\$\$

€ \$ € ¥ currency index

</FILTERS>{"FILTERS"}
</CLASS_TYPE>

LAST LOSS

AAA/
Aaa

AA/Aa

A/A

BBB/
Baa

B/B



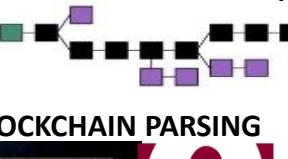
Spatial Econometrics



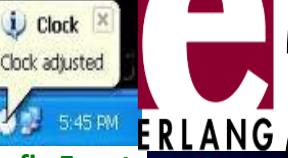
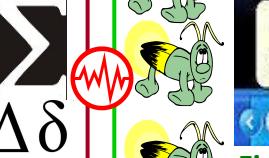
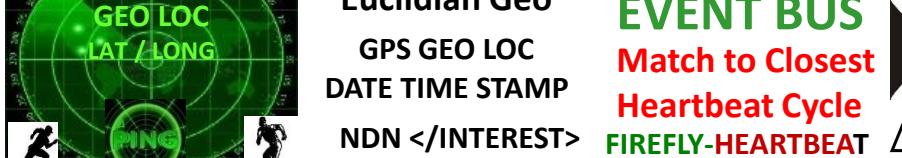
PROCESS BY </PRECEDENCE>
SonarMaps ID_Hops



ON / OFF SHORE
NDN
NDN
PROXIMITY BEACONS



HOPS / RADIUS = REACHABILITY
WATER DROP IN POND MEME
AREA RADIUS



</FILTERS>
BY ORG ID / URN
NDN </INTEREST>
</DISTANCE>
Closer = Cheaper
Closer = < Fuel

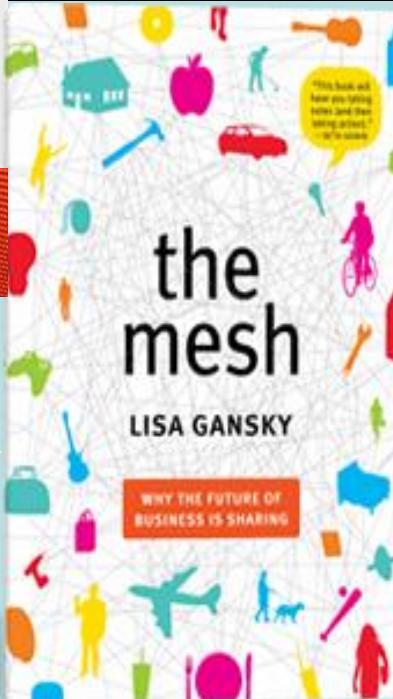
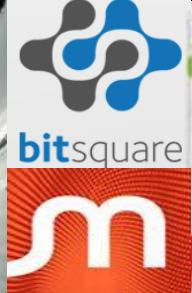




COINTELEGRAPH
live cryptocurrency community opinion



Decentralized Exchange Meets Decentralized Crowdfunding



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



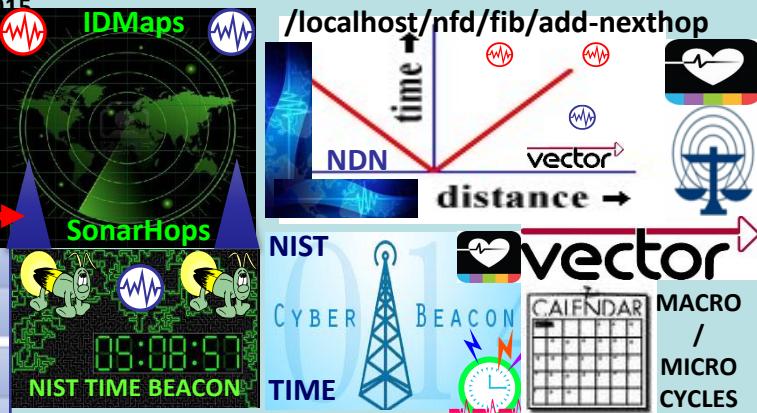
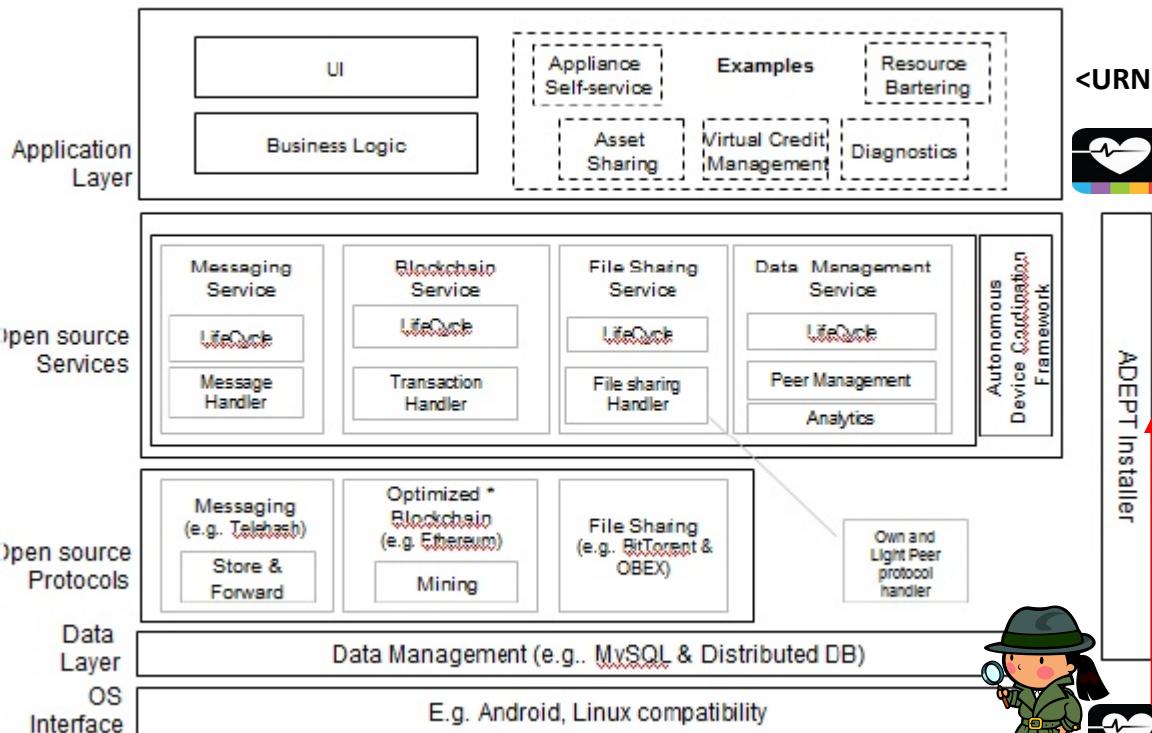
- Registration
- Authentication
- Proximity based rules
- Consensus based rules
- Contracts
- Checklists

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

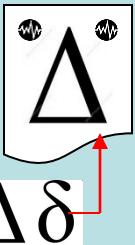


PAYMENTS BASED ON GEO-SPATIAL TEMPORAL METRICS / METERS
<URN> DESCRIBES COMMODITIES ETC BY UNIFORM RESOURCE NAME BY </INTEREST>>



ASSET SHARING WITHIN FEDERATION

BUSINESS LOGIC = WORKFLOW <XML_Wf>



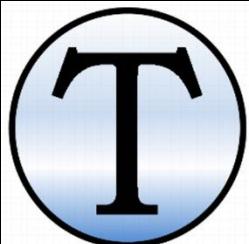
FILE SHARING = CYCLIC SYNC DELTA LEDGER / DOCUMENT REFRESH



OPEN SOURCE = HBC = PROTOCOL AGNOSTIC

DATA LAYER: STATE META DATA TIME STAMPED BY <UUID><ORG_ID><URN> & DATA PREPPED & "DATA WRANGLED PRIOR TO FUSION CENTER ENHANCED ANALYTICS / PROTECTS BANDWIDTH





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.

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)...

3. A software protocol

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

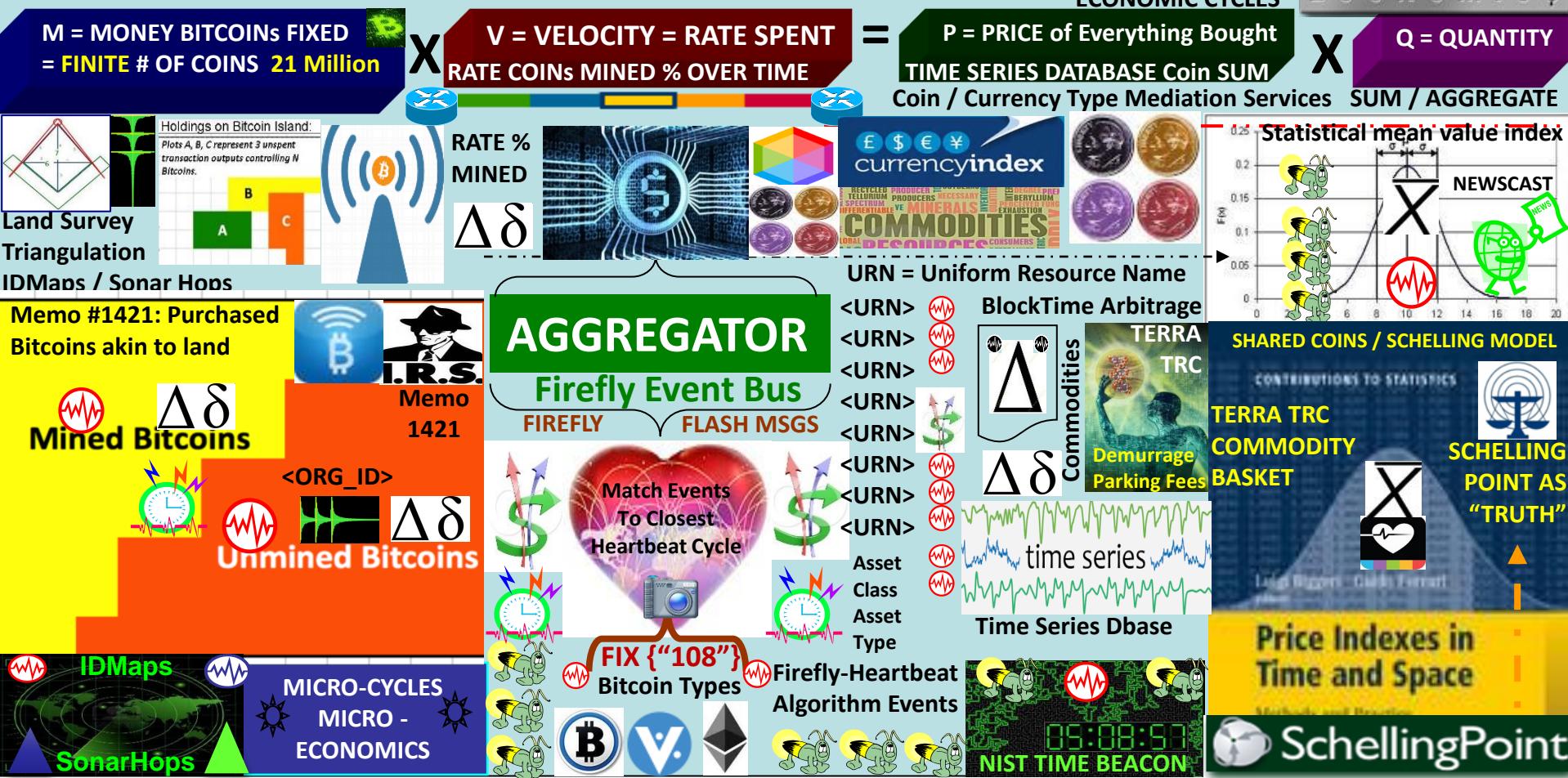


Protocol (Decentralized)	Centralized Non-Protocol
Spoken English	Shakespeare’s Globe Theatre, The Library of Alexandria, MLA Citation Format, Walt Whitman, J.K. Rowling.
Rules to American Football	The NFL, ESPN, The Buffalo Bills.
Bluetooth	A Set of Stereo Speakers, The iPhone 6, A Car Radio Equipped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

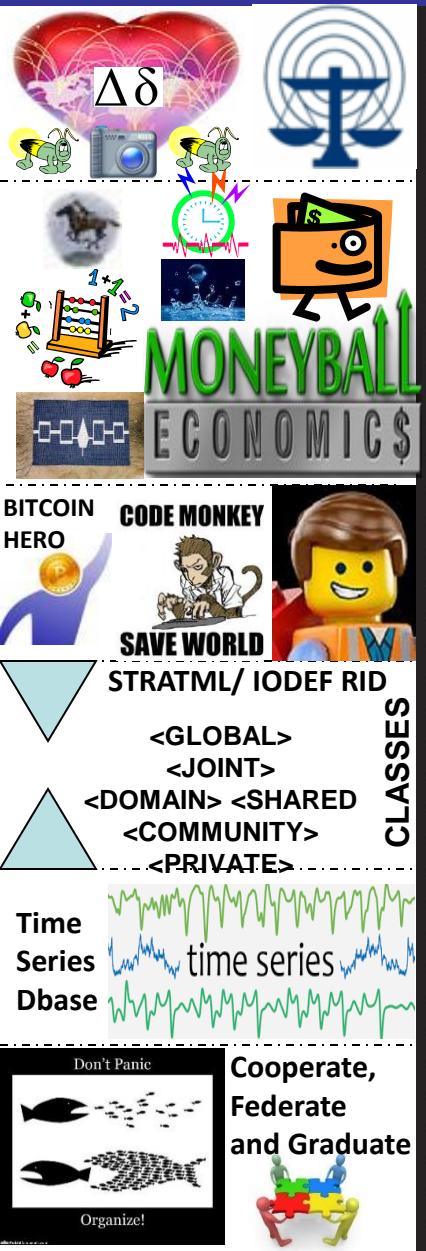
How 'Bitbanks' Could Solve Bitcoin's Volatility Problem

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

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



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



HOW GAMIFICATION WORKS:

5 COMMON MECHANICS

POINTS



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

BADGES



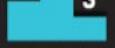
Reward achievements visually

LEVELS



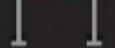
Encourage users to progress and unlock new rewards

LEADERBOARDS



Organise players by rank

CHALLENGES



Encourage engagement by offering specific tasks to complete

4 MAIN WAYS TO DRIVE ENGAGEMENT

ACCELERATED FEEDBACK CYCLES



CLEAR GOALS AND RULES OF PLAY



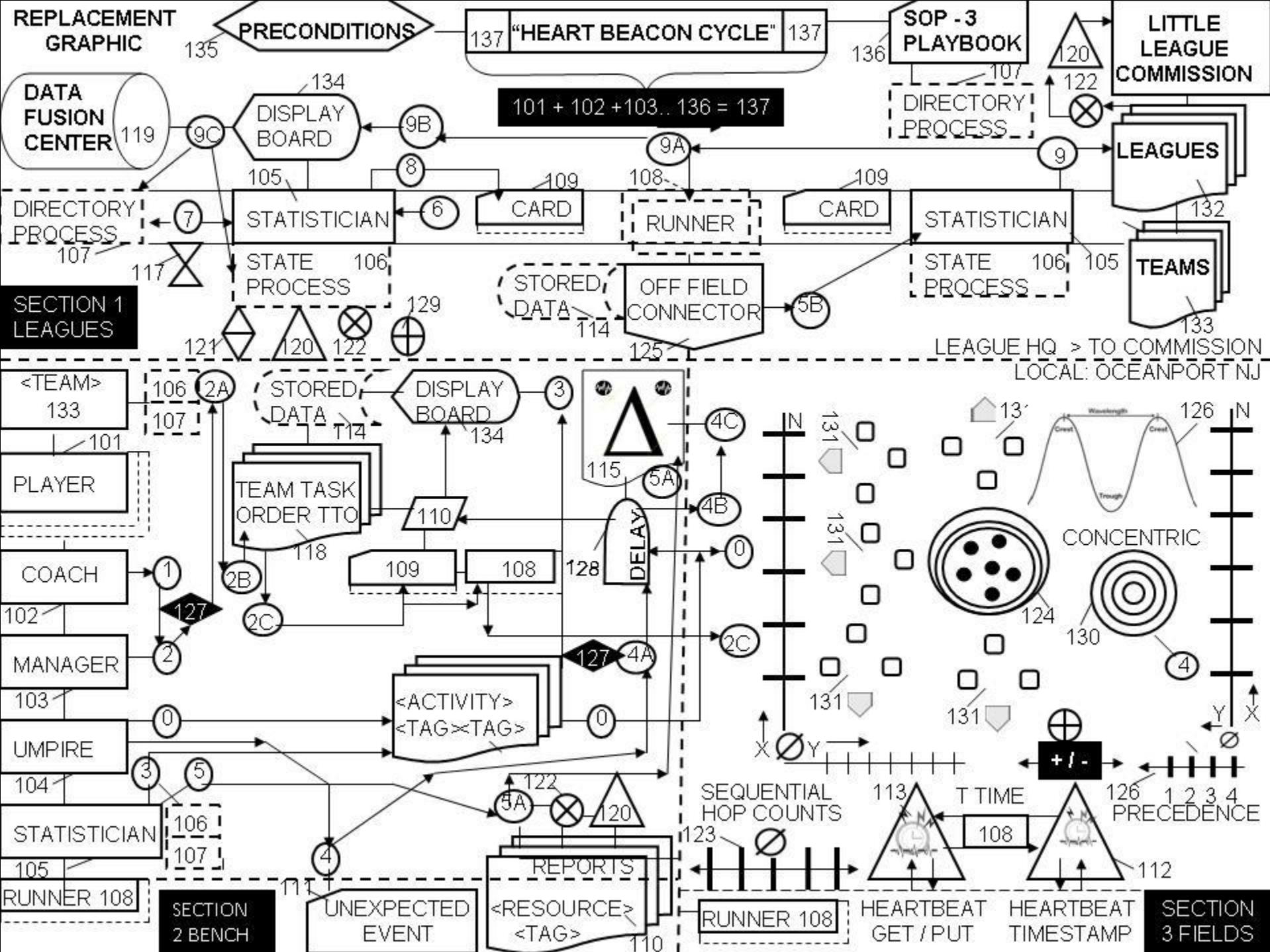
A COMPELLING NARRATIVE

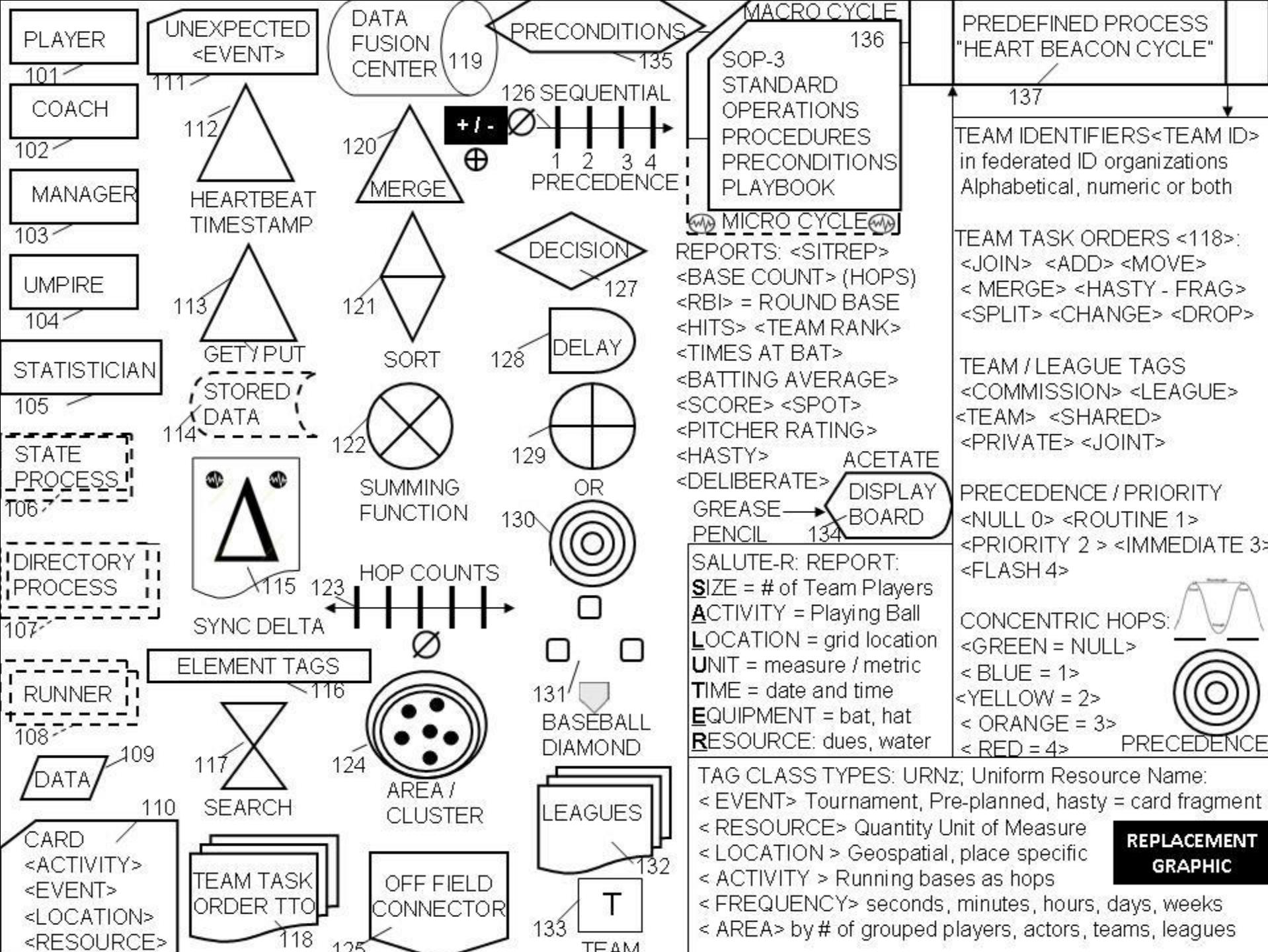


CHALLENGING BUT ACHIEVABLE TASKS









BUILDING BLOCKS



TASK ON / OFF

201

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



MACRO CYCLES



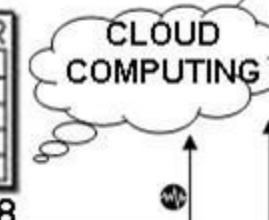
.0001

MICRO CYCLES

216



218



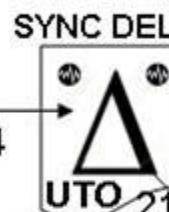
219

202 FEDERATED GROUP JOINS, MERGE, ADDS, DROPS

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



214



UTO 213

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



215 LEADER'S INTENT DECISIONS



SNAPSHOTS

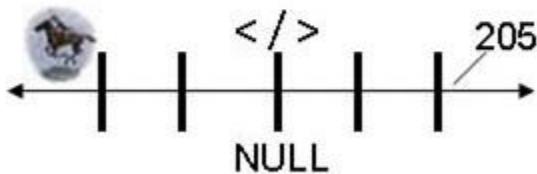


203

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



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



LENGTH, THRESHOLD, INTENSITY, DURATION



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



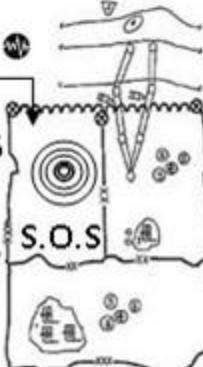
206



208



APPLIQUE' OVERLAYS



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

204

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

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



NIST QUANTUM ENCRYPTION RANDOMIZATION BEACON

UNPREDICTABLE SAMPLING

SECURE AUTHENTICATION

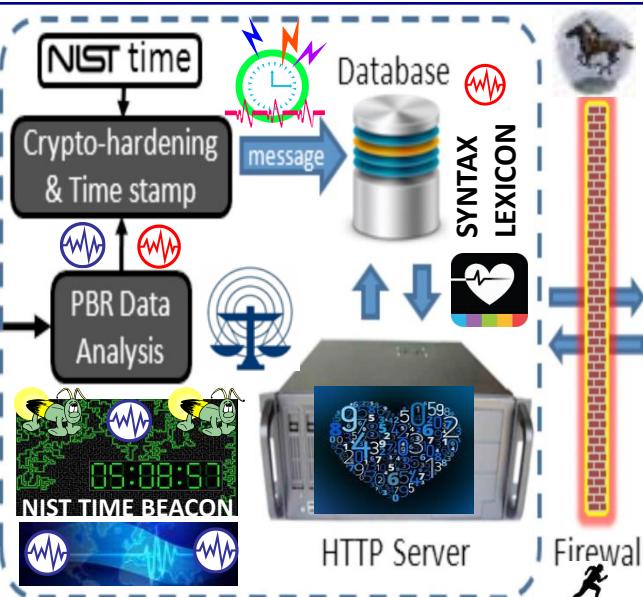
SECURE MULTI

PARTY /
AUTHENTICATION

Entanglement
Source

RANDOM
NUMBER
GENERATOR

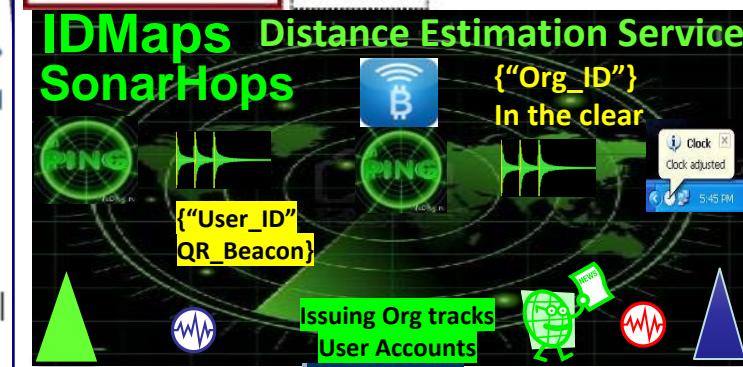
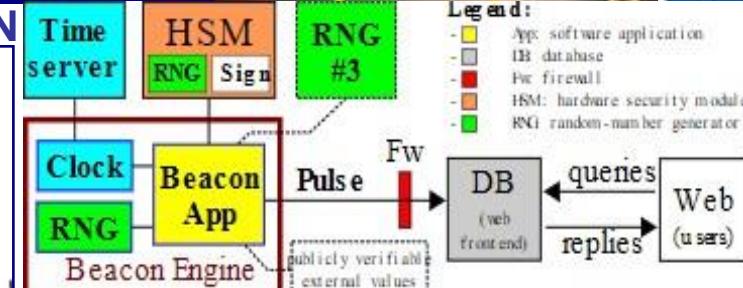
Bell
Test



NIST

**NON
REPUDIATION**

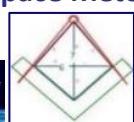
Legend:
■ App: software application
■ DB: database
■ Fw: firewall
■ HSM: hardware security module
■ RNG: random-number generator



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

Metrics and Time - Space Meter uses PHYSICAL Memes / Metaphors

**NAMED DATA
NETWORKING**



NDN
 </Interest>
 </Distance>

SURVEY METHODS + TRIANGULATION

Euclidian Geometry

Geodesic System Routing Info Base RIB

ACCOUNT BELONGS TO </Org_ID>

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

DEVICE / SENSORS <UUID><UUID>

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

Time / Distance Metrics

PROXIMITY

OFFSHORE BEACONS ONSHORE

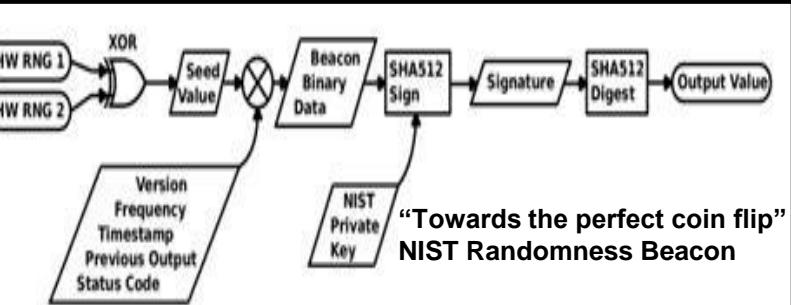
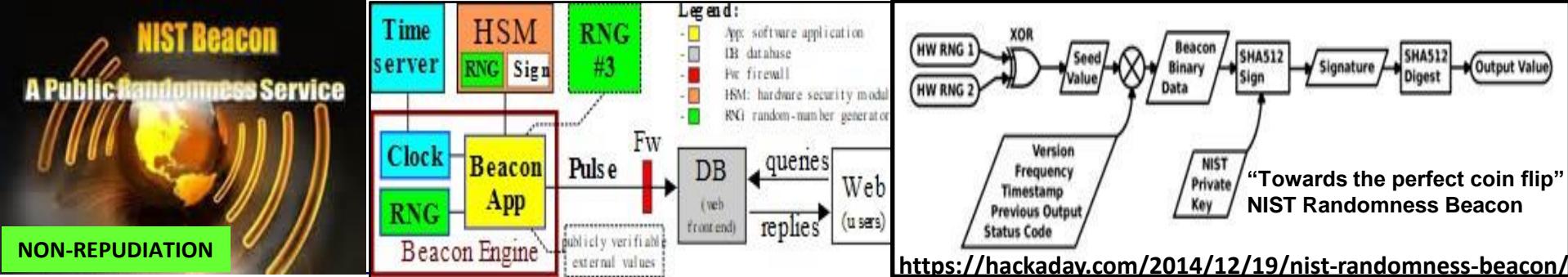
NDN

</interest></distance>

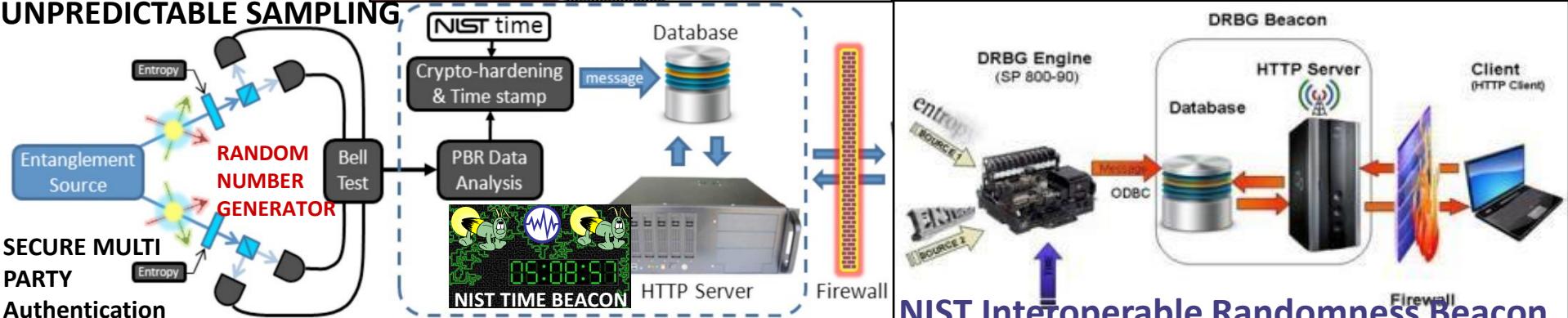
The current standard time common throughout the world is based on a 24-hour clock, with zones that are either 12 hours ahead or behind Coordinated Universal Time (UTC). However, these time zones are decided upon by individual governments, without overall coordination and can even extend fourteen hours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



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

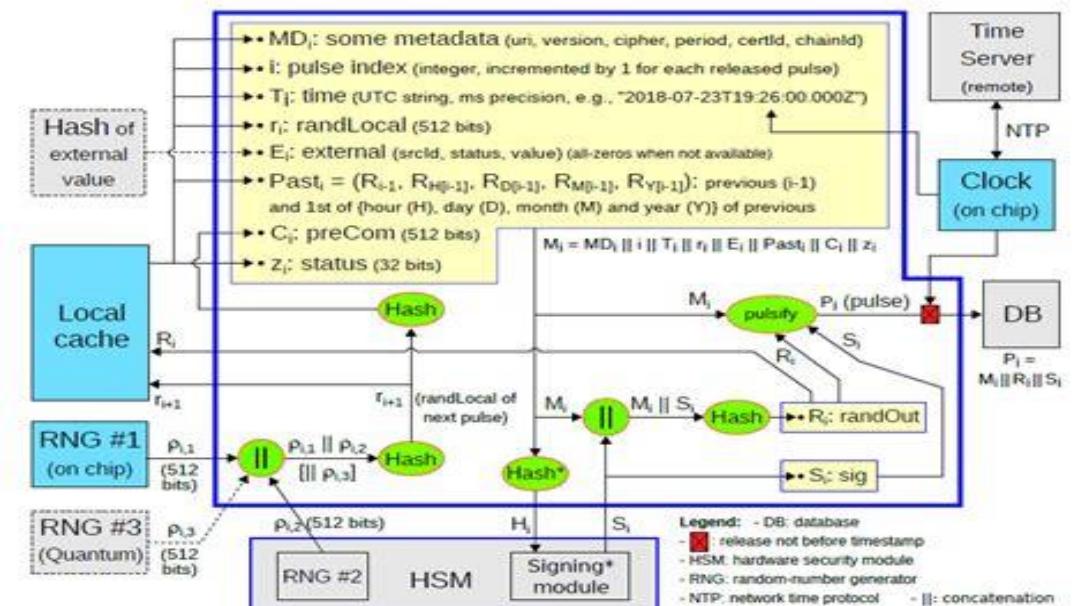
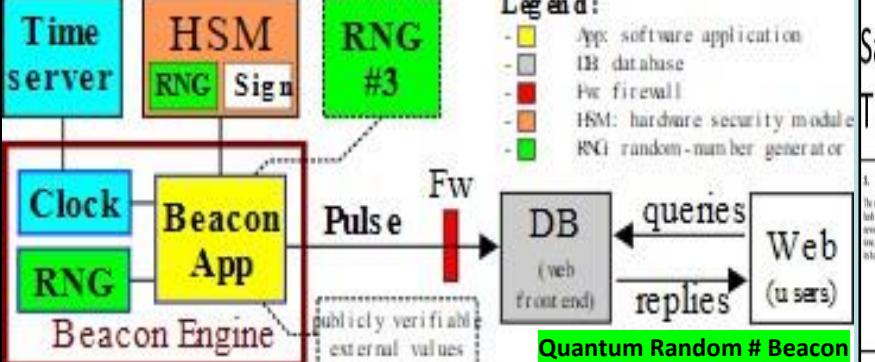


Figure 2. Illustration of the generation of the i^{th} pulse by a Beacon App (2.0)

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**"



QubitCoin Interval: Every 30 Seconds

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

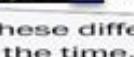
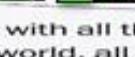
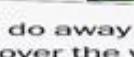
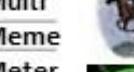
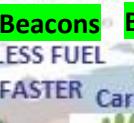
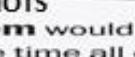
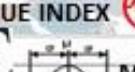
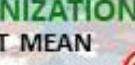
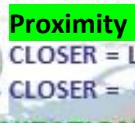
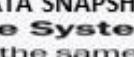
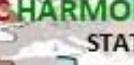
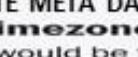
ENVIRONMENT FRIENDLY ECO INCENTIVES

["INTEREST"]
["DISTANCE"]

NDN
FIREFLY HEARTBEAT ALGORITHM
HEARTBEAT {108"} MESSAGES

Sync To Closest HEARTBEAT EPOCH

STATE META DATA SNAPSHOTs
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.



Satoshi Bitcoin Blockchain Time Stamp Server

1. Timestamp Server

The solution we propose begins with a timestamp server. A timestamp server works by taking a hash of a block of data to be timestamped and widely publishing the hash, such as in a newspaper or online post [3]. The timestamp proves that the data must have existed in the system already, whether it's gotten into the hash. Each timestamp includes the previous timestamp in its hash, forming a chain, with each additional timestamp confirming the previous one.

2. Block chain

THE SOLUTION WE PROPOSE BEGINS WITH A TIME STAMP SERVER

3. What does a block look like?

TIME SPACE

4. Metrics / Meters

Metrics / Meters

5. Metrics Tree Hash

Metrics Tree Hash

6. Merkle

Merkle

7. Transaction's list

Transaction's list

8. Block

Block

9. Block

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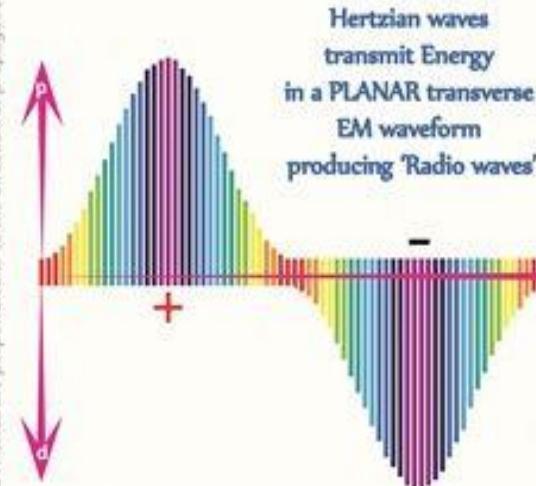
Block

CLOSER = < Infrastructure
= CHEAPER SLA

ElectroMagnetic waveforms



ENERGY / DATA
Over
Transmission
Lines / Airwaves



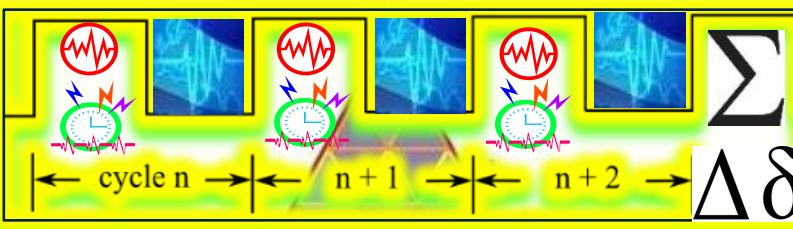
In 1887, Heinrich Hertz demonstrated the reality of Maxwell's electromagnetic waves by experimentally generating radio waves in his laboratory.

f



(22 February 1857 - January 1 1894)

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



Cycles per Second

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

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

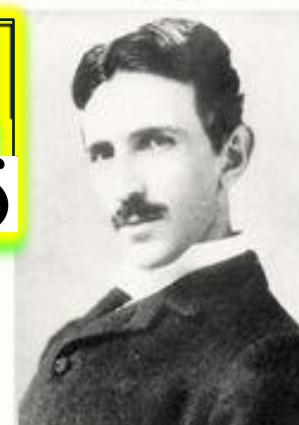


Teslian waves transmit Energy in a LONGITUDINAL waveform producing 'Action at a Distance'

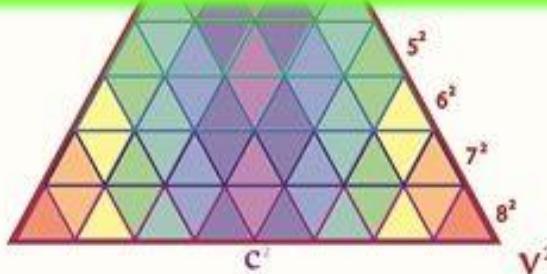
Although they utilise the same EM energies, different EM waveforms can be produced where the Electric fields are in 90° opposition to each other thus leading to conflicting theories of EM wave propagation

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

Nikola Tesla



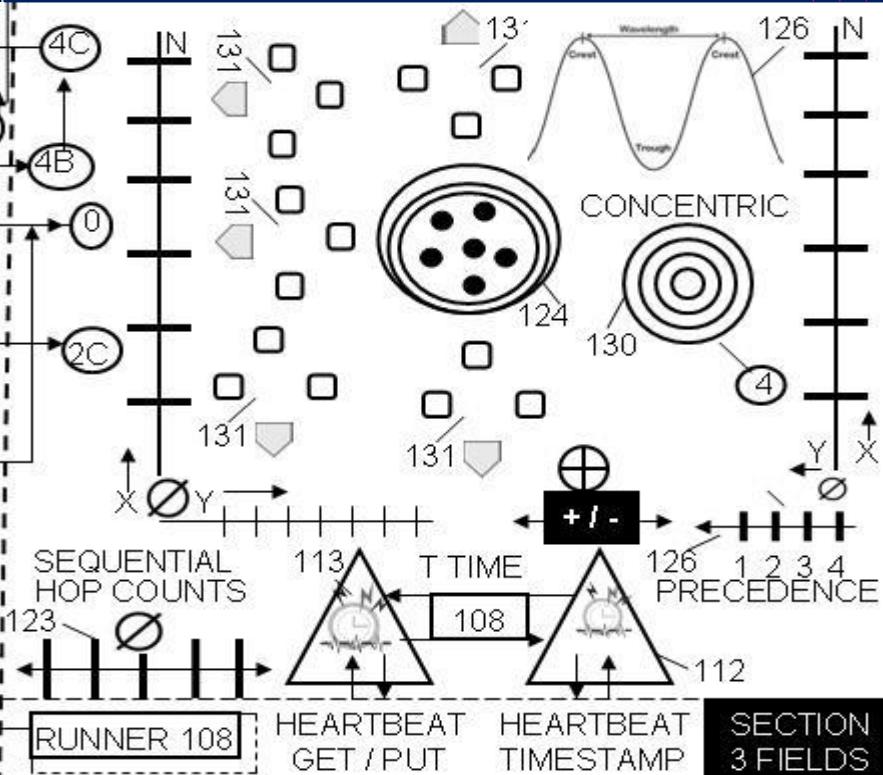
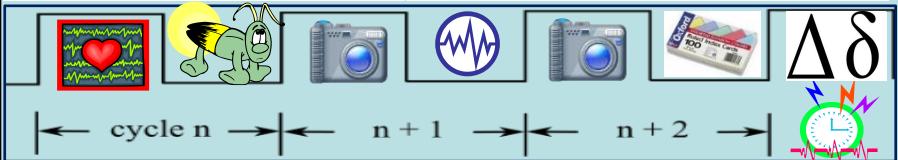
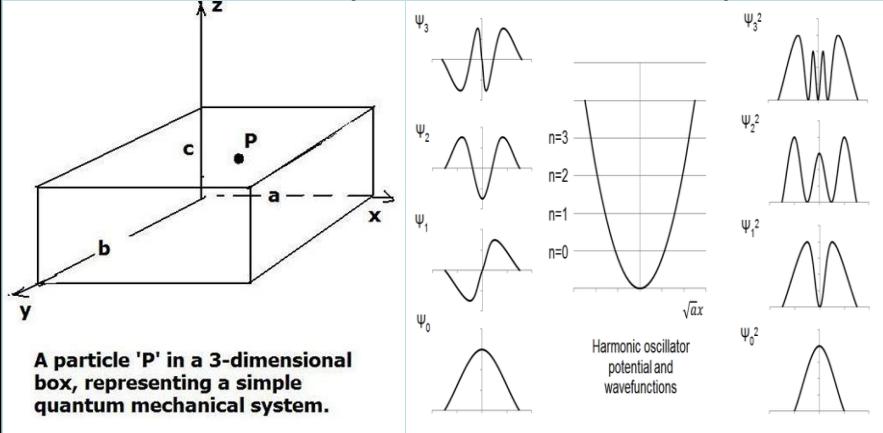
(10 July 1856 - 7 January 1943)



Volts per Second

V

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

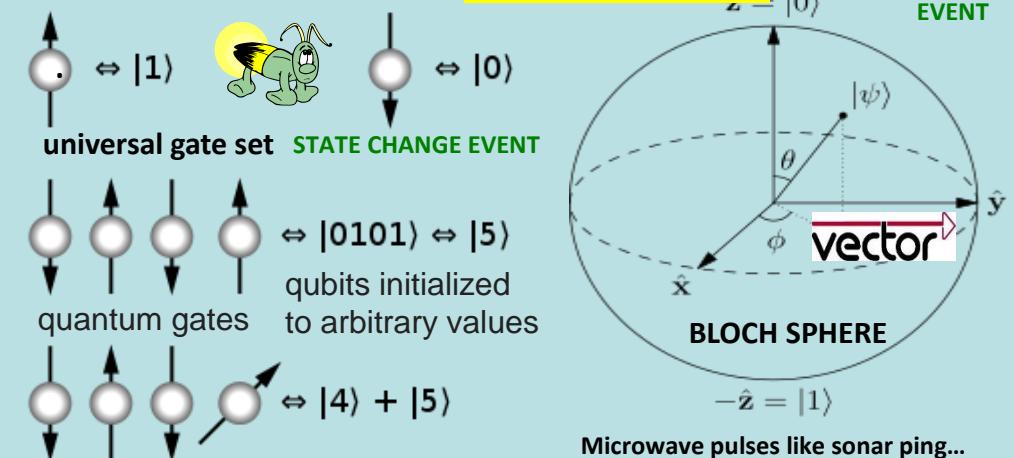
Vertical polarization vectors from a known point 0 null Sonar Hop meme



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?



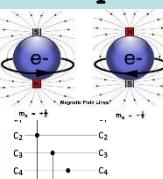
qubits can be in a superposition of all the classically allowed states

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)

$$|00\rangle = \begin{bmatrix} 1 \\ 0 \\ 0 \end{bmatrix}, \quad |01\rangle = \begin{bmatrix} 0 \\ 1 \\ 0 \end{bmatrix}, \quad |11\rangle = \begin{bmatrix} 0 \\ 0 \\ 1 \end{bmatrix}$$

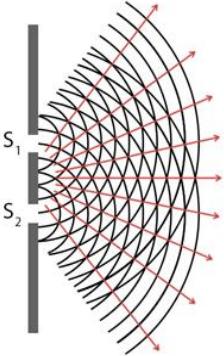


Double-Slit Experiment

Screen with two slits

PARTICLE ?

Sodium lamp



Screen

WAVE ?

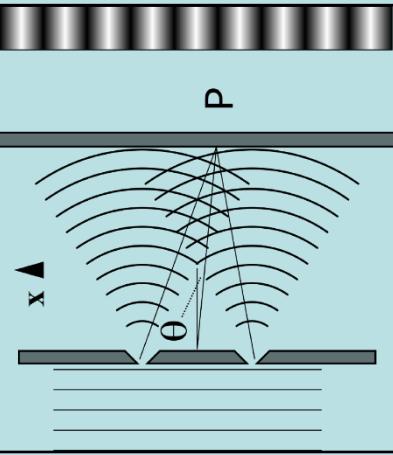


Light source Rays of light coming from the source reach the slits

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

Alternating bright and dark fringes due to interference of light waves

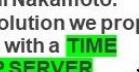
QUANTUM COMPUTING
- RESISTANT ? - BASED ?
THROUGH LENS OF SCOTUS
ALICE LOOKING GLASS RULING



CLOCK FACE 360°
90 / 90 / 90 / 90



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



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

first base
RUNNER
Message Bus

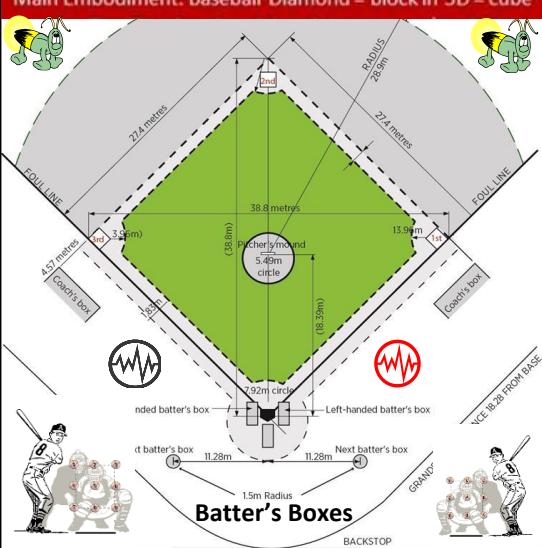
Firefly – Heartbeat Algo
EVENTS

Fix {"108"}
FLASH MESSAGE EVENT BUS

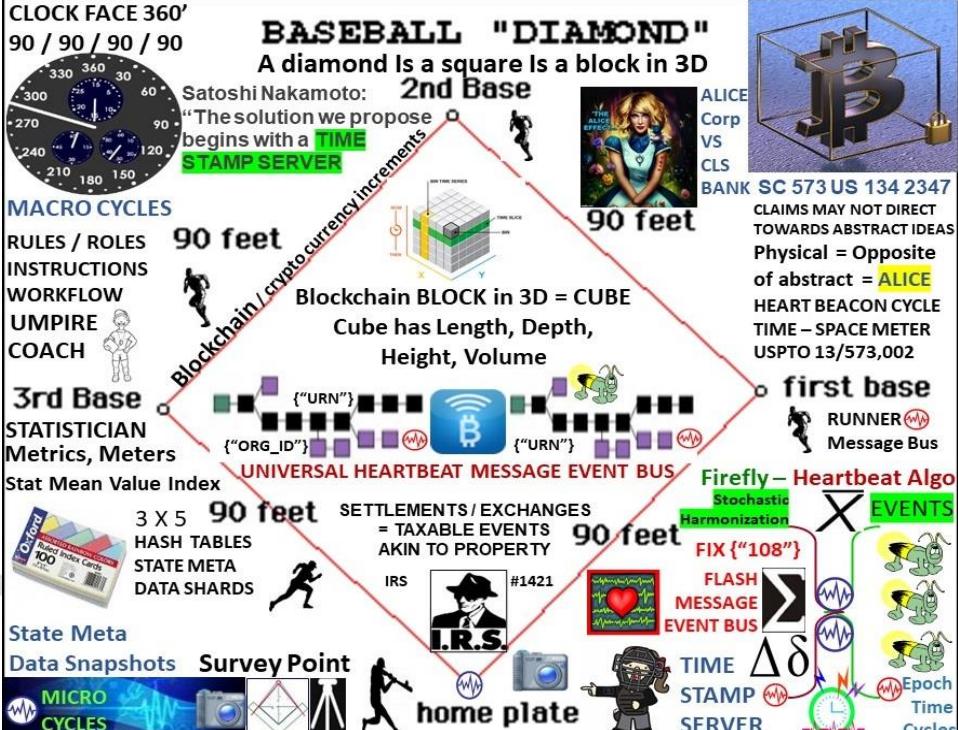
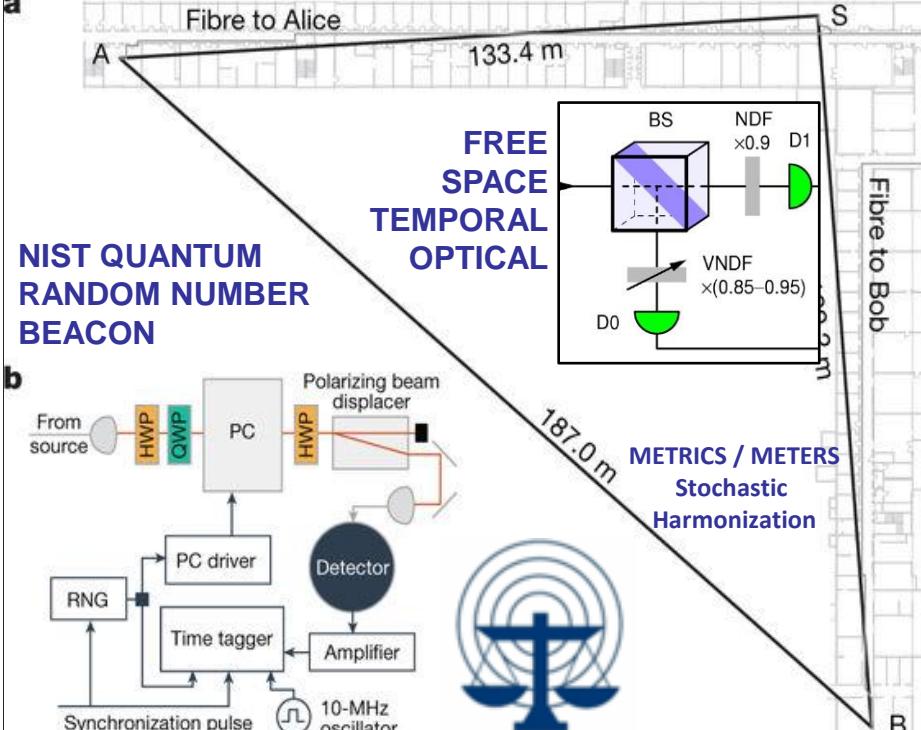
TIME STAMP SERVER
 $\Delta\delta$
Epoch Time Cycles

USPTO APPLICATION 13/573 002

The Heart Beacon Cycle Time-Space Meter
Main Embodiment: Baseball Diamond = block in 3D = cube



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



The Hopf Fibration

Edmund Harriss

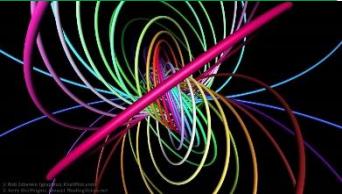
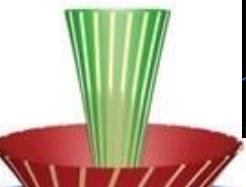
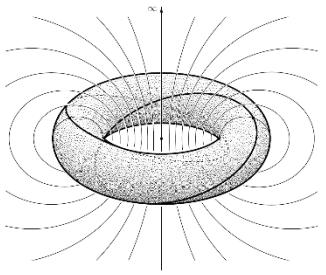
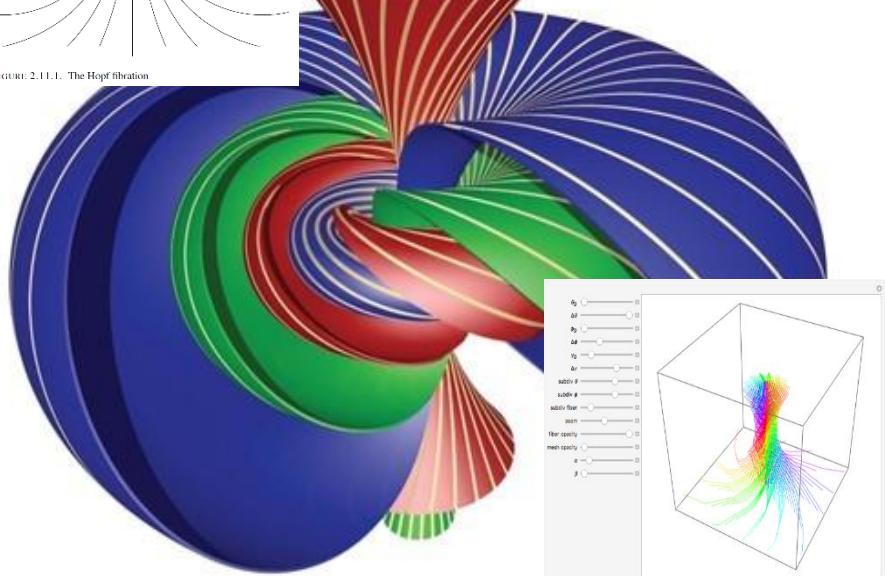
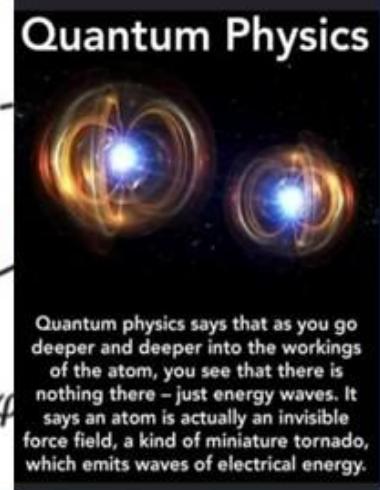
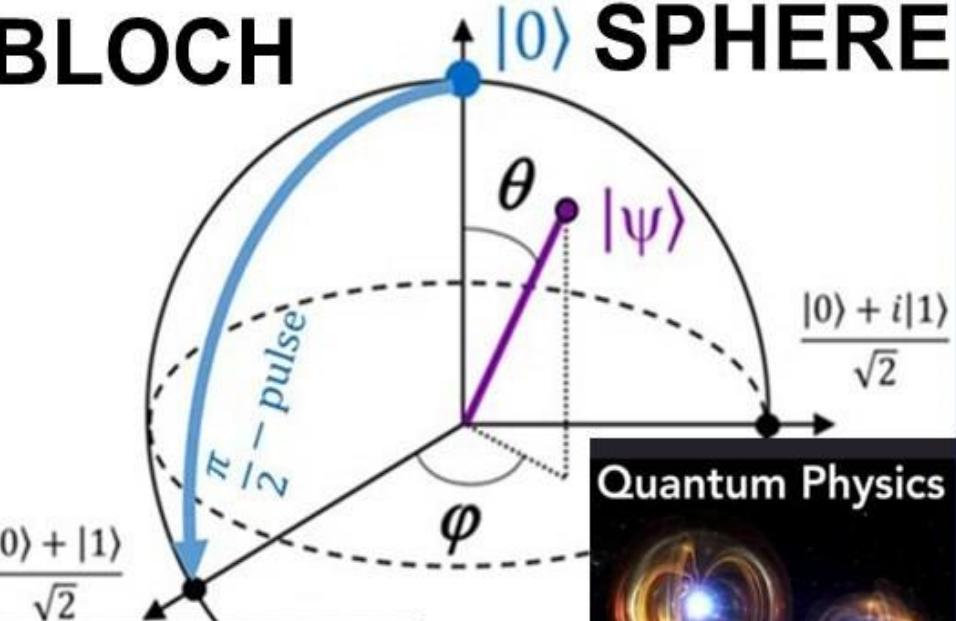


FIGURE 2.11.1. The Hopf fibration



BLOCH SPHERE



Quantum physics says that as you go deeper and deeper into the workings of the atom, you see that there is nothing there – just energy waves. It says an atom is actually an invisible force field, a kind of miniature tornado, which emits waves of electrical energy.

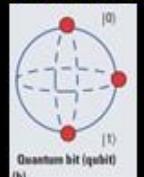
Hopf Fibration / #Bloch sphere

"the most important object in the universe"

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

Paul Revere linear - sequential hop count meme

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





THE 1919 WORLD SERIES

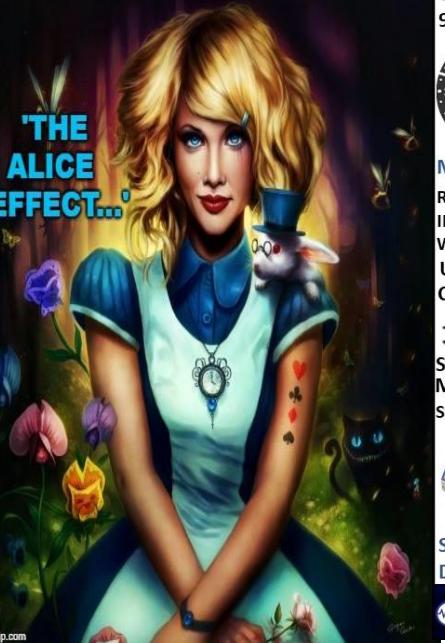
What Really Happened?

William A. Cook



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

Application Developers Alliance

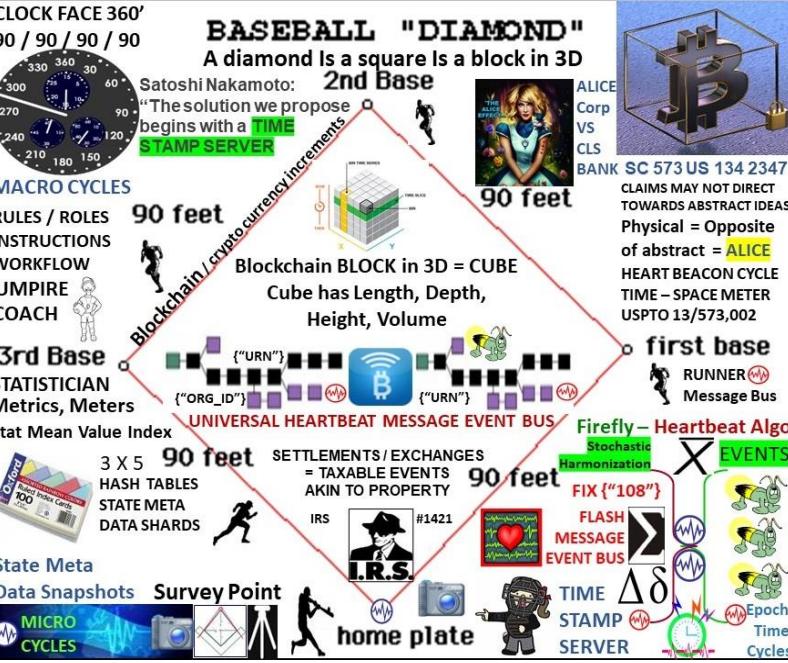


Alice Corp. v. CLS Bank International, 573 U.S. 134 S. Ct. 2347 (2014)
RULING: “claims may not direct towards abstract ideas”



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 

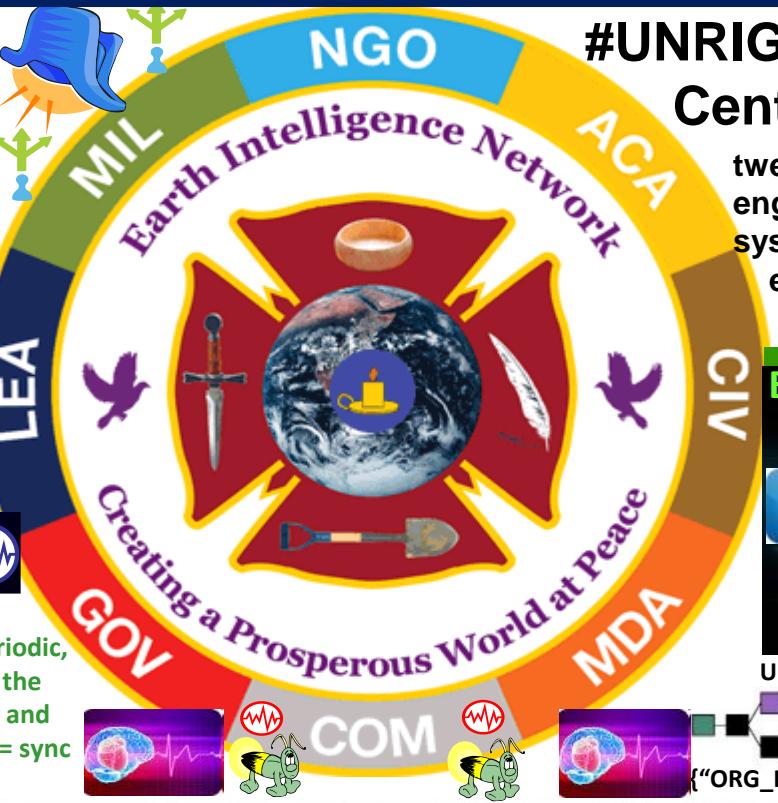
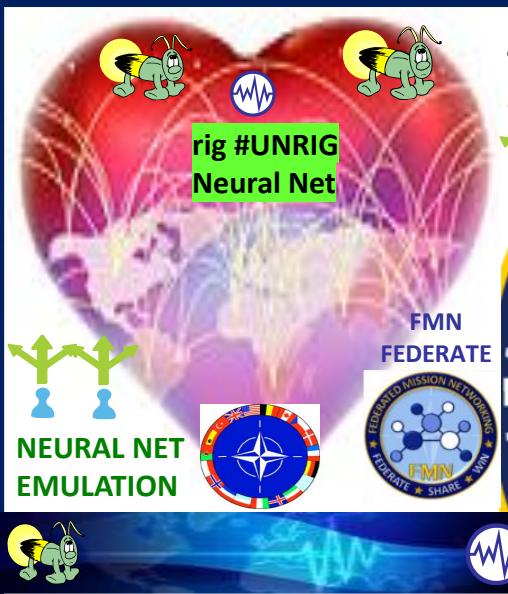






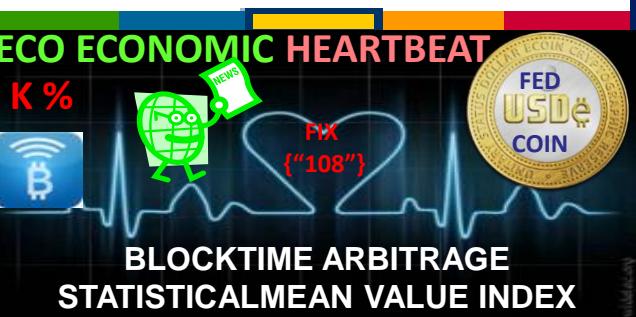
MINIMUM LIST OF COMPONENTS, BUILDING BLOCKS, PROCESSES, PROCEDURES AGREED ON BY TRADE FEDERATIONS TO ACHIEVE DISTRIBUTED AUTONOMOUS ORGANIZATION DAO CONSENSUS,



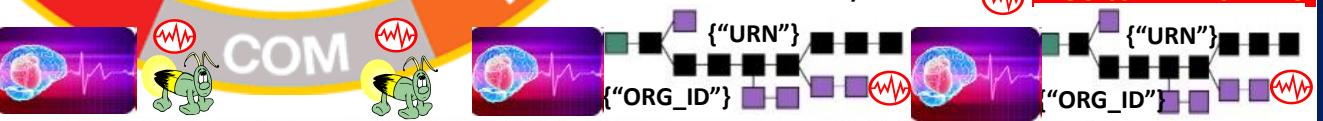


#UNRIG Marine Corps Data Center Robert Steele RIP

twelve reforms needed to create educated engaged democracy, unrig the "pay to play" system + DoD system of systems
engineering structured data exchange
best practice foundation DeFI technology

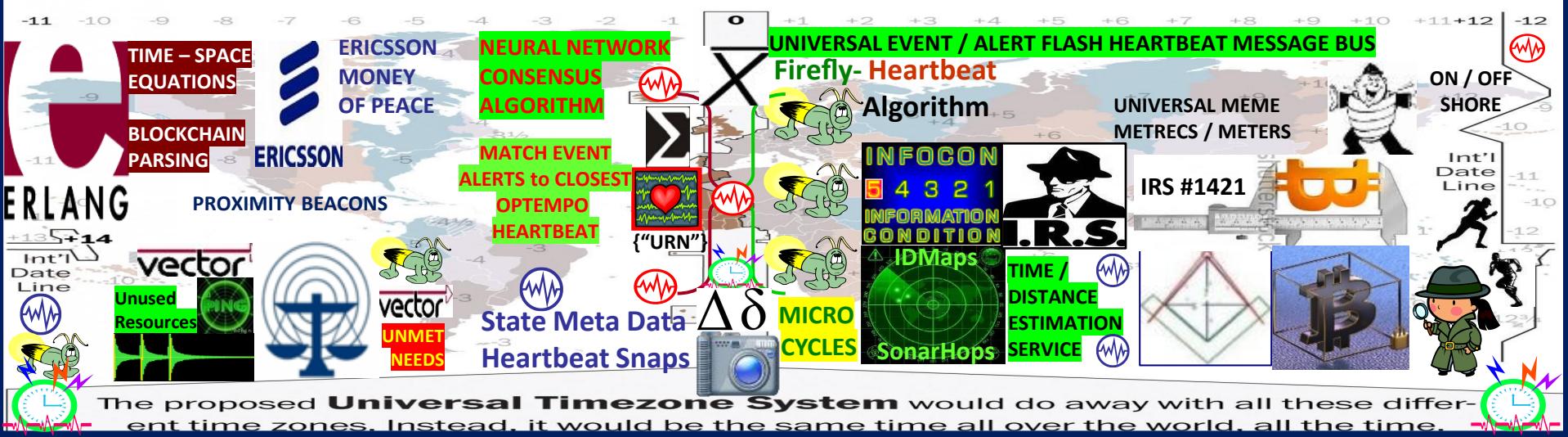


Universal Event / Alert Bus  PROCESS BY PRECEDENCE



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 = sync to the closest **OPTEMPO HEARTBEAT**

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



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

DAO: Distributed Autonomous Organization

RAND term circa 2000 / The TAO OF THE DAO

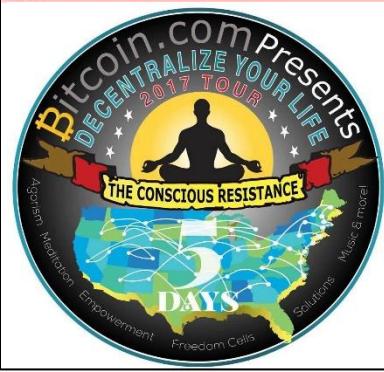
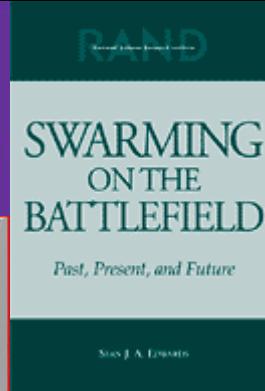
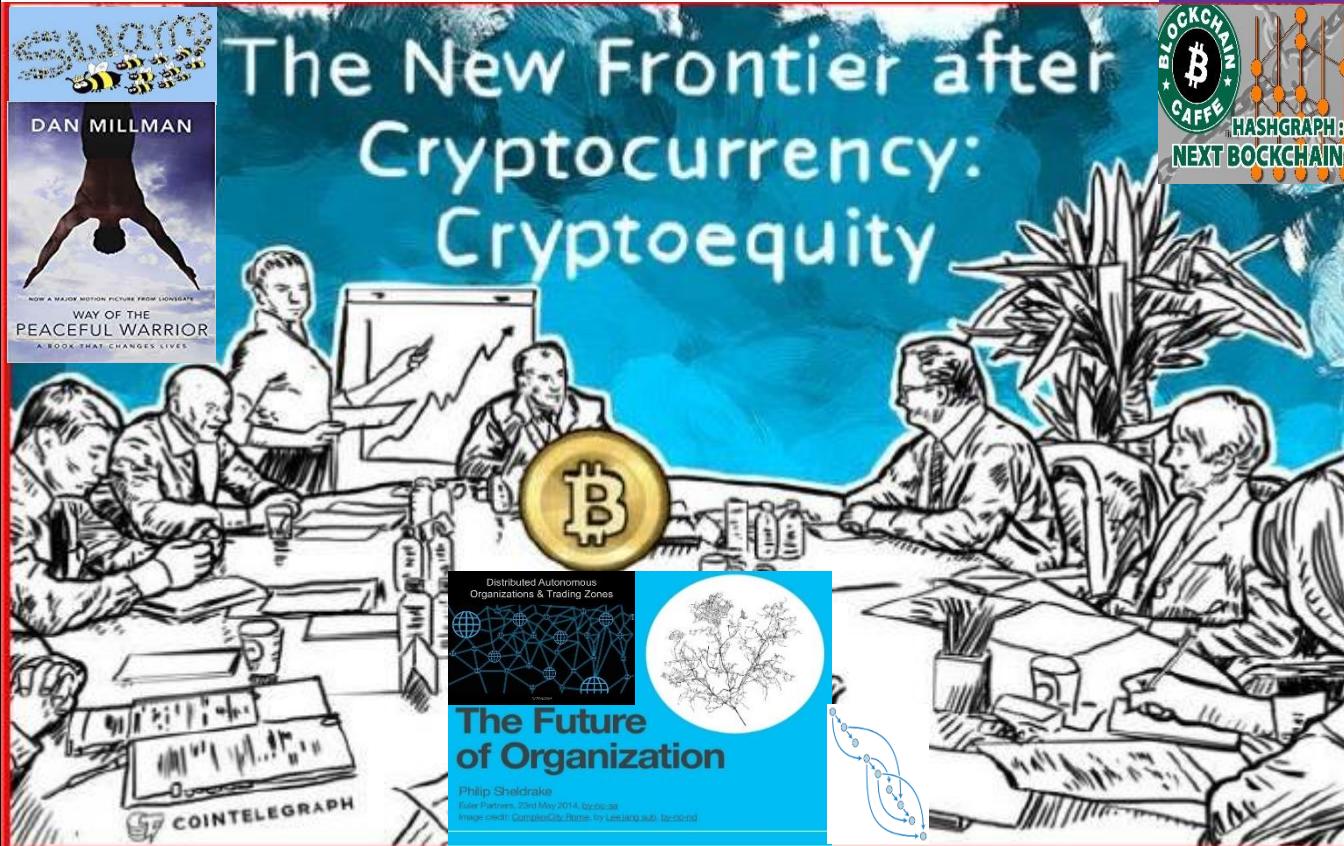
SWARMING AND THE FUTURE OF CONFLICT



RAND

RAND
Monograph
Report

THE
ADVENT
Of NETWAR



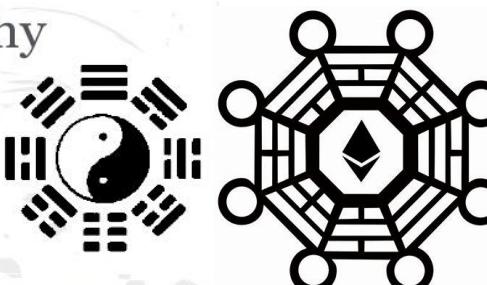
<http://cointelegraph.com/news/112077/the-new-frontier-after-cryptocurrency-cryptoequity>

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





Buckminster Fuller 1968 *Operating Manual for Spaceship Earth*

"we can make all of humanity successful through science's world-engulfing industrial evolution. We have the tools"



“The Dymaxion Map reveals a One-World Island in a One-World Ocean”
which helps us to view the world as one interdependent system [of systems] of relationships. This is what is most fundamentally at HEART when we speak of Spaceship Earth “**The planet is a [system of] system (s)**” 

SPACESHIP EARTH: comprehensive planetary planning  
describing new strategies intended to enable all of humanity
to live with freedom, comfort and dignity, without negatively
impacting the earth's ecosystem's regenerative ability 



GDP INDEX ECONOMY

K % RULE

The banner consists of three horizontal panels. The left panel shows a blue gradient background with a white, glowing ECG or waveform line. The middle panel features a globe with a complex, multi-colored hexagonal pattern. The right panel contains a green infinity symbol (recycling logo) with a cartoon illustration of a small dog wearing a graduation cap inside it.

Earth relates Earth to a spaceship flying through space. Finite amount of resources and cannot be resupplied.

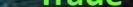


Algorithmic Regulation

Stat Mean Value Index

Cryptocurrency Micro Payments Demurrage Fees

A horizontal graphic with four colored segments (green, blue, yellow, orange) at the top. Below this is a large red bullseye target. To the right is a cartoon illustration of a green alien with a large head, wearing a white spacesuit with a clear dome helmet, sitting in a silver rocket ship.

 Trade w Earth ???

A white, puffy cloud with a small blue bird perched on top, set against a dark background.

ENERGY / DATA PULSE

ERGY ATTENUATES
SER = CHEAPER
SER= LESS FUEL
o₂ emissions

TESLA

The Book Spaceship Earth relates Earth to a spaceship flying through space. Our spaceship has a finite amount of resources and cannot be resupplied.

The HEART BEACON CYCLE SIGNALING, TELEMETRY ANNEX K OPORD
BUCKMINSTER FULLER'S OPERATING MANUAL for SPACESHIP EARTH

 Spatial Econometrics  FIREFLY SYNC PULSE MATCH TO CLOSEST HEARTBEAT CYCLE

A horizontal collage of various icons and illustrations. From left to right, it includes: a large white sigma symbol with a red sound wave icon inside; a green cartoon character holding a yellow speech bubble that says "UNMET NEEDS"; a yellow speech bubble containing a red heart with a blue outline; a green camera icon; a blue circular icon with a white map of the world; a green speech bubble containing the word "COMMODITIES"; a black silhouette of a person walking; four small square icons showing a sun, a water tap, a network of people connected by lines, and a person in a hard hat; a blue speech bubble containing a cartoon character wearing a blue hard hat and safety vest; and a small green square icon.

Δ0 COMMODITIES vector {"Org

Firefly BIOCOIN START Our Spaceship Earth
one Island in one ocean ... from space

The collage consists of five images: 1) A green wheat field with a path leading to a central figure. The path is labeled 'SUPPORT' and the figure is labeled 'FARMER'. 2) A close-up of a plant with a grid overlaid, labeled 'FARMER'. 3) A network of interconnected nodes forming a mesh-like structure. 4) A curved structure composed of many small nodes. 5) A circular structure composed of many small nodes.

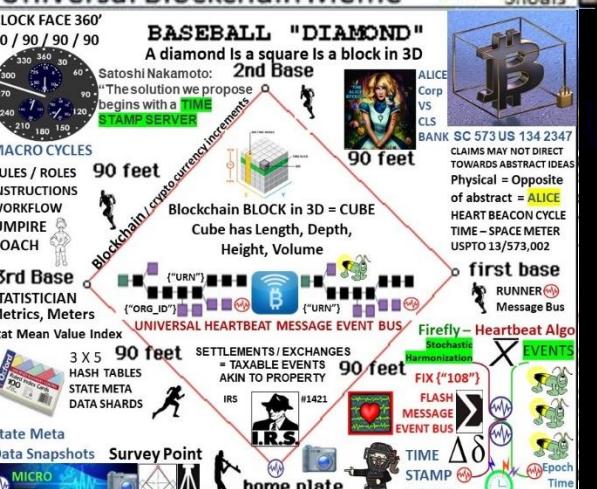
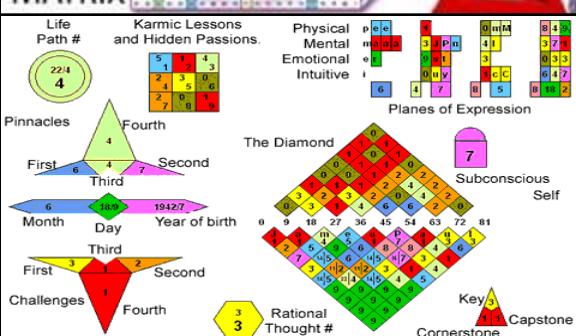
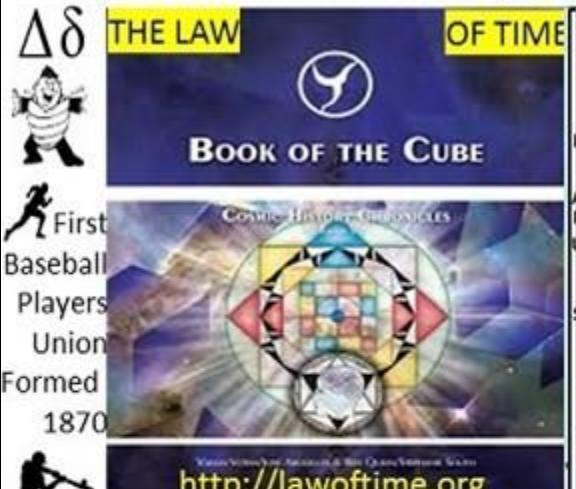
USPTO APPLICATION 13/573 002

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



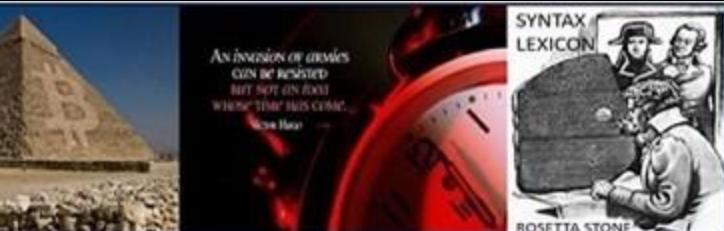
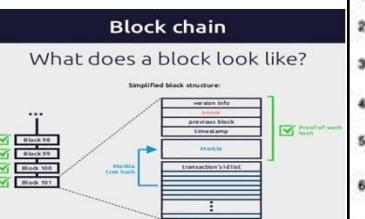
atoshi Bitcoin Blockchain
ime Stamp Server

TIMESTAMP SERVER
 In order to propose begins with a timestamp server. A timestamp server works by taking a block of blocks to be timestamped and publicly publishing the hash, such as H_1 , of the first block. This hash is then used to timestamp the second block, H_2 . This continues until the obviously, in order to get into the hash. Each timestamp includes the previous timestamp in its header, forming a chain, with each additional timestamp referencing the one before it.



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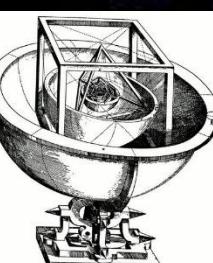
graph LR
    subgraph TS [Timestamp Server]
        direction TB
        TS_in[Blocks] --> TS_out[Hash]
    end
    TS_in --- TS_out
  
```



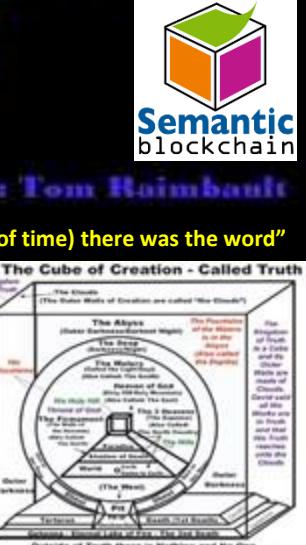
Metatron's Cube and the Platonic Solids



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



GENESIS OF ALL FORM





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

-Buckminster Fuller



THE GREAT CONJUNCTION IN AQUARIUS

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

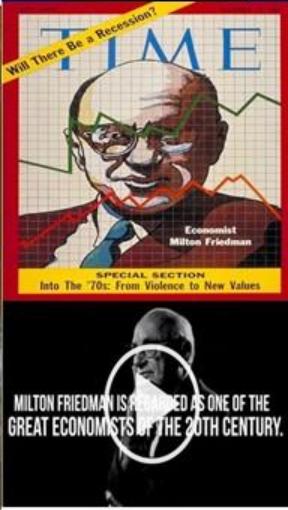
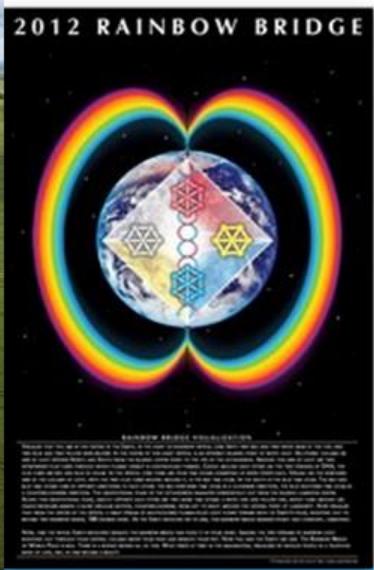
Over the next ten years, we are going to see our world innovate unlike never before, particularly in the fields of AI, technology, science, space travel, UFOs, networks, and the Internet. Major Universal truths will also be revealed as we welcome the New Age of Aquarius. The old world will soon come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

photo by werner du plessis



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

~ Edgar Cayce



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

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

Milton Friedman — Preface to Capitalism & Freedom 1962

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

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

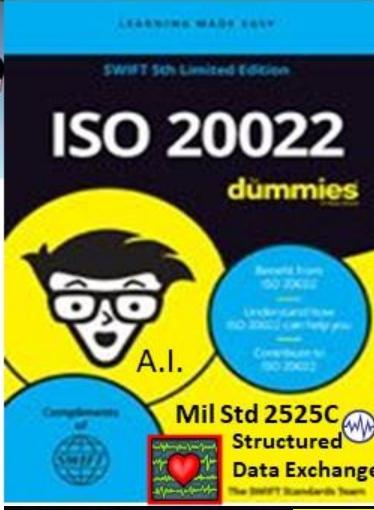
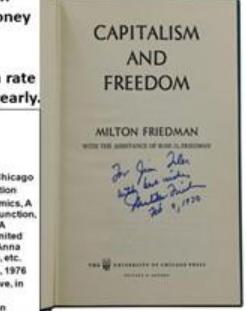


Milton Friedman

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



Reverend K "I see Mr. MaGoo"



The Age of Aquarius: Aquarius, Aquarius Rising @ 6:44 A.M. Feb 10th 1960

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

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

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

