



Eco Economic Epochs Heartbeat

DEFI FINTECH IP WARS / Litigation Foundation Tech



SWORDS to PLOWSHARES



The logo features a blue digital camera icon on the left, followed by a blue circular icon containing a white brain-like waveform. To the right of these icons, the text "USPTO 13/573,002" is displayed in large, bold, black letters. Below it, "573 U.S. 134 SCt 2347" is shown in a slightly smaller, bold, black font. At the bottom, the words "Alice in Wonderland Ruling" are written in a bold, black, sans-serif font.



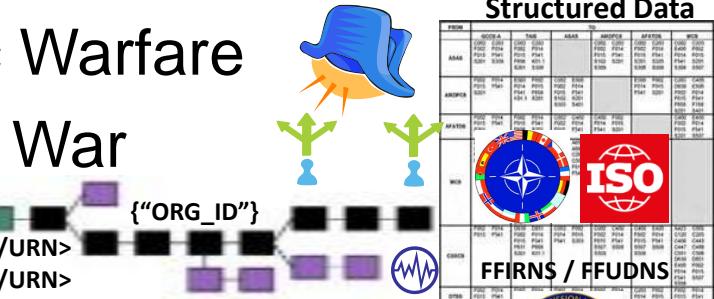
**Symbols
Rule
The World
OPSCODE
BREVITY
CODES
Mapped
To symbols
2525A,C D**



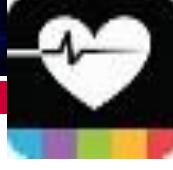
SYNC DELTA $\Delta\delta$ DATA SNAPSHOT

**INFOCON
5 4 3 2 1
INFORMATION
CONDITION**

- 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



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



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

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



MEMO #1421



Humanitarian Assistance Networked Donor System

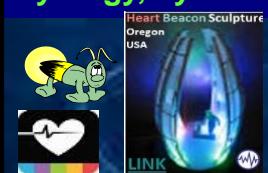
H.A.N.D.S: "Based on the need to speed up the processes of influencing an adversary, new concepts result in the adaptation of military doctrine, organization, training, material, infrastructure, interagency interaction, leadership, personnel and facilities" ... German Bundeswehr concept of "OOTW Operations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



OPERATIONS
OTHER
THAN
WAR



Beacon Communities

Vernetzte Operationsführung



PING

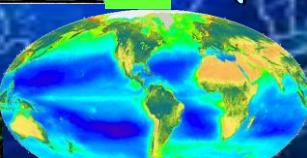
Proximity Beacons

JAEGERS

BIOCOIN



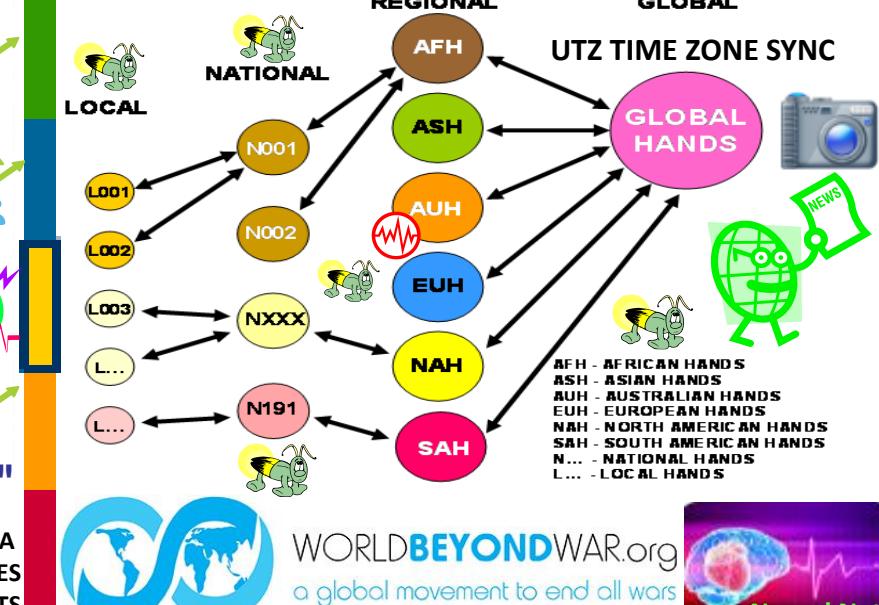
Closer < \$\$\$ < FUEL



FREELY
HEARTBEAT
EVENT / ALERT Flash Heartbeat Message Bus
ALGORITHM



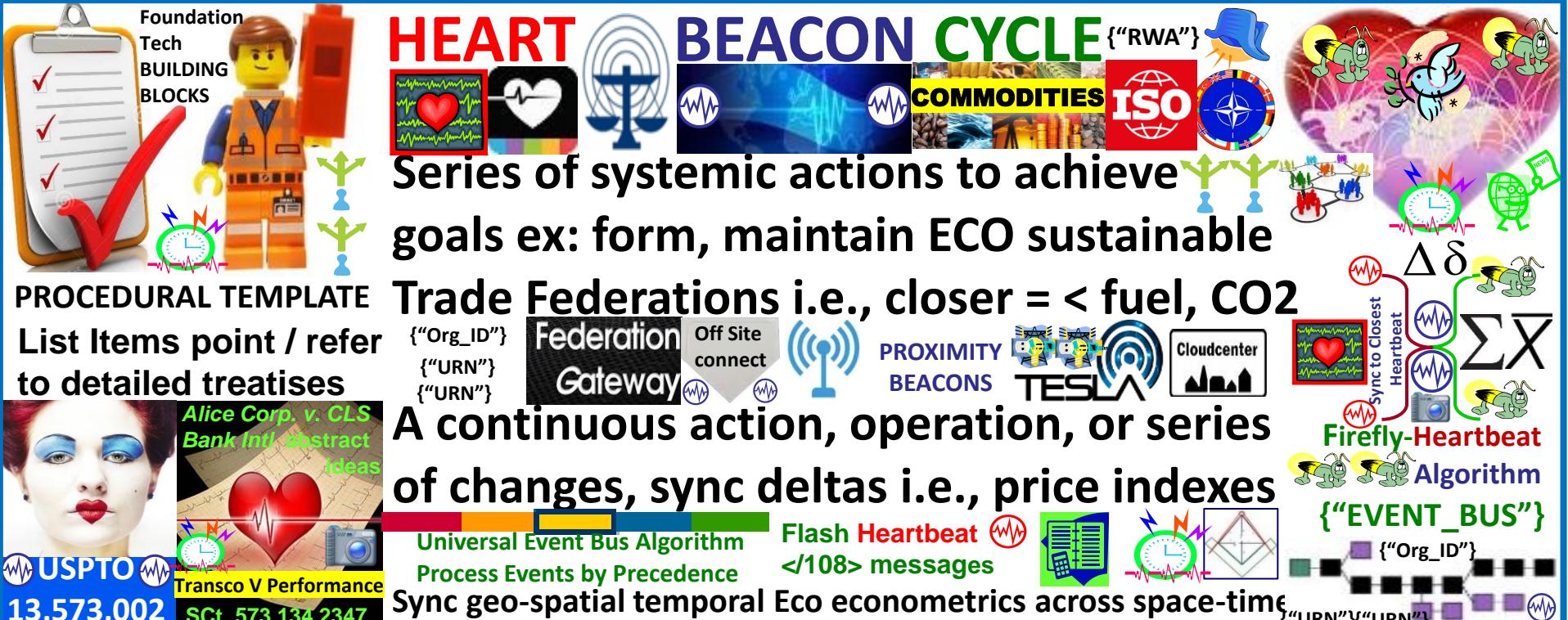
SYSTEM
Of
SYSTEMS

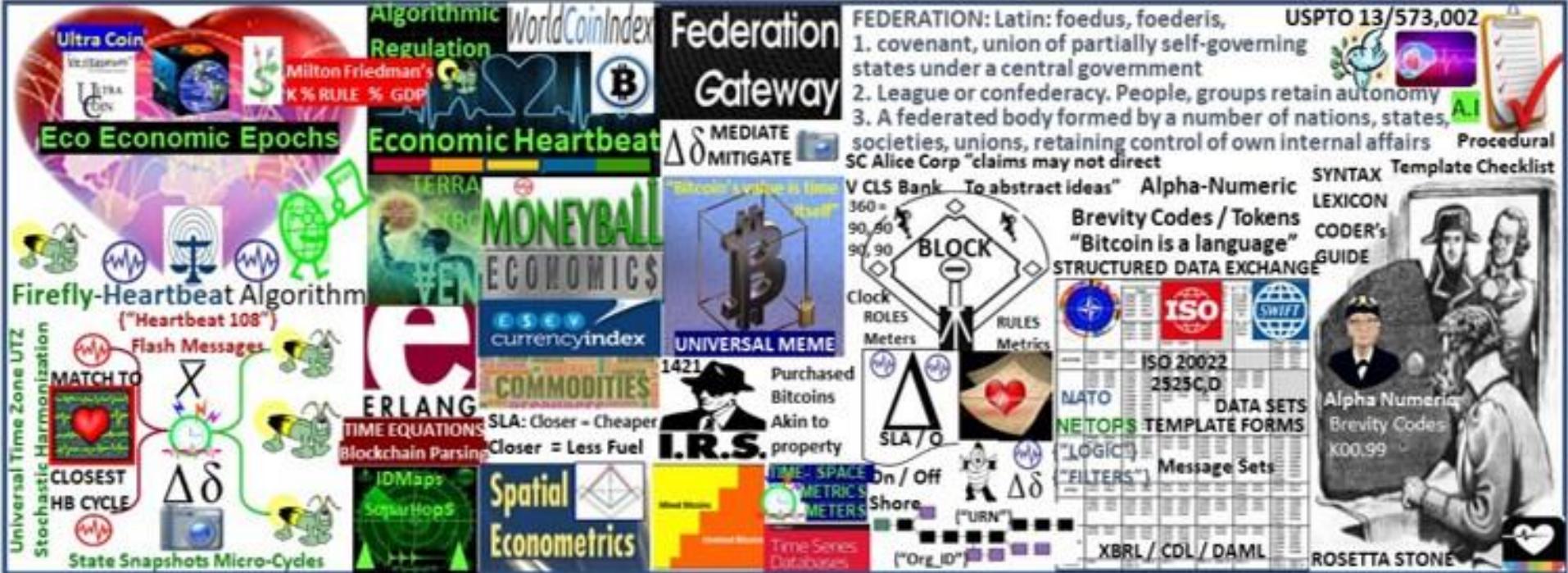


WORLD BEYOND WAR.org
a global movement to end all wars



KAIJU





THE BITCOIN BLOCKCHAIN FOR DUMMIES



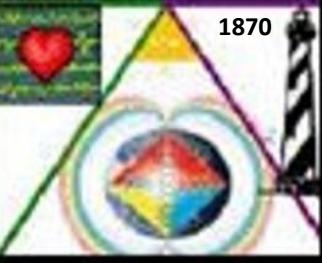
Satoshi Nakamoto



Craig WRIGHT



“Bitcoin is a LANGUAGE”



Wright Brother's 1st Flight Cape Hatteras Outer Banks

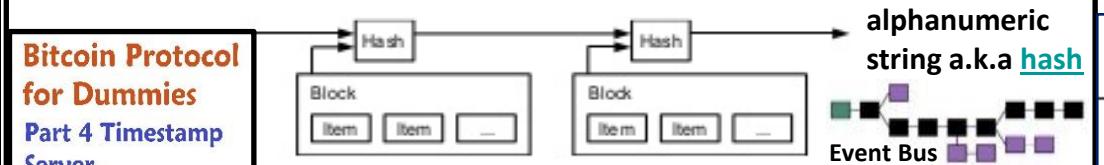
1870

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

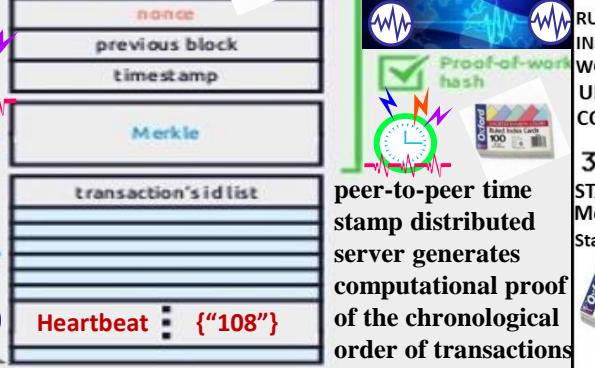
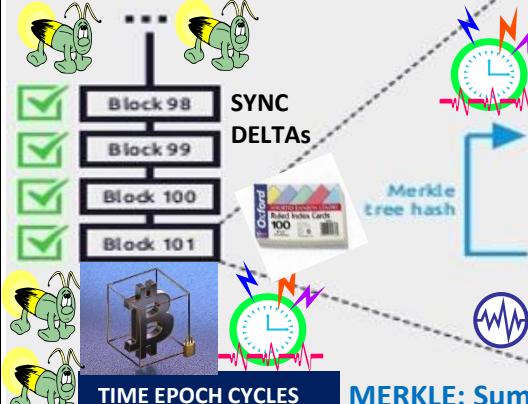
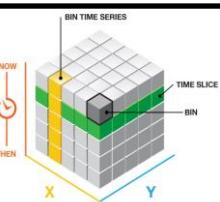
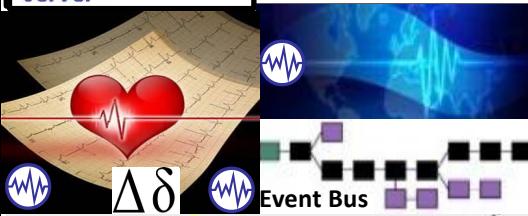
3. Timestamp Server

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



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

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



The image is a dense collage of various diagrams, icons, and text snippets. It includes:

- A top left corner showing a circular dial with numbers 360, 90, 90, 90.
- A large central title "BASEBALL 'DIAMOND'" with the subtitle "A diamond Is a square Is a block in 3D".
- A section about Satoshi Nakamoto: "The solution we propose begins with a TIME STAMP SERVER".
- An illustration of a person running on a path labeled "90 feet".
- A woman in a baseball uniform with the text "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".
- A diagram of a 3D cube labeled "Blockchain BLOCK in 3D = CUBE Cube has Length, Depth, Height, Volume".
- A section on "ACRO CYCLES" with a circular icon.
- A section on "ULES / ROLES STRUCTURES WORKFLOW IMPIRE DACH" with a figure of a person holding a bat.
- A section on "3rd Base STATISTICIAN Metrics, Meters" with a figure of a person holding a bat.
- A section on "first base RUNNER Message Bus" with a figure of a person running.
- A diagram of a network with nodes labeled "URN", "ORG_ID", and a Bitcoin symbol.
- A section on "Mean Value Index 3 X 5 HASH TABLES STATE META DATA SHARDS" with a figure of a person running.
- A section on "UNIVERSAL HEARTBEAT MESSAGE EVENT BUS SETTLEMENTS / EXCHANGES = TAXABLE EVENTS AKIN TO PROPERTY IRS #4212" with a figure of a person running.
- A section on "home plate MICRO CYCLES Survey Point" with a camera icon.
- A section on "TIME STAMP SERVER" with a figure of a person running.
- A section on "Firefly – Heartbeat Algo Stochastic Harmonization FIX {"108"} FLASH MESSAGE EVENT BUS" with a figure of a person running.
- A section on "EVENTS" with a figure of a person running.
- A section on "Epoch Time Cycles" with a figure of a person running.
- A large graphic of a 3D cube with a Bitcoin symbol inside, labeled "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".

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

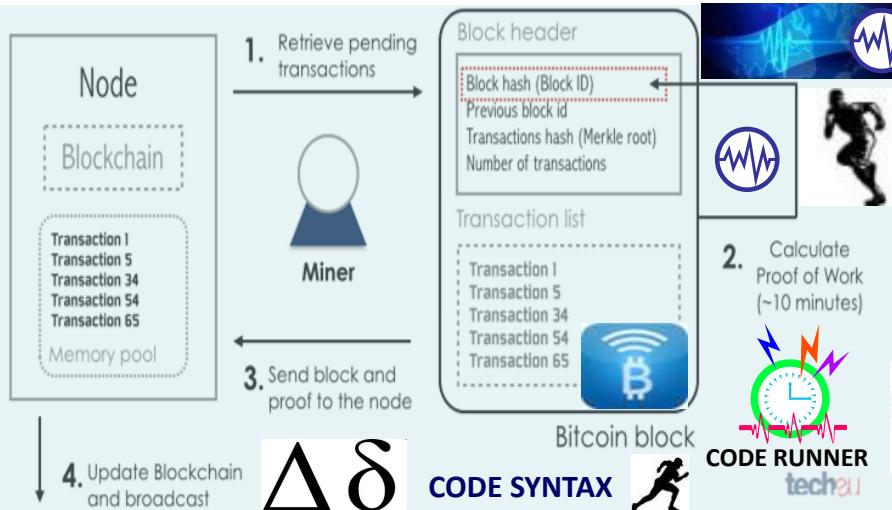


“Bitcoin is a Language”

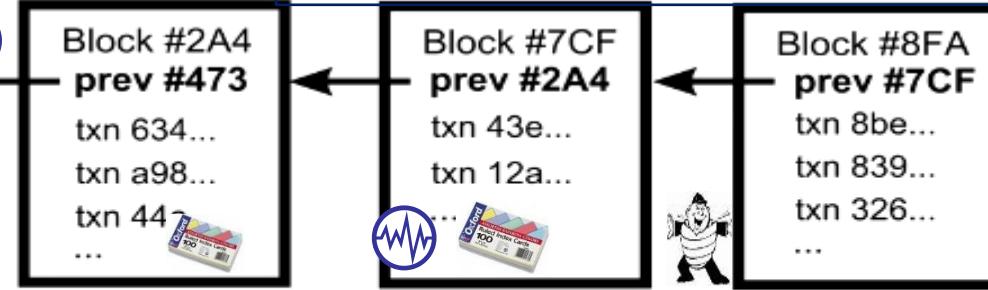
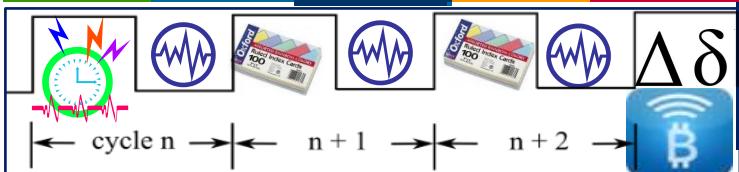
WIRED

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

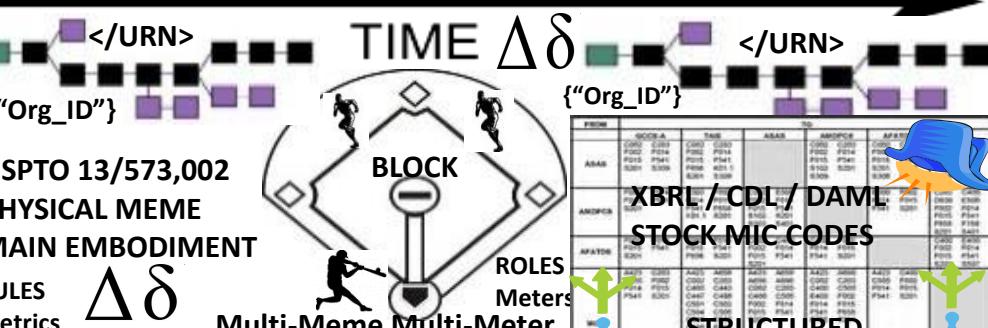
Alice Corp. v. CLS Bank International, 573 U.S. 134 SCt 2347 (2014) is a 2014 decision of the United States Supreme Court about patentable subject matter (patent eligibility).[2] The issue in the case was whether certain claims about a computer-implemented, electronic escrow service for facilitating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



The image is a collage of various stock market-related terms and concepts, including:

- XBRL / CDL / DAML STOCK MIC CODES
- STRUCTURED DATA EXCHANGE TEMPLATE FORMS LOGIC / FILTERS
- SYNTAX LEXICON LIBRARY
- Stock market tickers for NYSE, AMEX, Nasdaq, and OTCBB.
- Logos for Nasdaq, NYSE, and AMEX.
- Icons representing financial data, charts, and money.

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

SYNTAX LEXICON

Library

1st Compiler



Alpha Numeric Brevity Codes

Coder Guide Rosetta Stone

STRUCTURED DATA EXCHANGE TEMPLATE FORMS

300+ USE CASES

LOGIC / FILTERS

SYNTAX / SYMBOL LEXICON LIBRARY



"BITCOIN MAKES MONEY PROGRAMMABLE. MONEY IS SIMPLY DATA"

"Bitcoin's Value is TIME itself"

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



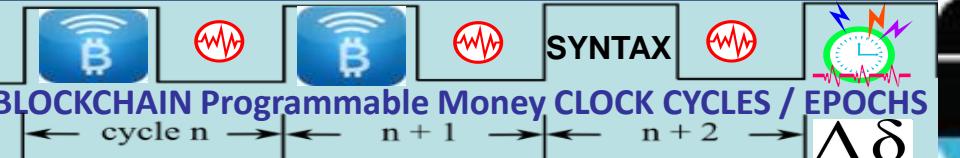
ALICE CORP VS CLS BANK

"claims may not be directed towards an abstract idea"

US SC 573 US 134 2347

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

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



CLOCK FACE 360°
90 / 90 / 90 / 90



MACRO CYCLES

RULES / ROLES

INSTRUCTIONS

WORKFLOW

UMPIRE

COACH

3rd Base

STATISTICIAN

Metrics, Meters

Stat Mean Value Index

3 X 5 HASH TABLES

STATE META DATA SHARDS

State Meta Data Snapshots

Survey Point

MICRO CYCLES

BASEBALL "DIAMOND"

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

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

ALICE Corp VS CLS BANK SC 573 US 134 2347

CLAIMS MAY NOT DIRECT TOWARDS ABSTRACT IDEAS

Physical = Opposite of abstract = ALICE

HEART BEACON CYCLE

TIME – SPACE METER

USPTO 13/573,002

first base

RUNNER Message Bus

Firefly – Heartbeat Algo

Stochastic Harmonization

EVENTS

SETTLEMENTS / EXCHANGES = TAXABLE EVENTS AKIN TO PROPERTY

IRS #1421

FLASH MESSAGE EVENT BUS

TIME STAMP SERVER

Epoch Time Cycles

Δδ

home plate



BIN TIME SERIES

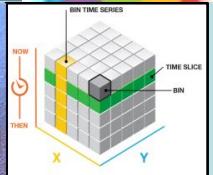
NOW

THEN

X

Y

Z



THE ALICE EFFECT

CLAIMS MAY NOT DIRECT TOWARDS ABSTRACT IDEAS

Physical = Opposite of abstract = ALICE

HEART BEACON CYCLE

TIME – SPACE METER

USPTO 13/573,002

first base

RUNNER Message Bus

Firefly – Heartbeat Algo

Stochastic Harmonization

EVENTS

SETTLEMENTS / EXCHANGES = TAXABLE EVENTS AKIN TO PROPERTY

IRS #1421

FLASH MESSAGE EVENT BUS

TIME STAMP SERVER

Epoch Time Cycles

Δδ

home plate

Now

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

HEART BEACON CYCLE
USPTO 13/573,002
SURVEY METHODS

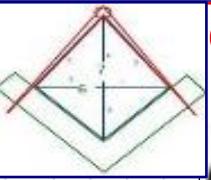
SC ALICE CORP VS CLS BANK: "claims may not direct towards abstract ideas"

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

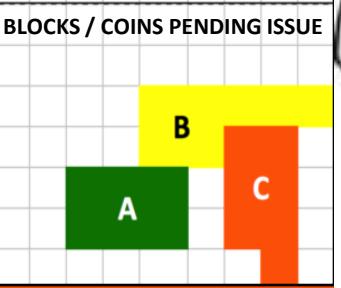


Memo #1421: Purchased Bitcoins are treated akin to property

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



Mined Bitcoins



$$\Delta\delta$$

Unmined Bitcoins



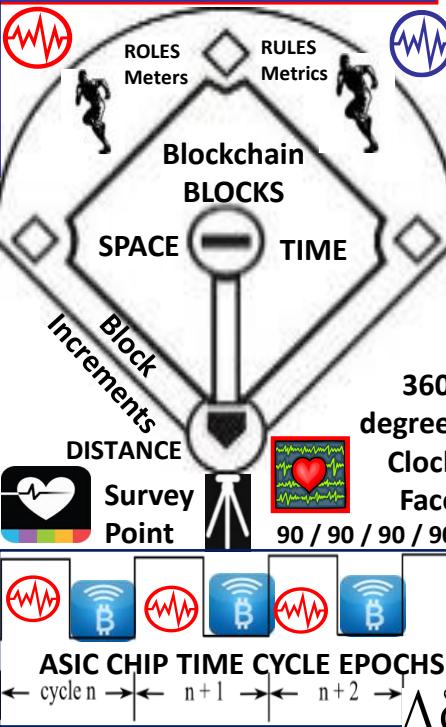
Un-mined coins -- think of them as parcels of land on "Bitcoin Island" not yet released:

IDMaps-SONARHOPS distance estimation query-reply service

- End-state Bitcoin quantity will be fixed like land

"Bitcoin as protocol of ownership, not transfer"

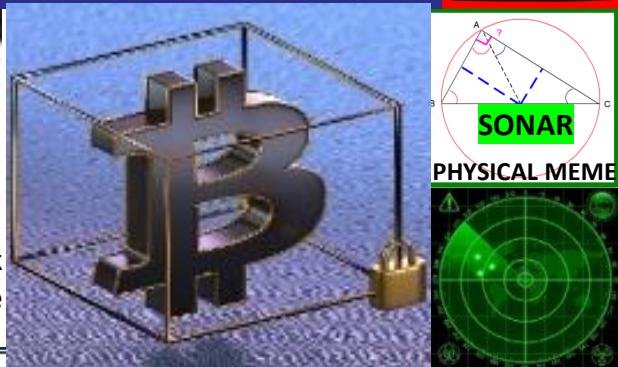
Coin never travel, but simply switch owners"



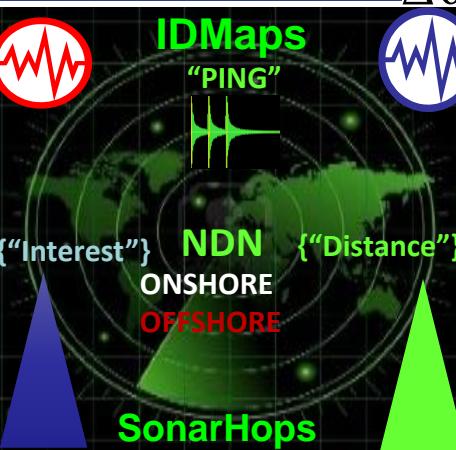
TRIANGULATION



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

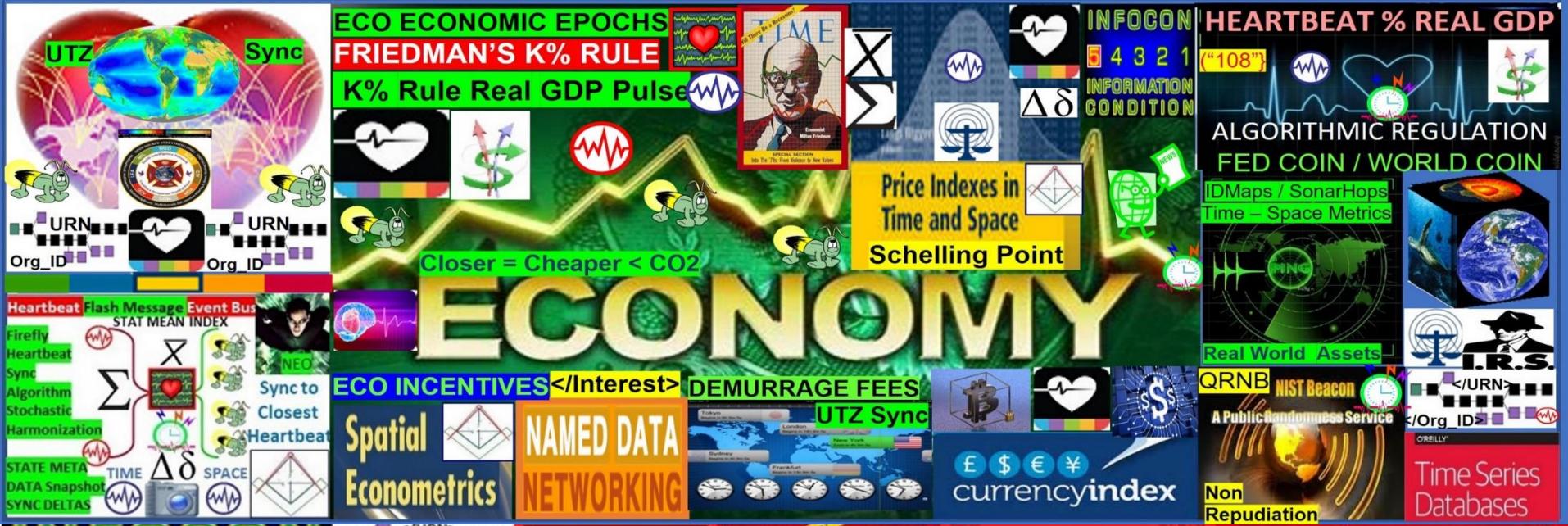


IDMaps Distance Metrics:
latency (round-trip delay)
available bandwidth estimation



FEDERATE: COMMON GOALS SYNCHRONIZED IN SPACE - TIME





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
TERC

Physical = opposite of abstract

The collage includes the following elements:

- CLOCK FACE 360°**: A circular diagram showing a clock face with labels: 90 / 90 / 90 / 90.
- BASEBALL "DIAMOND"**: A diamond-shaped field diagram with bases labeled 1st Base, 2nd Base, 3rd Base, and home plate.
- A diamond is a square is a block is in 3D**: A text snippet with a small diamond icon.
- Satoshi Nakamoto: The solution we propose begins with a **TIME STAMP SERVER****: A text snippet with a small portrait of Satoshi Nakamoto.
- 90 feet**: A label indicating distance between bases.
- Blockchain CURRENTS INVESTMENTS**: A diagram showing a stack of coins with a bar chart overlay.
- ROLES / RULES**: A list of roles: INSTRUCTION, WORKFLOW, UMPIRE, COACH.
- MACRO CYCLES**: A label indicating cycles.
- Blockchain BLOCK in 3D = CUBE**: A diagram showing a 3D cube.
- Cube has Length, Depth, Height, Volume**: A text snippet describing the cube's dimensions.
- 3rd Base STATISTICIAN Metrics, State Mean Value Index**: A label indicating metrics.
- 90 feet**: A label indicating distance between bases.
- HEARTBEAT MESSAGE EVENT BUS**: A diagram showing a bus with various icons representing heartbeat messages.
- STATEMENT / EXCHANGES TAXABLE EVENTS AKN TO PROPERTY**: A text snippet with a small IRS logo.
- 90 feet**: A label indicating distance between bases.
- IRIS**: A small illustration of a person wearing a mask.
- FIX ("108") FLASH MESSAGE EVENT BUS**: A diagram showing a bus with various icons representing fix and flash messages.
- TIME Δδ STAMP SERVER**: A text snippet with a small stamp icon.
- EVENTS**: A label indicating events.
- State Meta Data Snapshots**: A label indicating meta data.
- MICRO Survey Point**: A label indicating a survey point.
- home plate**: A label indicating the home plate.
- cycle n → n + 1 → n + 2 → Δδ**: A sequence diagram showing a cycle with steps n, n+1, n+2, and a final step Δδ.
- ALICE Corp VS CLS**: A text snippet with a small Alice and Bob icon.
- BANK SC 573 US 134 2347 TOWARDS ABSTRACT LOGICAL Physical is Opposite of abstract = ALICE**: A text snippet with a small bank icon.
- HEART BEACON CYCLE TIME - SPACE METER USPTO 13/573,002**: A text snippet with a small heart icon.
- first base RUNNER Message Bus**: A diagram showing a runner on a track with a message bus icon.
- Firefly - Heartbeat Algo**: A text snippet with a small firefly icon.
- EVENTS**: A label indicating events.
- COMMODITIES**: A large yellow banner with the word COMMODITIES.
- Ericsson Open \$\$\$ for Society**: A yellow banner with the text Ericsson Open and \$\$\$ for Society.

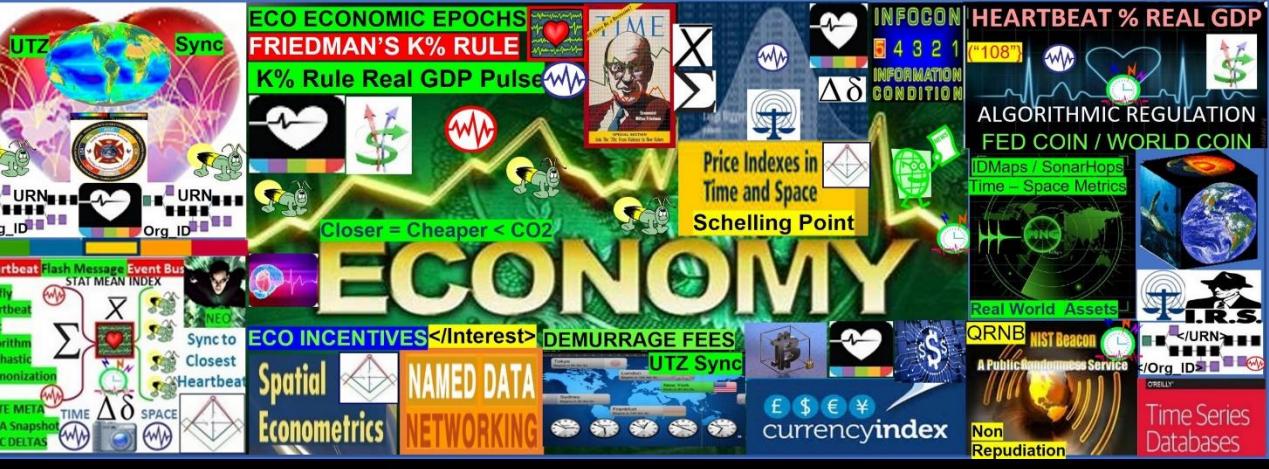
“The solution we propose begins with a time-stamp server” Satoshi

"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 itse
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

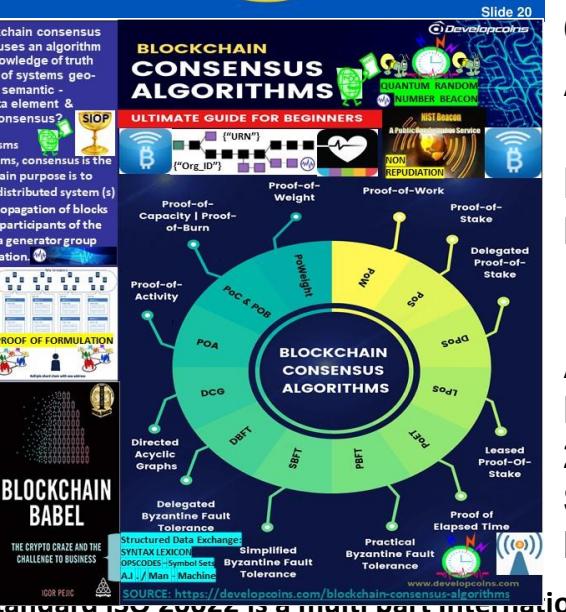
SYNTHETIC SYMBOL SETS AJ / Man - Machine

SETTLEMENTS EXCHANGES 90 feet

SYNTHETIC SYMBOL SETS AJ / Man - Machine

STRUCTURED EXCHANGES 90 feet

SYNTHETIC SYMBOL SETS AJ / Man - Machine



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>

RTI Your systems. Working as one.

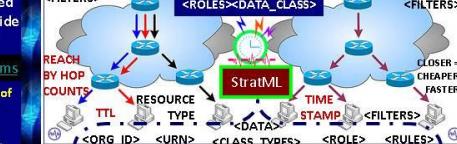
"The fundamental value driver is easy integration of applications into subsystems, of subsystems into systems, and of systems into larger SYSTEM OF SYSTEMS"

INTERNET / BLUE FORCE TRACKER BASICS: Unicast / Multicast & Workflow NET FUNDAMENTALS USED BY MANY OTHER SYSTEMS / FRAMEWORKS

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.



NAMED DATA NETWORKING



Unicast: private or unique resource requested.

Multicast: supports larger audience serving content simultaneously to multiple users

SHARED SITUATION UNDERSTANDING: WHERE AM I, WHERE ARE MY FRIENDS? CYCLICAL REPORTING DURING MICRO-CYCLES AGGREGATED IN MACRO-CYCLES

BEFORE DATA FUSION STATE META DATA SNAPSHOTS JUST TIME BEACON

NDN: "FRESH DATA" = TTL

iT / Every-WHERE Geo-Lo

ARIN American Registry for Internet Numbers

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) <DATA CLASS TYPES>

- URLs LOCATE / FIND RESOURCES

SITUATION AWARENESS NEWSCAST

BY <TAG TYPES> Ledgers Contracts Trade SLA Agreements

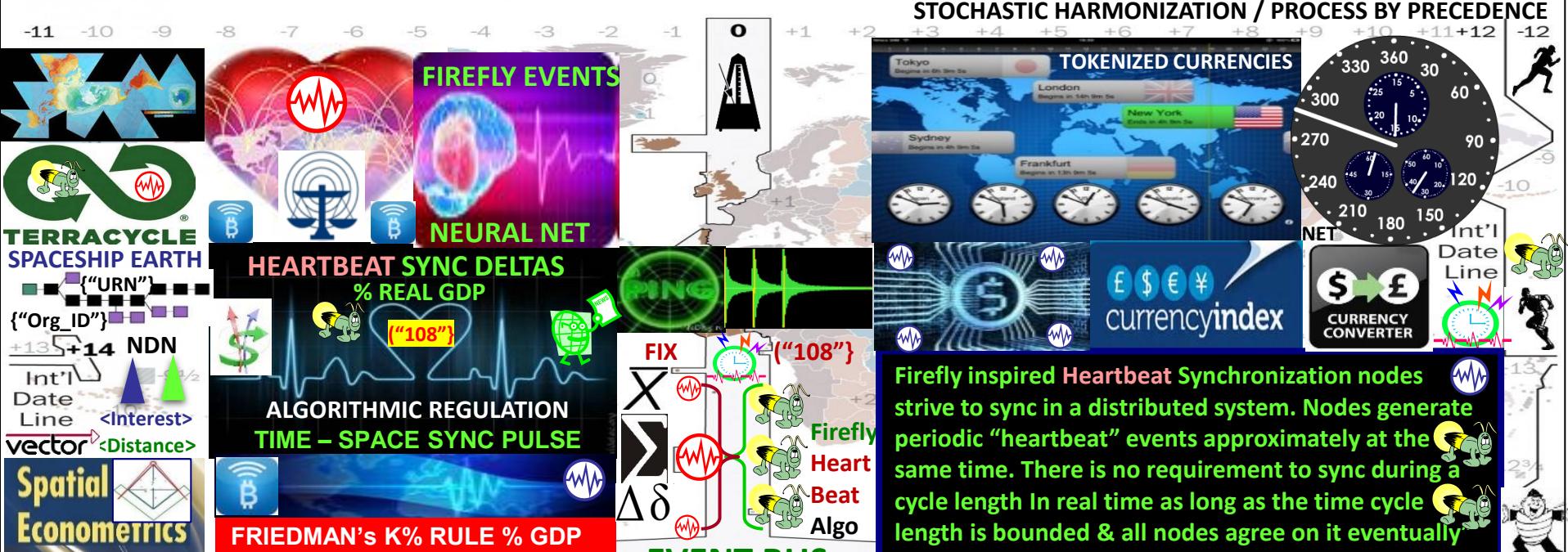
CrowdSourcing TRIANGULATION

vector TELCO MESH FABRIC

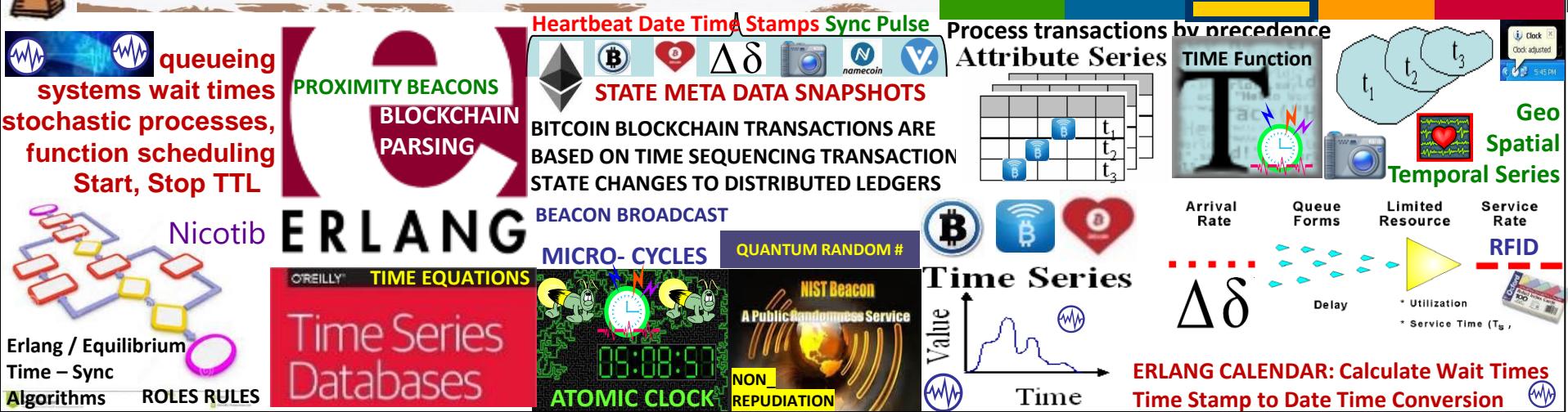
Ethereum: Decentralized Autonomous Organizations

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

XBRL
THE BUSINESS REPORTING STANDARD
BINARY XML
Decision

UBL
DDL DATA
DEFINITION
LANGUAGE

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



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

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

MTL Machine Trust Language



{"URN"} {"URN"}

{"TRANSACTION ID"}

MESSAGE TEXT FORMAT :

SEG RPT OCC CLASSNAME SETID SEQ FIELD OCCURRENCE SET FORMAT NAME

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

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

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



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

DISTANCE

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



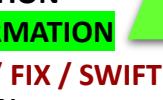
NUPRES DTG 6 /M // (NU) DATE-TIME GROUP



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



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



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



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



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



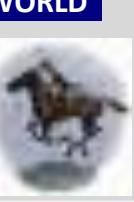
SYMBOLS Friend Neutral Hostile DICAL EVAC & HOSPITALISATION

Partner Competitor MIL - MILITARY OPERATIONS

TOKENIZED ECONOMY BREVITY CODE OPSCOSE MAPPET TO SYMBOLS



TIME EQUATIONS

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			C002 C203 F014 E400 F541 F002 S305 S201 S507
AMDPCS	TOKENS OPSCODE BREVITY CODES	F002 F014 F015 F541 S201				F002 C203 F015 D630 S201 E500 F002 F014
AFATDS	F002 F014 F015 F541 S201	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 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	Rosetta Stone Syntax Lexicon Coder's Guide	A423 C203 C505 F002 F014 F541 S201
MCS	  	 	ASSET TOKENS Token Economy		"SYMBOLS RULE THE WORLD"	

MESSAGE CATALOG 300 + Use Cases

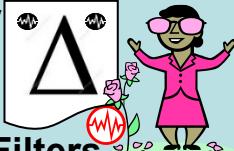
Data Elements: entity, attribute, relationship equivalents

HEARTBEAT MESSAGE =
K00.99 </108> {"108"}

Information Categories and Examples

Object Categories	Examples	Location	Movement	Identify	Status	Activity	Intent
OOB	SYNTAX LEXICON	STRUCTURED DATA lat/long	EXCHANGE spd/hdg	Message country / alliance, type/class	Sets readiness	COA targeting, reconning	{"Java JS"}
Infrastructure	Comm, power, transportation, water/sewer	Machine Trust Language MTL network, grid	throughput, flow rates,	name, part-of relationship	BDA, op levels	repair, broadcasts	YAML expansion
Sociological	Culture, religion, economic, ethnic, government, history, languages	temples, historic structures	E-R Model	Class Diagram	Relational Database	Object DBMS	XML DTD / Schema
Geophysical	Terrain, weather, climatology, oceanography, astrometry	feature lat/long, alt/dpth	Entity	Class	Table	Class	Element
			Attribute	Attribute	Field / Column	Attribute	Child Element or Element Attribute
			Domain Value	PURCHASE CODES	Instance, Value	TADILs	MTF
						DUI	FUD

- COI Determination Org Interaction
- Search and Discovery
- Ontologies STANDARDS
- Taxonomies REFERENCE
- Metadata Attributes / Filters
({"Org_ID"} {"URN"} </URN></URN> FILTERS



FFUDN: Field Format Unit Designator #

FFIRN Field Format Index Reference #

Structured military messaging ID's messages, message sets, data element, symbol fields </108>
BY Form Field Position & NUMBER

 {"108"}  NDN  Firefly-Heartbeat Flash Messages

PROCESS MESSAGE BY PRECEDENCE
UNIVERSAL EVENT / ALERT MESSAGE BUS

OPERATIONAL NODES / ACTIVITIES

DATA	SYSTEM FUNCTIONS	PERFORMANCE
11.4 - Classification	11.8 - Kinematics	
11.4.1 - Category	11.8.1 - Pos / Vel / Acc (PVA)	
11.4.1.1 - Confidence Level	11.8.1.1 - Acceleration	
11.4.1.2 - Estimate Type	11.8.1.1.1 - Angular	
11.4.1.2.1 - Alternative	11.2 - Linear	
11.4.1.2.2 - Evaluated D	2 - Estimate Type	
11.4.1.3 - Value	1.2.1 - Estimated	
	1.2.2 - Observed	
	1.2.3 - Predicted	
	1.2.4 - Smoothed Data	
	PURCHASE CODES	
SYMBOL	Friend	Neutral
2525C	Partner	
		Hostile 
		Competitor 
		1 - Velocity
		1.4.1 - Horizontal
		1.4.2 - Vertical
		VA Confidence
		1 - Bearing Angle
		2 - Bearing Angle Rate
		3 - Covariance Matrix

NAMED DATA <CONTENT> CENTRIC NETWORKING NETWORKING



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

Situational Awareness Reference Architecture (SARA)

IDENTITY, Inventory, Activity, and Sharing



<Federated ID> **<URN>** **<type>** **<Data Class Types>**

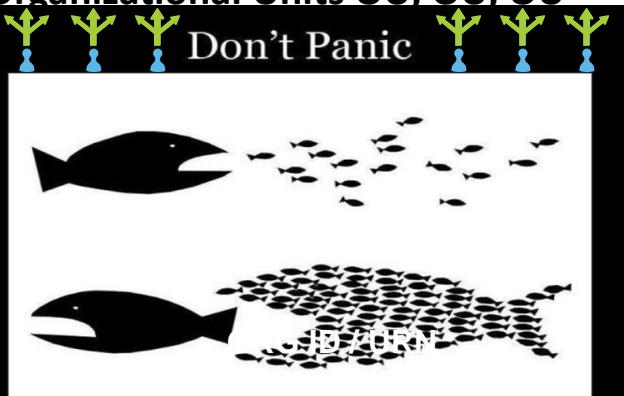
STRUCTURED MILITARY MESSAGING FORMS: FIELD TYPES, FILTERS, TAGS PARSED, PROCESSED, COMPILED TELEMETRY SIGNALING STANDARDIZATION

USMTE / XML MTF FORMATTED MESSAGE CATALOG

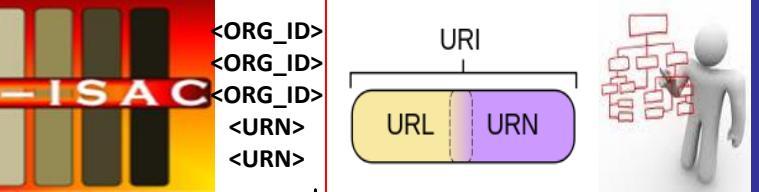
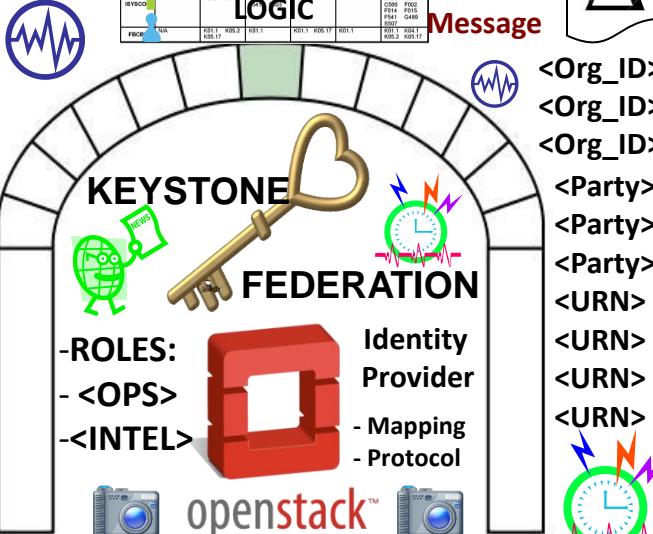
Catalog has over 300 messages to choose from have a wide number of information exchange requirements using common, **CONSENSUS** Message Text Formats MTFs. MTFs specify <CONTENT> / information agreed by group consensus presenting information in a logical, well specified and unambiguous layout resulting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

</Organizational Identifier Org ID>

Organizational Units OU OU OU



FEDERATE



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

- URNs IDENTIFICATION (SENSORS, DEVICES) <DATA CLASS TYPES>
 - URCs INCLUDE META- INFORMATION
 - URLs LOCATE / FIND RESOURCES



SITUATION AWARENESS

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

BY <TAG_TYPES>
Ledgers
Contracts
Trade SLA
Agreements

<Org_ID> CROWD SOURCING / FUNDING

<Org_ID> PARTIDO X

ETHERIUM: DAO

<Org_ID>	PARTIDO X:		ETHEREUM: Decentralized Autonomous Organizations
<Party>	Distributed		
<Party>	Democratic		
<Party>	Participation		
			

Situational Awareness Reference Architecture (SARA)

Identity, Inventory, Activity, and Sharing

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



IDENTITY: <UUID> = Devices, sensors

<ORG_ID> Organizations

Federation
Gateway

INVENTORY: Uniform Resource Name <URN>

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



vector

<COMMODITY><WATER><ENERGY><AVAILABLE UNITS>
GEO-SPATIAL TEMPORAL INTENSITY METRICS
UNIFIED EVENT / ALERT TRIGGER / THRESHOLDS

<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

ACTIVITY: <EVENT><ALERT>

CONTENT LEXICON
ROSETTA STONE



AVALANCHE

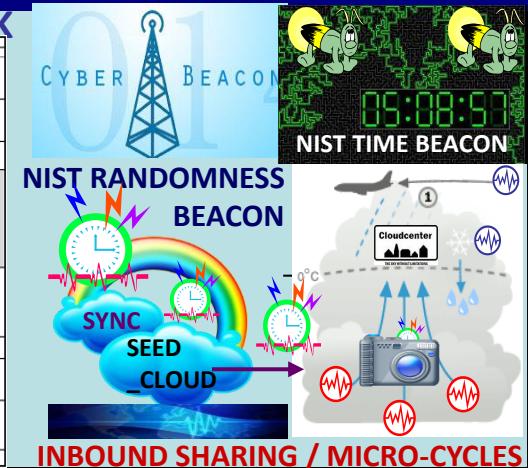
WELCOME TO THE FS-ISAC SECURITY AUTOMATION GROUP. OUR VISION IS
A FEDERATED NETWORK OF STIX-BASED REPOSITORIES SHARING INTELLIGENCE IN
REAL-TIME. AVALANCHE: STRENGTH IN NUMBERS, SECURELY SHARE INTELLIGENCE

NIST CYBER SECURITY FRAMEWORK

FRM	GC02-A	TAB	ASAB	AMPCRS	APAFTR	MCR
ASAB	C0201	C0201	C0201	C0201	F0201	E400
ANICOPS	B0201	K0201	K0201	K0201	P0201	F0201
APAFTR	F0201	F0202	F0202	F0202	F0203	F0202
CBRS	C0202	C0202	C0202	C0202	C0202	C0202
CMITS	F0101	F0101	F0101	F0101	F0101	F0101
IMBON	F0202	F0202	F0202	F0202	F0202	F0202
PRIME	I0201	I0201	I0201	I0201	I0201	I0201

CYBER SECURITY
CONTENT
LEXICON ROSETTA STONE

STRUCTURED
<CONTENT>
TEMPLATES



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

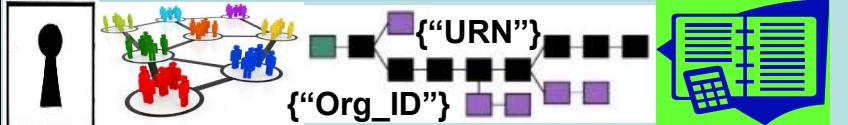
<TAG>
LIBRARY

NAMED DATA
NETWORKING
<Content> Centric

NIEM
SHARING INFORMATION SYSTEMS

Heart Beacon Cycle

FEDERATE / TRADE FEDERATIONS



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

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

Federation
Gateway

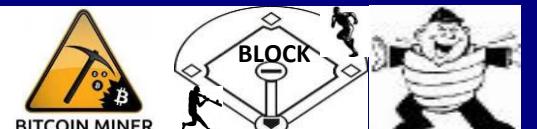


{"GLOBAL"}
{"SHARED"}
{"DOMAIN"}
{"COMMUNITY"}
{"PRIVATE"}
{"GROUP ID"}



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

Bitcoin Mining Pools
MEME / METAPHOR MEDIATION



DISTRIBUTED AUTONOMOUS ORGANIZATION = DAO RAND Corp

term coined circa 1991 now in use by Blockchain tech corporations

Uniform_Resource_Name



FIREFLY FLASH HEARTBEAT MESSAGES

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

IeT DEVICE / PLATFORM
IoT SENSOR DEVICE

{"Asset_Type"}

STOCK EXCHANGE

MIC MARKET IDENTIFIER
CODES / BREVITY CODES



Office 365 Groups

Microsoft Teams



Signalling, Telemetry



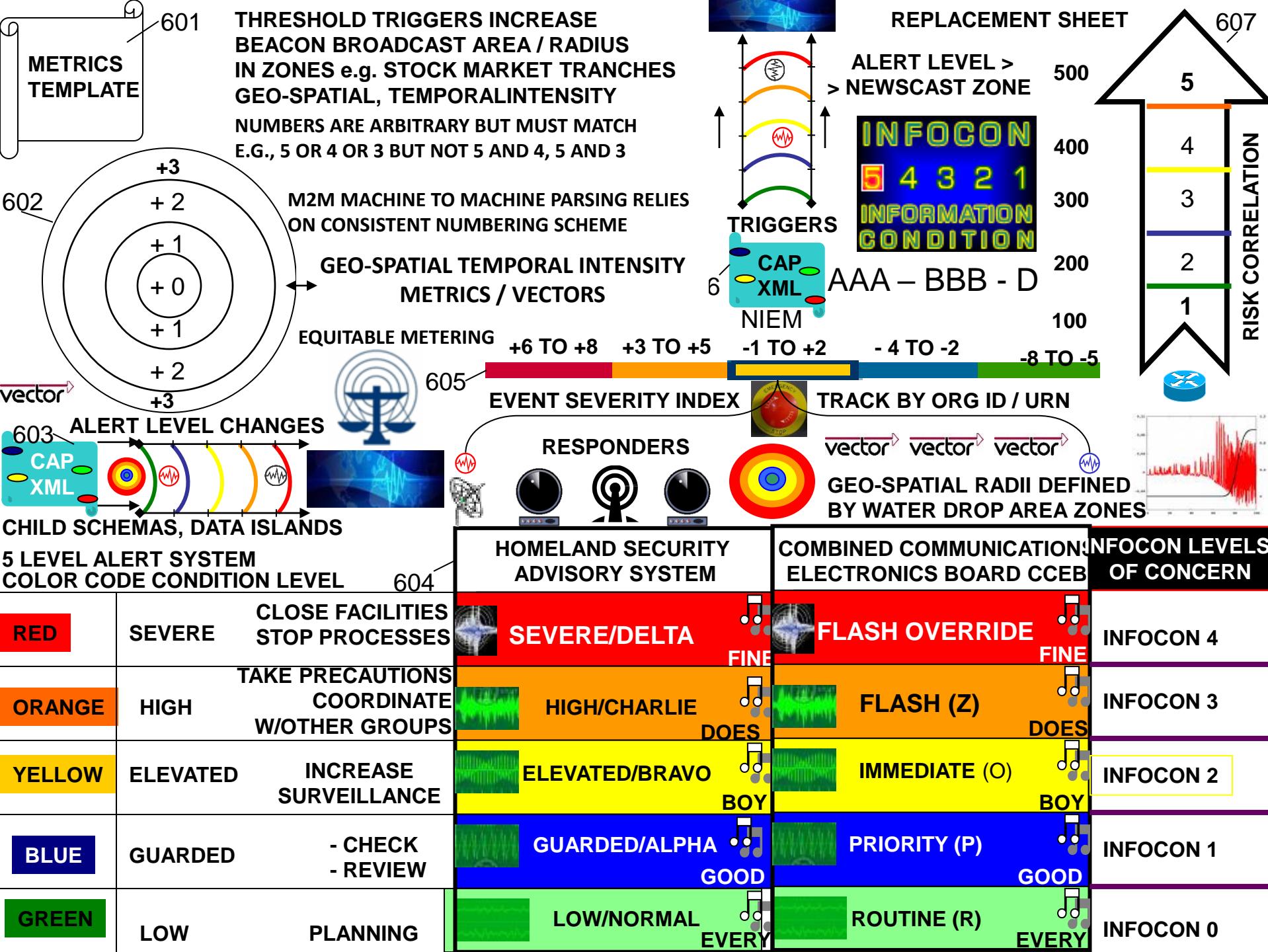
UUID 123e4567-e89b-12d3-a456-426655440000
123e4567-e89b-12d3-a456-426655440001
123e4567-e89b-12d3-a456-426655440002

QR CODE



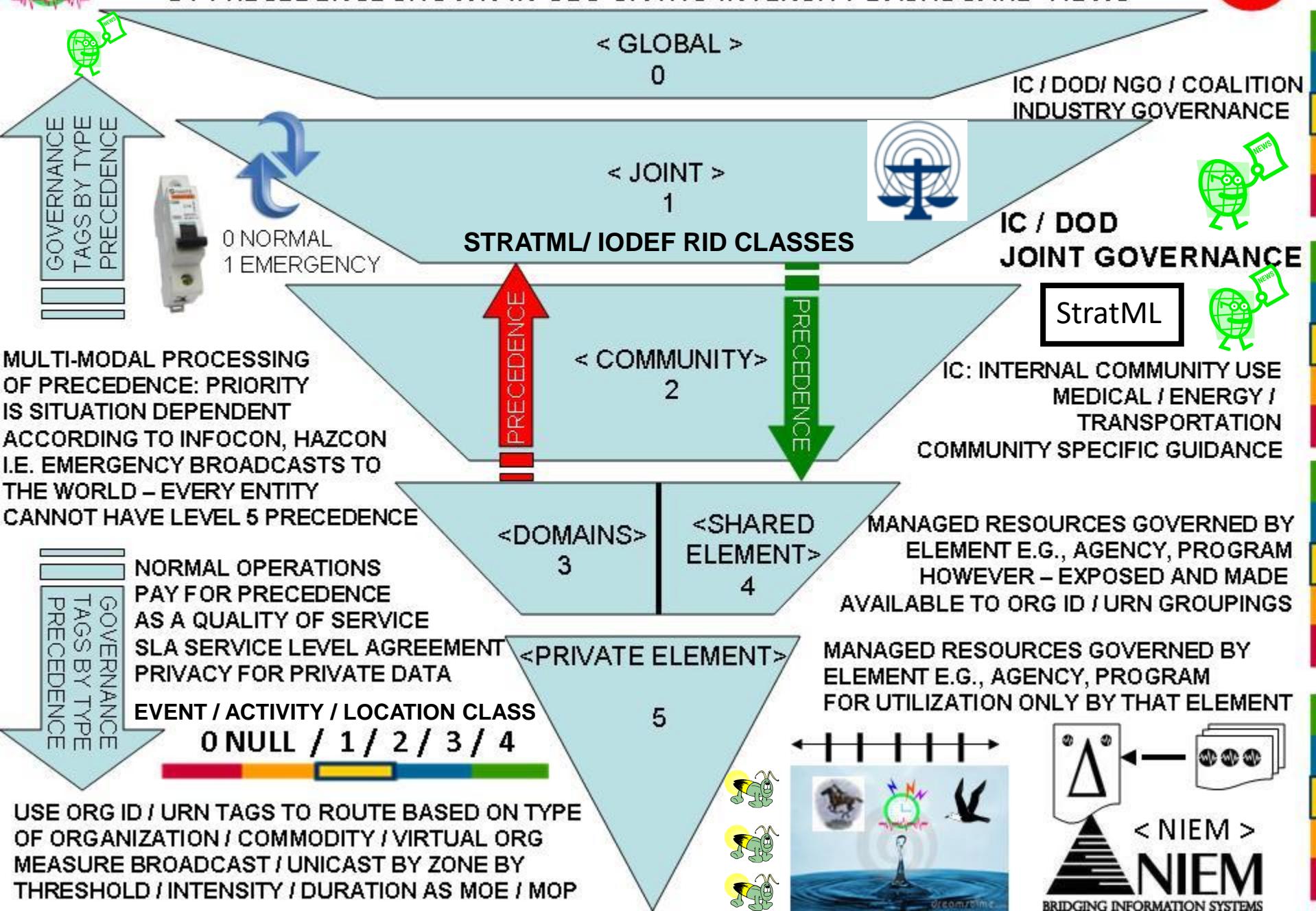
{"DUNS #"} {"Org_ID"} Heartbeat Snaps
QR CODE MICRO-CYCLES







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

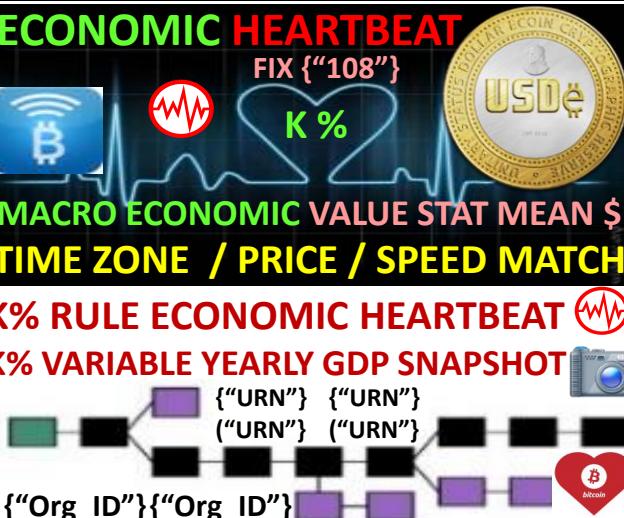
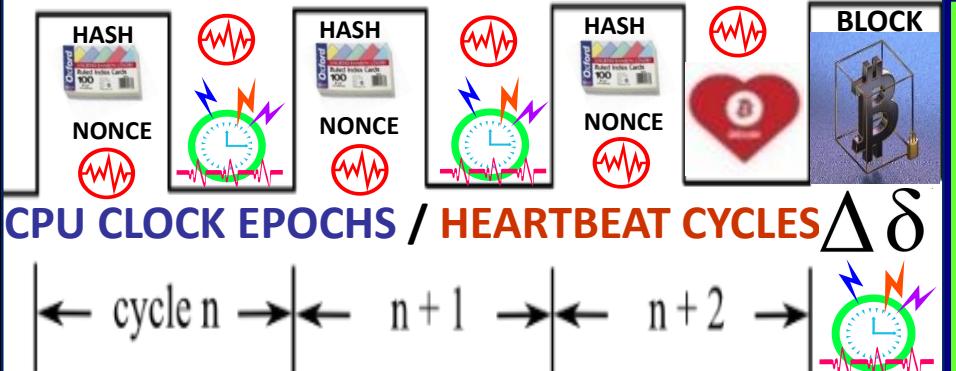




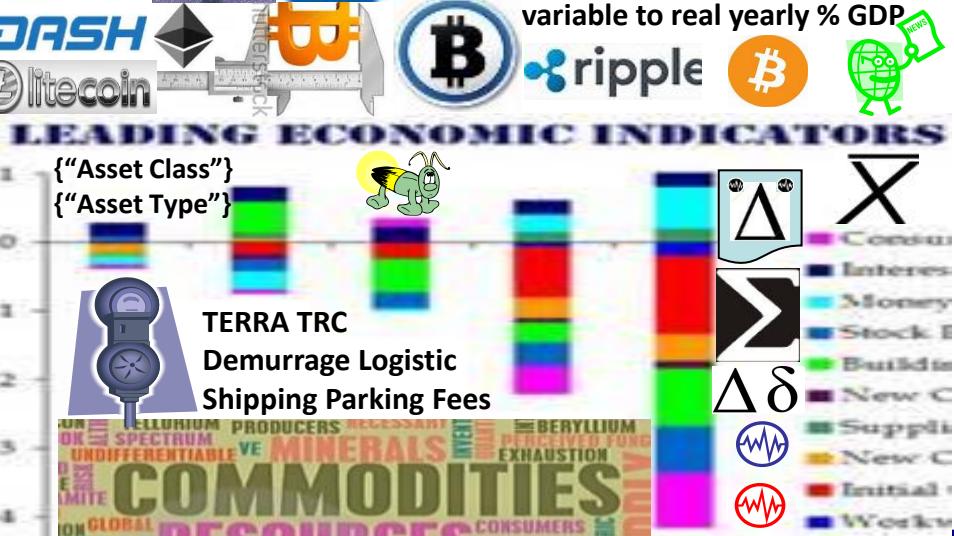
The current standard time common throughout the world is based on a 24-hour clock, with zones that are either 12 hours ahead or behind **Coordinated Universal Time (UTC)**. However, these time zones are decided upon by individual governments, without overall coordination and can even extend fourteen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



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.



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

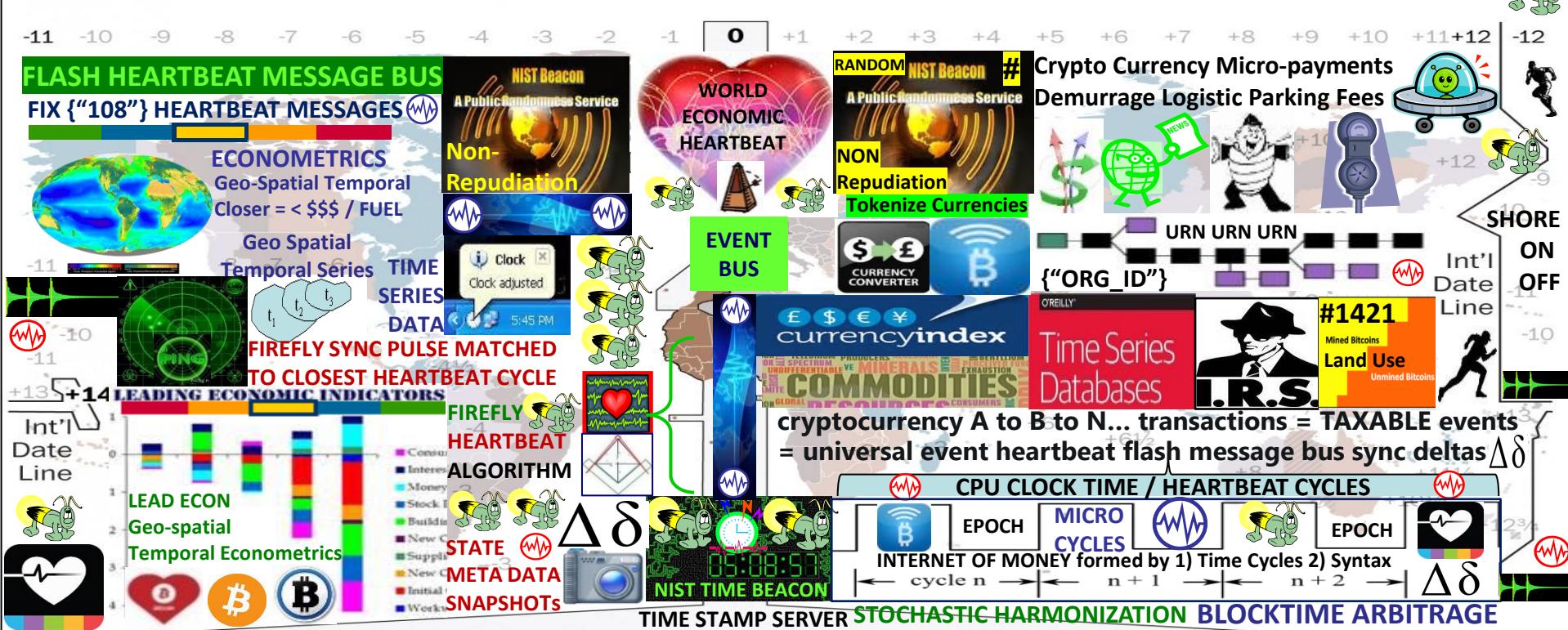


"Heartbeat Synchronization strives to have nodes in a distributed system generate periodic local "heartbeat" events approximately at the same time. It differs from classical clock sync in that Nodes are not interested in counting cycles and agreeing on the ID of the current clock cycle. There is no requirement 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.

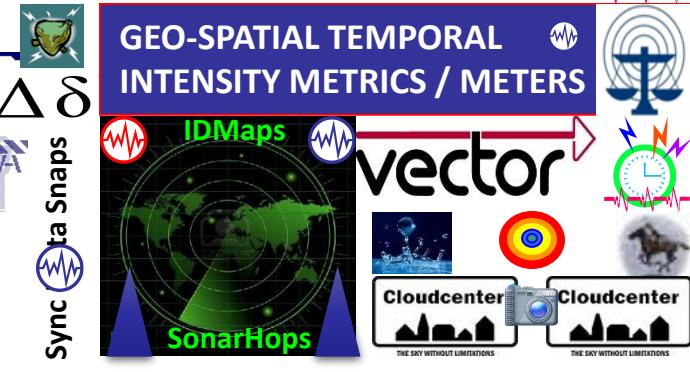
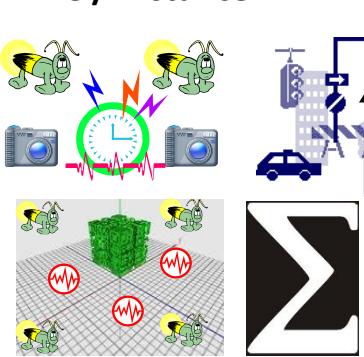
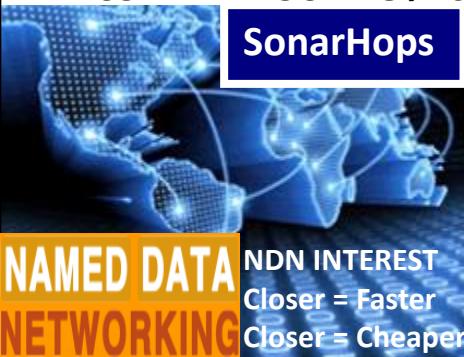




IDMaps: Global Internet Host Distance Estimation Service



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



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



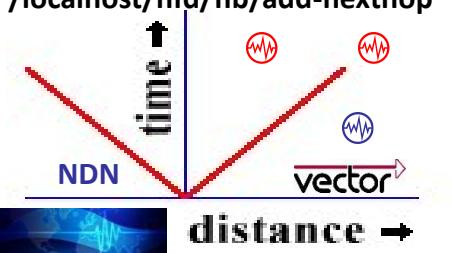
HOP COUNTS



REACHABILITY



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



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

Name Prefix
<Org_ID> Trie (NPT)



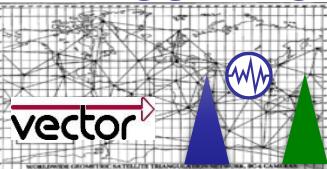
NDN NAMES

NDN NAMED DATA NETWORK RIB / FIB Datasets event notification

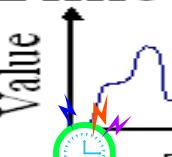
Distance information adjusts to “permanent” topology changes e.g., splits, joins, adds, moves, drops, merges in lieu of formal merger / acquisition



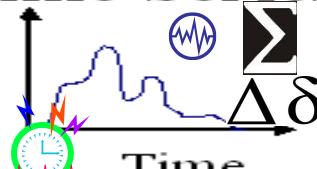
TRIANGULATION



Time Series



IS DATA FRESH ?



Datasets and Event Notification

INTEREST in <URNs>

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



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



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



NDN INTEREST LIFETIME = TTL Time To Live



HEARTBEAT STATE META DATASNAPSHOTS



MICRO-CYCLES



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:



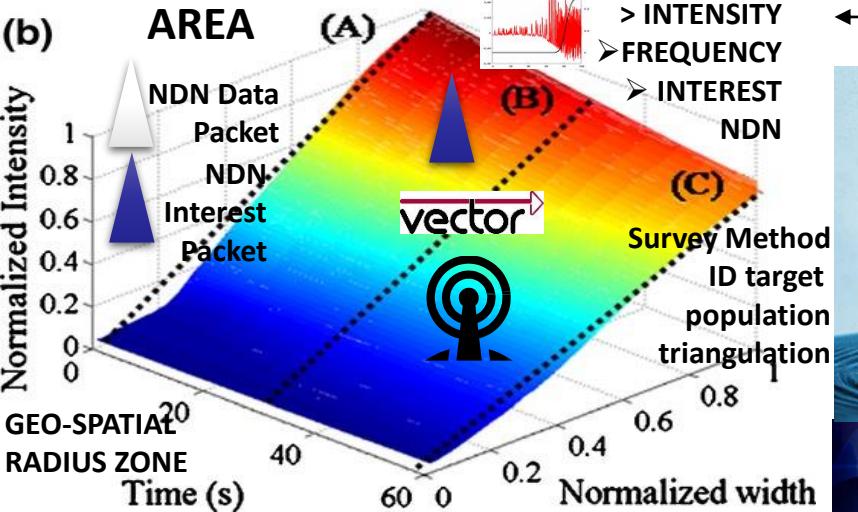
Paul Revere = linear, sequential



TCP/IP hop by hop counts, by hop controls



Water Drop = AREA / INTENSITY Cyclic Frequency



NAMED DATA NETWORKING

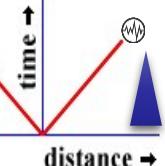
</IoT>
MQTT



NIST TIME BEACON

05:08:50

<INTEREST>



ARRESTED-D

TELEMETRY TRANSPORT

IEEE 802.15.4

OASIS MQTT

Hop Count

SOURCE NETWORK 172.16.0.0/16

omnisecu.com.R1 omnisecu.com.R2 omnisecu.com.R3 omnisecu.com.R4

INSTRUCTIONS TO MASTER CONTROLLER

Number of Hops = 3

TTL = Time To Live

DESTINATION NETWORK 172.27.0.0/16

STOP

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

vector

WirelessHART

time synchronized, self-organizing, mesh Net

ALERT LEVEL > NEWSCAST ZONE

vector

WirelessHART

time synchronized, self-organizing, mesh Net

ALERT LEVEL > NEWSCAST ZONE

vector

WirelessHART

time synchronized, self-organizing, mesh Net

ALERT LEVEL > NEWSCAST ZONE

vector

WirelessHART

time synchronized, self-organizing, mesh Net

ALERT LEVEL > NEWSCAST ZONE

vector

WirelessHART

time synchronized, self-organizing, mesh Net

ALERT LEVEL > NEWSCAST ZONE

vector

WirelessHART

time synchronized, self-organizing, mesh Net

ALERT LEVEL > NEWSCAST ZONE

vector

WirelessHART

time synchronized, self-organizing, mesh Net

ALERT LEVEL > NEWSCAST ZONE

vector

WirelessHART

time synchronized, self-organizing, mesh Net

ALERT LEVEL > NEWSCAST ZONE

vector

WirelessHART

time synchronized, self-organizing, mesh Net

ALERT LEVEL > NEWSCAST ZONE

vector

WirelessHART

time synchronized, self-organizing, mesh Net

ALERT LEVEL > NEWSCAST ZONE

vector

WirelessHART

time synchronized, self-organizing, mesh Net

ALERT LEVEL > NEWSCAST ZONE

vector

WirelessHART

time synchronized, self-organizing, mesh Net

ALERT LEVEL > NEWSCAST ZONE

vector

WirelessHART

time synchronized, self-organizing, mesh Net

ALERT LEVEL > NEWSCAST ZONE

vector

WirelessHART

time synchronized, self-organizing, mesh Net

ALERT LEVEL > NEWSCAST ZONE

vector

WirelessHART

time synchronized, self-organizing, mesh Net

ALERT LEVEL > NEWSCAST ZONE

vector

WirelessHART

time synchronized, self-organizing, mesh Net

ALERT LEVEL > NEWSCAST ZONE

vector

WirelessHART

time synchronized, self-organizing, mesh Net

ALERT LEVEL > NEWSCAST ZONE

vector

WirelessHART

time synchronized, self-organizing, mesh Net

ALERT LEVEL > NEWSCAST ZONE

vector

WirelessHART

time synchronized, self-organizing, mesh Net

ALERT LEVEL > NEWSCAST ZONE

vector

WirelessHART

time synchronized, self-organizing, mesh Net

ALERT LEVEL > NEWSCAST ZONE

vector

WirelessHART

time synchronized, self-organizing, mesh Net

ALERT LEVEL > NEWSCAST ZONE

vector

WirelessHART

time synchronized, self-organizing, mesh Net

ALERT LEVEL > NEWSCAST ZONE

vector

WirelessHART

time synchronized, self-organizing, mesh Net

ALERT LEVEL > NEWSCAST ZONE

vector

WirelessHART

time synchronized, self-organizing, mesh Net

ALERT LEVEL > NEWSCAST ZONE

vector

WirelessHART

time synchronized, self-organizing, mesh Net

ALERT LEVEL > NEWSCAST ZONE

vector

WirelessHART

time synchronized, self-organizing, mesh Net

ALERT LEVEL > NEWSCAST ZONE

vector

WirelessHART

time synchronized, self-organizing, mesh Net

ALERT LEVEL > NEWSCAST ZONE

vector

WirelessHART

time synchronized, self-organizing, mesh Net

ALERT LEVEL > NEWSCAST ZONE

vector

WirelessHART

time synchronized, self-organizing, mesh Net

ALERT LEVEL > NEWSCAST ZONE

vector

WirelessHART

time synchronized, self-organizing, mesh Net

ALERT LEVEL > NEWSCAST ZONE

vector

WirelessHART

time synchronized, self-organizing, mesh Net

ALERT LEVEL > NEWSCAST ZONE

vector

WirelessHART

time synchronized, self-organizing, mesh Net

ALERT LEVEL > NEWSCAST ZONE

vector

WirelessHART

time synchronized, self-organizing, mesh Net

ALERT LEVEL > NEWSCAST ZONE

vector

WirelessHART

time synchronized, self-organizing, mesh Net

ALERT LEVEL > NEWSCAST ZONE

vector

WirelessHART

time synchronized, self-organizing, mesh Net

ALERT LEVEL > NEWSCAST ZONE

vector

WirelessHART

time synchronized, self-organizing, mesh Net

ALERT LEVEL > NEWSCAST ZONE

vector

WirelessHART

time synchronized, self-organizing, mesh Net

ALERT LEVEL > NEWSCAST ZONE

vector

WirelessHART

time synchronized, self-organizing, mesh Net

ALERT LEVEL > NEWSCAST ZONE

vector

WirelessHART

time synchronized, self-organizing, mesh Net

ALERT LEVEL > NEWSCAST ZONE

vector

WirelessHART

time synchronized, self-organizing, mesh Net

ALERT LEVEL > NEWSCAST ZONE

vector

WirelessHART

time synchronized, self-organizing, mesh Net

ALERT LEVEL > NEWSCAST ZONE

vector

WirelessHART

time synchronized, self-organizing, mesh Net

ALERT LEVEL > NEWSCAST ZONE

vector

WirelessHART

time synchronized, self-organizing, mesh Net

ALERT LEVEL > NEWSCAST ZONE

vector

WirelessHART

time synchronized, self-organizing, mesh Net

ALERT LEVEL > NEWSCAST ZONE

vector

WirelessHART

time synchronized, self-organizing, mesh Net

ALERT LEVEL > NEWSCAST ZONE

vector

WirelessHART

time synchronized, self-organizing, mesh Net

ALERT LEVEL > NEWSCAST ZONE

vector

WirelessHART

time synchronized, self-organizing, mesh Net

ALERT LEVEL > NEWSCAST ZONE

vector

WirelessHART

time synchronized, self-organizing, mesh Net

ALERT LEVEL > NEWSCAST ZONE

vector

WirelessHART

time synchronized, self-organizing, mesh Net

ALERT LEVEL > NEWSCAST ZONE

vector

WirelessHART

time synchronized, self-organizing, mesh Net

ALERT LEVEL > NEWSCAST ZONE

vector

WirelessHART

time synchronized, self-organizing, mesh Net

ALERT LEVEL > NEWSCAST ZONE

vector

WirelessHART

time synchronized, self-organizing, mesh Net

ALERT LEVEL > NEWSCAST ZONE

vector

WirelessHART

time synchronized, self-organizing, mesh Net

ALERT LEVEL > NEWSCAST ZONE

vector

WirelessHART

time synchronized, self-organizing, mesh Net

ALERT LEVEL > NEWSCAST ZONE

vector

WirelessHART

time synchronized, self-organizing, mesh Net

ALERT LEVEL > NEWSCAST ZONE

vector

WirelessHART

time synchronized, self-organizing, mesh Net

ALERT LEVEL > NEWSCAST ZONE

vector

WirelessHART

time synchronized, self-organizing, mesh Net

ALERT LEVEL > NEWSCAST ZONE

vector

WirelessHART

time synchronized, self-organizing, mesh Net

ALERT LEVEL > NEWSCAST ZONE

vector

WirelessHART

time synchronized, self-organizing, mesh Net

ALERT LEVEL > NEWSCAST ZONE

vector

WirelessHART

time synchronized, self-organizing, mesh Net

ALERT LEVEL > NEWSCAST ZONE

vector

13/573,002 HEART BEACON CYCLE

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

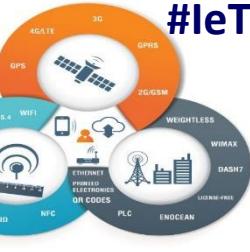
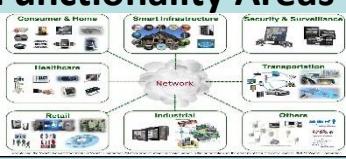
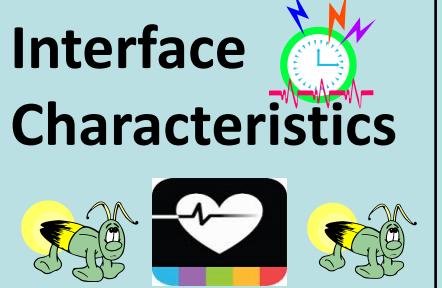
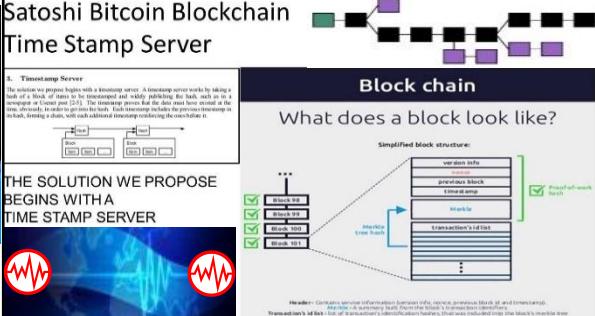
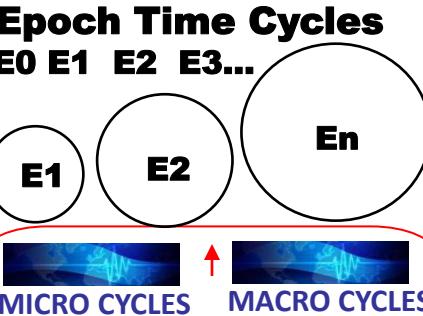
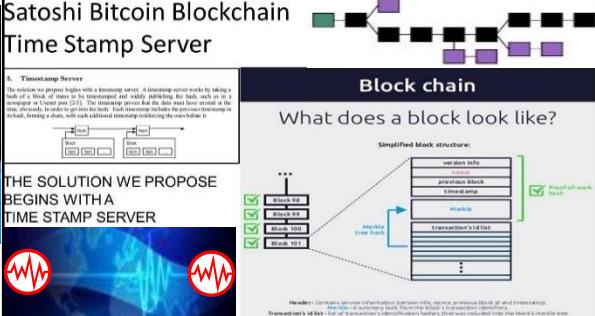
The four dimensions of Big Data

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

TIME STAMP BY Org_ID, URN Before FUSION CENTER

Position of a point in space relative to another point



Interface Name	HEARTBEAT Administration Interface [SCOP]		
Documentation URL	http://scop.sourceforge.net/ http://linuxvirtualserver.org/software/index.html		
API Information	 	#Big_Data  	Cloud Interface Management configuration, start, stop cloud services, edit configuration (heartbeat messages)
Programmable Money World Computer / Blockchain	 	API Operation Count	
Interface Characteristics		Web service access type Network Effects / A.I. LANGUAGE / PLATFORM BINDINGS	Web application, front end to [network, device, system, blockchain] heartbeat  
<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>	 Epoch Time Cycles E0 E1 E2 E3... 
<p>QubitCoin Interval: Every 30 Seconds</p>		 	

SOFTWARE DEFINED NETWORKING

NETOPS

Command Syntax

REST State Transfer

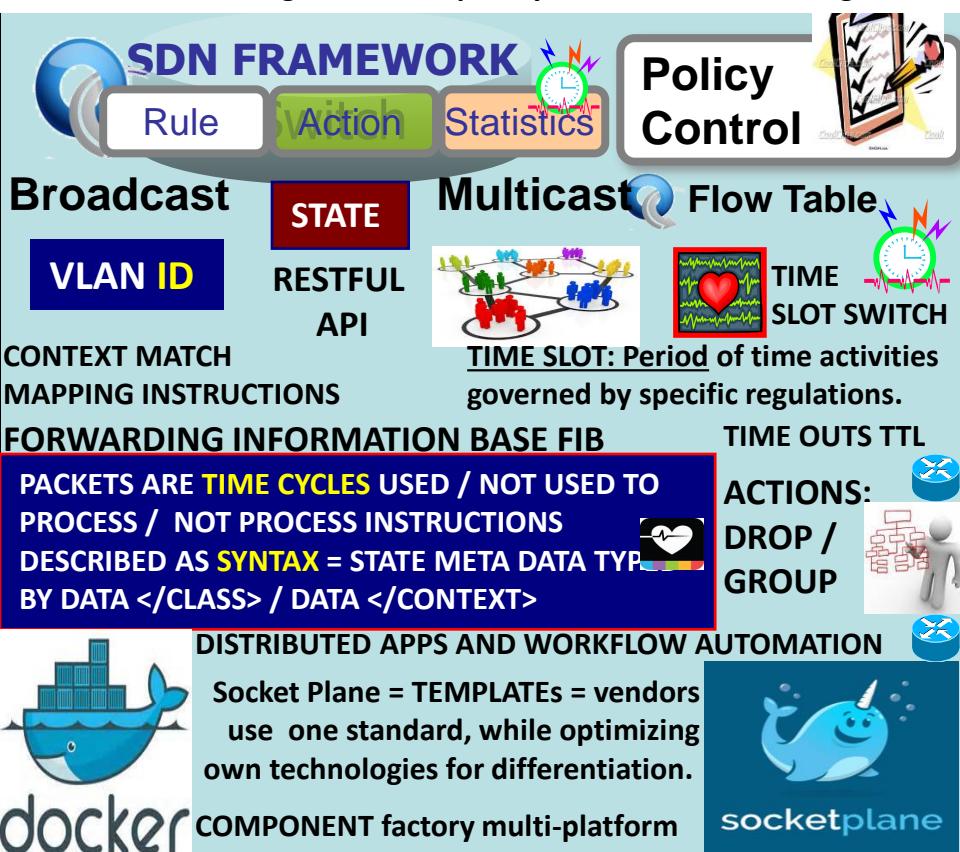
COMMAND SYNTAX
STATE TRANSFER
Unicast / Multicast
Flow Tables / Workflow
Dynamic Network
Configuration Management

NET CENTRIC WARFARE
SYSTEM OF SYSTEMS TELEMETRY

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

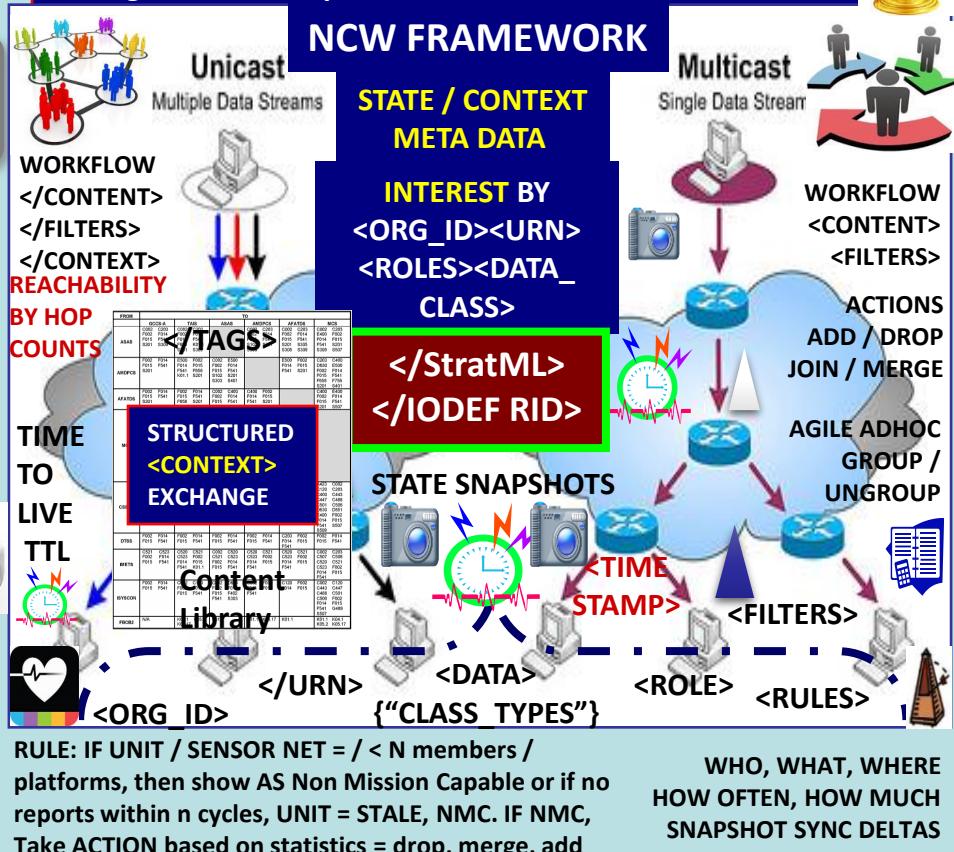
- SDN is a *framework* to allow network administrators to *automatically* and dynamically manage and control a *large number* of network devices, *services*, topology, traffic paths, and packet handling (quality of

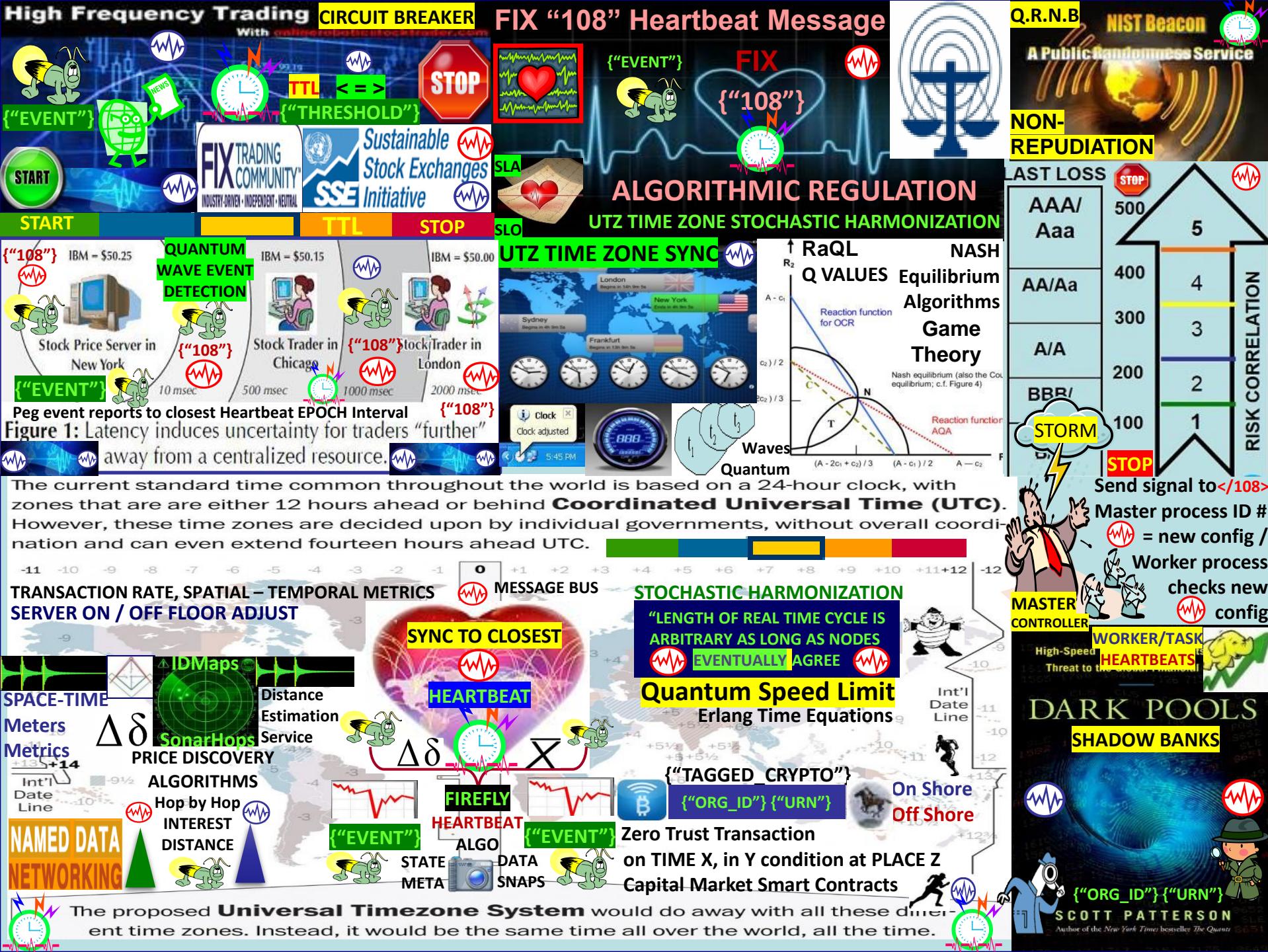
DevOps model and tools to enable scale, programmable agility, and policy-driven automation, and provides network virtualization to mask network configuration complexity with set of networking APIs



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



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



vector

602

+3

+2

+1

Null

0

+1

+2

+3

RISK

UNUSED RESOURCES
UNMET NEEDS

Spatial
Econometrics

Spaceship
Earth
Signals &
Telemetry
Annex

TIME-SPACE BEACON INFOCON
METRICS / METERS TRADE WITH EARTH
SIRIUS DISCLOSURE

INFORMATION CONDITION

???
MOON = HELIUM 3
"Numbers are the Universal Language offered by deity to humans as confirmation of the truth"

ASTEROID BELTS = RARE MINERALS

MAIN ASTEROID BELT

MARS

MERCURY

VENUS

EARTH

STOCHASTIC

HARMONIZATION

Farther = More Cost
➤ Fuel, Resources

Service Level Agreements

FIREFLY-HEARTBEAT ALGORITHM UNIVERSAL EVENT MESSAGE BUS

ERLANG TIME- SPACE METRICS

TROJAN ASTEROIDS

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes Astronomical units

43 22 13 0 1.5 2.7 5.2 Light minutes 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

A horizontal banner featuring the Ericsson logo in blue and white, with a red and yellow background. The text "ERICSSON ERLANG API FOR BLOCKCHAIN ERICSSON" is displayed in the center. Below the banner, the text "“BITCOIN MAKES MONEY PROGRAMMABLE. MONEY IS SIMPLY DATA” WIRED MAG" and "“BITCOIN IS A LANGUAGE” “ITS VALUE IS TIME ITSELF” ---DIGINOMICS" are visible.

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



Functional Sequential Erlang

- 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**

SORTING ALGO'S

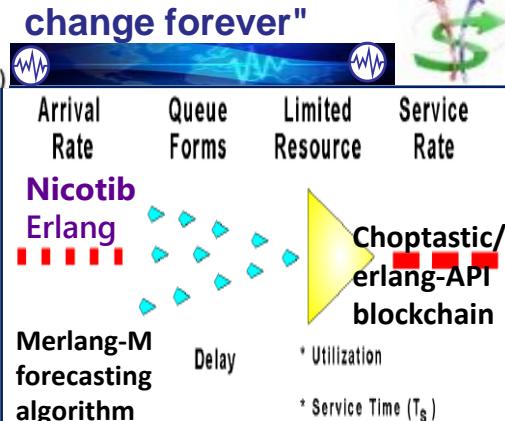
Ericsson Open Money For Society Patent App



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 $\frac{\text{Arrival Rate}}{\text{Service Rate per unit time}}$ $\Delta\delta$ queueing systems wait times
stochastic processes, function scheduling Start, Stop TTL



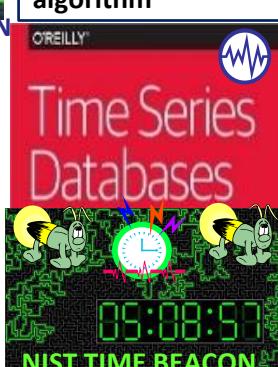
distributed "noSQL" database, embedded right into Erlang,
supports **indexing, replication, transactions, and fail-over**

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

Mnesia database (“Organization_ID”) Global name resolution

Most of the world is based on a 24-hour clock, with

FORMAT	MS-001A	THE	MS-003	MS-004	MS-005	MS-006	MS-007
XBRL / CDL / DAML	F001	F002	F003	F004	F005	F006	F007
ALPHANUMERIC	F008	F009	F010	F011	F012	F013	F014
BREVITY CODES	F015	F016	F017	F018	F019	F020	F021
AZURE	F022	F023	F024	F025	F026	F027	F028
BLETCHLEY	F029	F030	F031	F032	F033	F034	F035
STRUCTURED	F036	F037	F038	F039	F040	F041	F042
MILITARY MESSAGE	F043	F044	F045	F046	F047	F048	F049
TEMPLATE FORMS	F050	F051	F052	F053	F054	F055	F056
LOGIC / FILTERS	F057	F058	F059	F060	F061	F062	F063
PERSON	F064	F065	F066	F067	F068	F069	F070
PHONE	F071	F072	F073	F074	F075	F076	F077

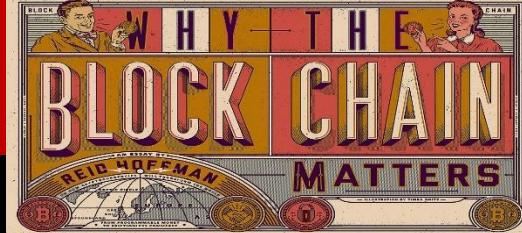


HEART BEACON CYCLE: ALL THINGS INTERNET ARE PROGRAMMED USING TIME CYCLES USED / NOT USED TO PROCESS / NOT PROCESS SYNTAX

TradeNet

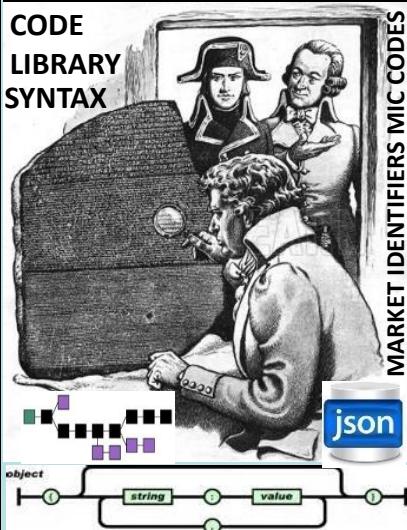


Programmable Money \$\$\$



RIED HOFFMAN 15 May 2015 [LINK](#)

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



FROM	TO	MCS
ASAS	PSM1	F405
ARDCPS	PSM1	F406
MFATOS	PSM1	F407
	PSM1	F408
	PSM1	F409
	PSM1	F410
	PSM1	F411
	PSM1	F412
	PSM1	F413
	PSM1	F414
	PSM1	F415
	PSM1	F416
	PSM1	F417
	PSM1	F418
	PSM1	F419
	PSM1	F420
	PSM1	F421
	PSM1	F422
	PSM1	F423
	PSM1	F424
	PSM1	F425
	PSM1	F426
	PSM1	F427
	PSM1	F428
	PSM1	F429
	PSM1	F430
	PSM1	F431
	PSM1	F432
	PSM1	F433
	PSM1	F434
	PSM1	F435
	PSM1	F436
	PSM1	F437
	PSM1	F438
	PSM1	F439
	PSM1	F440
	PSM1	F441
	PSM1	F442
	PSM1	F443
	PSM1	F444
	PSM1	F445
	PSM1	F446
	PSM1	F447
	PSM1	F448
	PSM1	F449
	PSM1	F450
	PSM1	F451
	PSM1	F452
	PSM1	F453
	PSM1	F454
	PSM1	F455
	PSM1	F456
	PSM1	F457
	PSM1	F458
	PSM1	F459
	PSM1	F460
	PSM1	F461
	PSM1	F462
	PSM1	F463
	PSM1	F464
	PSM1	F465
	PSM1	F466
	PSM1	F467
	PSM1	F468
	PSM1	F469
	PSM1	F470
	PSM1	F471
	PSM1	F472
	PSM1	F473
	PSM1	F474
	PSM1	F475
	PSM1	F476
	PSM1	F477
	PSM1	F478
	PSM1	F479
	PSM1	F480
	PSM1	F481
	PSM1	F482
	PSM1	F483
	PSM1	F484
	PSM1	F485
	PSM1	F486
	PSM1	F487
	PSM1	F488
	PSM1	F489
	PSM1	F490
	PSM1	F491
	PSM1	F492
	PSM1	F493
	PSM1	F494
	PSM1	F495
	PSM1	F496
	PSM1	F497
	PSM1	F498
	PSM1	F499
	PSM1	F500
	PSM1	F501
	PSM1	F502
	PSM1	F503
	PSM1	F504
	PSM1	F505
	PSM1	F506
	PSM1	F507
	PSM1	F508
	PSM1	F509
	PSM1	F510
	PSM1	F511
	PSM1	F512
	PSM1	F513
	PSM1	F514
	PSM1	F515
	PSM1	F516
	PSM1	F517
	PSM1	F518
	PSM1	F519
	PSM1	F520
	PSM1	F521
	PSM1	F522
	PSM1	F523
	PSM1	F524
	PSM1	F525
	PSM1	F526
	PSM1	F527
	PSM1	F528
	PSM1	F529
	PSM1	F530
	PSM1	F531
	PSM1	F532
	PSM1	F533
	PSM1	F534
	PSM1	F535
	PSM1	F536
	PSM1	F537
	PSM1	F538
	PSM1	F539
	PSM1	F540
	PSM1	F541
	PSM1	F542
	PSM1	F543
	PSM1	F544
	PSM1	F545
	PSM1	F546
	PSM1	F547
	PSM1	F548
	PSM1	F549
	PSM1	F550
	PSM1	F551
	PSM1	F552
	PSM1	F553
	PSM1	F554
	PSM1	F555
	PSM1	F556
	PSM1	F557
	PSM1	F558
	PSM1	F559
	PSM1	F560
	PSM1	F561
	PSM1	F562
	PSM1	F563
	PSM1	F564
	PSM1	F565
	PSM1	F566
	PSM1	F567
	PSM1	F568
	PSM1	F569
	PSM1	F570
	PSM1	F571
	PSM1	F572
	PSM1	F573
	PSM1	F574
	PSM1	F575
	PSM1	F576
	PSM1	F577
	PSM1	F578
	PSM1	F579
	PSM1	F580
	PSM1	F581
	PSM1	F582
	PSM1	F583
	PSM1	F584
	PSM1	F585
	PSM1	F586
	PSM1	F587
	PSM1	F588
	PSM1	F589
	PSM1	F590
	PSM1	F591
	PSM1	F592
	PSM1	F593
	PSM1	F594
	PSM1	F595
	PSM1	F596
	PSM1	F597
	PSM1	F598
	PSM1	F599
	PSM1	F600
	PSM1	F601
	PSM1	F602
	PSM1	F603
	PSM1	F604
	PSM1	F605
	PSM1	F606
	PSM1	F607
	PSM1	F608
	PSM1	F609
	PSM1	F610
	PSM1	F611
	PSM1	F612
	PSM1	F613
	PSM1	F614
	PSM1	F615
	PSM1	F616
	PSM1	F617
	PSM1	F618
	PSM1	F619
	PSM1	F620
	PSM1	F621
	PSM1	F622
	PSM1	F623
	PSM1	F624
	PSM1	F625
	PSM1	F626
	PSM1	F627
	PSM1	F628
	PSM1	F629
	PSM1	F630
	PSM1	F631
	PSM1	F632
	PSM1	F633
	PSM1	F634
	PSM1	F635
	PSM1	F636
	PSM1	F637
	PSM1	F638
	PSM1	F639
	PSM1	F640
	PSM1	F641
	PSM1	F642
	PSM1	F643
	PSM1	F644
	PSM1	F645
	PSM1	F646
	PSM1	F647
	PSM1	F648
	PSM1	F649
	PSM1	F650
	PSM1	F651
	PSM1	F652
	PSM1	F653
	PSM1	F654
	PSM1	F655
	PSM1	F656
	PSM1	F657
	PSM1	F658
	PSM1	F659
	PSM1	F660
	PSM1	F661
	PSM1	F662
	PSM1	F663
	PSM1	F664
	PSM1	F665
	PSM1	F666
	PSM1	F667
	PSM1	F668
	PSM1	F669
	PSM1	F670
	PSM1	F671
	PSM1	F672
	PSM1	F673
	PSM1	F674
	PSM1	F675
	PSM1	F676
	PSM1	F677
	PSM1	F678
	PSM1	F679
	PSM1	F680
	PSM1	F681
	PSM1	F682
	PSM1	F683
	PSM1	F684
	PSM1	F685
	PSM1	F686
	PSM1	F687
	PSM1	F688
	PSM1	F689
	PSM1	F690
	PSM1	F691
	PSM1	F692
	PSM1	F693
	PSM1	F694
	PSM1	F695
	PSM1	F696
	PSM1	F697
	PSM1	F698
	PSM1	F699
	PSM1	F700
	PSM1	F701
	PSM1	F702
	PSM1	F703
	PSM1	F704
	PSM1	F705
	PSM1	F706
	PSM1	F707
	PSM1	F708
	PSM1	F709
	PSM1	F710
	PSM1	F711
	PSM1	F712
	PSM1	F713
	PSM1	F714
	PSM1	F715
	PSM1	F716
	PSM1	F717
	PSM1	F718
	PSM1	F719
	PSM1	F720
	PSM1	F721
	PSM1	F722
	PSM1	F723
	PSM1	F724
	PSM1	F725
	PSM1	F726
	PSM1	F727
	PSM1	F728
	PSM1	F729
	PSM1	F730
	PSM1	F731
	PSM1	F732
	PSM1	F733
	PSM1	F734
	PSM1	F735
	PSM1	F736
	PSM1	F737
	PSM1	F738
	PSM1	F739
	PSM1	F740
	PSM1	F741
	PSM1	F742
	PSM1	F743
	PSM1	F744
	PSM1	F745
	PSM1	F746
	PSM1	F747
	PSM1	F748
	PSM1	F749
	PSM1	F750
	PSM1	F751
	PSM1	F752
	PSM1	F753
	PSM1	F754
	PSM1	F755
	PSM1	F756
	PSM1	F757
	PSM1	F758
	PSM1	F759
	PSM1	F760
	PSM1	F761
	PSM1	F762
	PSM1	F763
	PSM1	F764
	PSM1	F765
	PSM1	F766
	PSM1	F767
	PSM1	F768
	PSM1	F769
	PSM1	F770
	PSM1	F771
	PSM1	F772
	PSM1	F773
	PSM1	F774
	PSM1	F775
	PSM1	F776
	PSM1	F777
	PSM1	F778
	PSM1	F779
	PSM1	F780
	PSM1	F781
	PSM1	F782
	PSM1	F783
	PSM1	F784
	PSM1	F785
	PSM1	F786
	PSM1	F787
	PSM1	F788
	PSM1	F789
	PSM1	F790
	PSM1	F791
	PSM1	F792
	PSM1	F793
	PSM1	F794
	PSM1	F795
	PSM1	F796
	PSM1	F797
	PSM1	F798
	PSM1	F799
	PSM1	F800
	PSM1	F801
	PSM1	F802
	PSM1	F803
	PSM1	F804
	PSM1	F805
	PSM1	F806
	PSM1	F807
	PSM1	F808
	PSM1	F809
	PSM1	F810
	PSM1	F811
	PSM1	F812
	PSM1	F813
	PSM1	F814
	PSM1	F815
	PSM1	F816
	PSM1	F817
	PSM1	F818
	PSM1	F819
	PSM1	F820
	PSM1	F821
	PSM1	F822
	PSM1	F823
	PSM1	F824
	PSM1	F825
	PSM1	F826
	PSM1	F827
	PSM1	F828
	PSM1	F829
	PSM1	F830
	PSM1	F831
	PSM1	F832
	PSM1	F833
	PSM1	F834
	PSM1	F835
	PSM1	F836
	PSM1	F837
	PSM1	F838
	PSM1	F839
	PSM1	F840
	PSM1	F841
	PSM1	F842
	PSM1	F843
	PSM1	F844
	PSM1	F845
	PSM1	F846
	PSM1	F847
	PSM1	F848
	PSM1	F849
	PSM1	F850
	PSM1	F851
	PSM1	F852
	PSM1	F853
	PSM1	F854
	PSM1	F855
	PSM1	F856
	PSM1	F857
	PSM1	F858
	PSM1	F859
	PSM1	F860
	PSM1	F861
	PSM1	F862
	PSM1	F863
	PSM1	F864
	PSM1	F865
	PSM1	F866
	PSM1	F867
	PSM1	F868
	PSM1	F869
	PSM1	F870
	PSM1	F871
	PSM1	F872
	PSM1	F873
	PSM1	F874
	PSM1	F875
	PSM1	F876
	PSM1	F877
	PSM1	F878
	PSM1	F879
	PSM1	F880</



VERITAS TOKENS P2P Capital Market smart contracts Eco Economic HEARTBEAT

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



INFOCON
5 4 3 2 1
INFORMATION
CONDITION



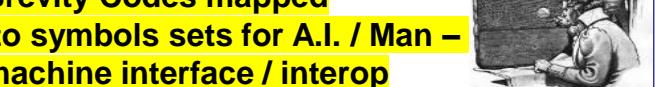
{"108"}

STATISTICAL MEAN VALUE INDEX PULSE

GDP INDEX ECONOMY K% RULE



E \$ € ¥ currency index



IDMaps SonarHops
DISTANCE ESTIMATION SERVICE
Qubit
Time – Space Meter Metrics

Rosetta Stone

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



Heartbeat Flash Messages Precedence Processing

Collateral Notional Expiry

FIREFLY HEARTBEAT ALGO EVENT MSG BUS

As long as INTC decline outpaces QCOM, you get paid. QCOM can be replaced with GOOG, or even AAPL although I feel AAPL will have its issues in the upcoming quarters as well.

{"Org_ID"} {"Tagged"} {"URN"}

Cryptos

STOP TTL

t_1 t_2 t_3

Eventual Agreement

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

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



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



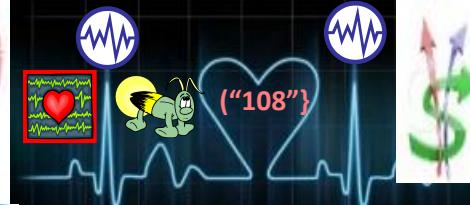
- Creates an online store for users to sell goods for Bitcoin
- Connects these stores directly to each other on a global network
- Users browse individual stores, search for products across whole network
- A buyer directly connects, purchases good from the merchant using Bitcoin
- Bitcoin payments via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

OPENBAZAAR.ORG
BLOCKCHAIN ARBITRAGE



CLOSER = < \$
CLOSER = < CO2

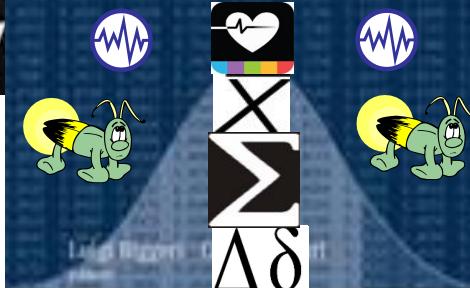
SLA
COMMODITIES
ECONOMIC HEARTBEAT



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>



Federation

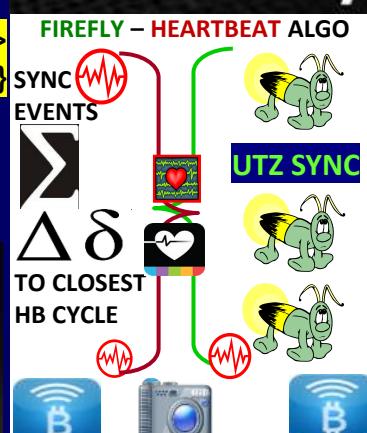
ORG ID
Gateway

Bitcoin: OpenBazaar transactional currency



Cryptographic Security

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



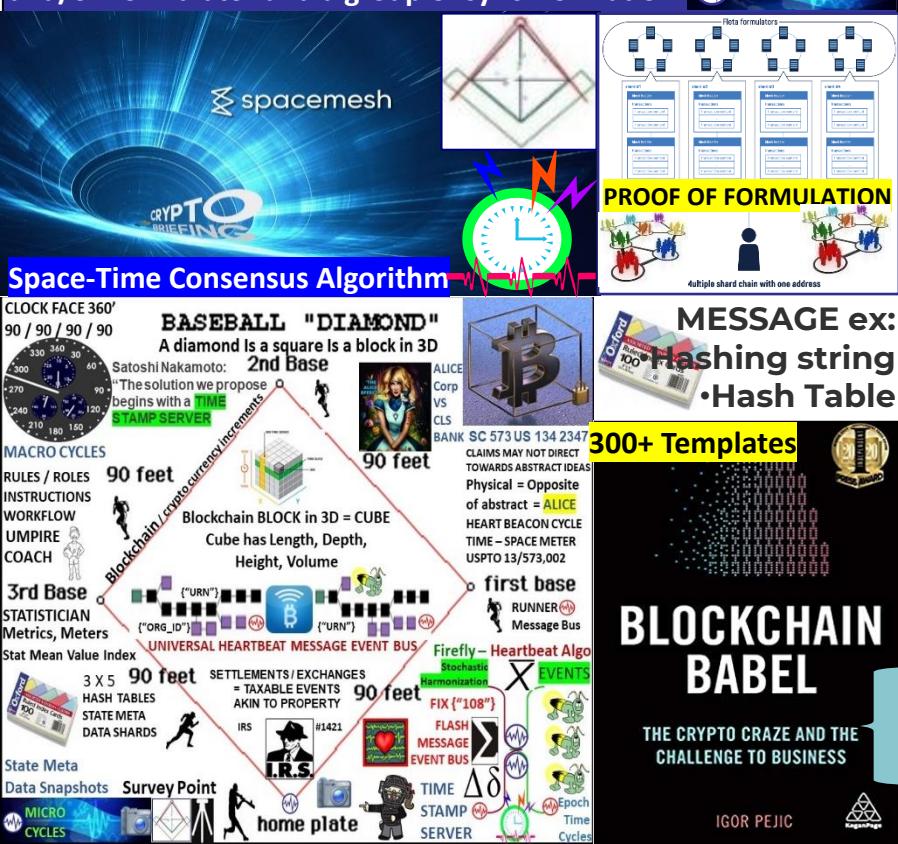
Q: Which meme describes the myriad blockchain consensus algorithms the most comprehensively that uses an algorithm (based on nature = “shortest path to the knowledge of truth Luxor Temple) enabling distributed system of systems geo-spatial, UTZ Universal Time Zone temporal, semantic - syntactic sync,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

Blockchain Consensus Algorithms & Mechanisms



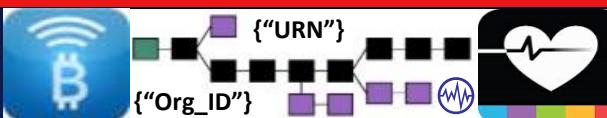
In the world of blockchain consensus algorithms, consensus is the **HEART OF THE BLOCKCHAIN NETWORK**. Its main purpose is to achieve agreement on transactions among a distributed system (s)

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



BLOCKCHAIN CONSENSUS ALGORITHMS

ULTIMATE GUIDE FOR BEGINNERS



NON REPUDIATION

Proof-of-Work

Proof-of-Weight

Proof-of-Stake

Delegated Proof-of- Stake

Pos

BPS

soa

LPOS

4

**Leased
Proof-Of-**

Stake

Proof of
Elapsed Time

Practical Antine Fault

www.developcoins.com

structured Data Exchange SYNTAX LEXICON

PPSCODES – Symbol Sets

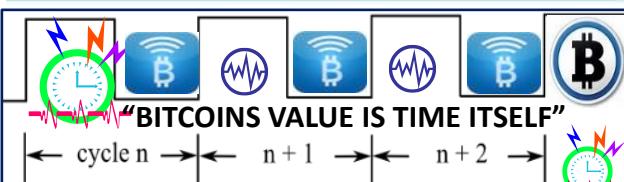
Simplified Zantine Fault Tolerance

www.developcoins.com

PROOF-OF-WORK



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



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

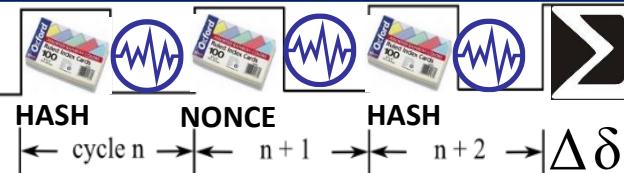


THROTTLE equivalent to difficulty. State
•target = maximum value of 8 bytes Snap
(2^{64}) divided by the difficulty.

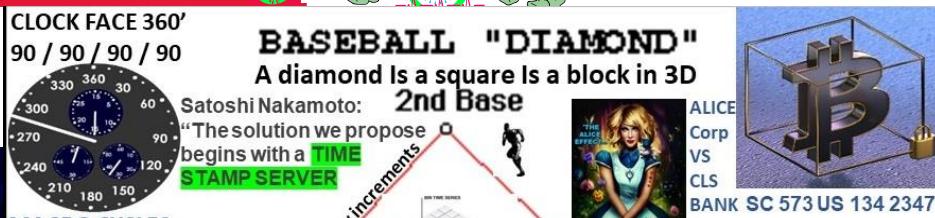
NONCE increments from 0..N until the target is met.



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





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



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

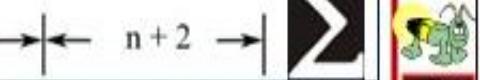
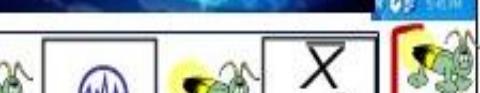
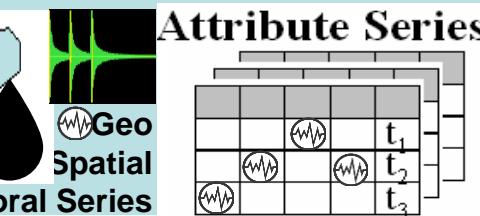
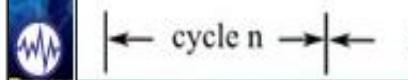
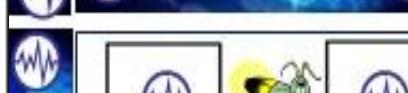
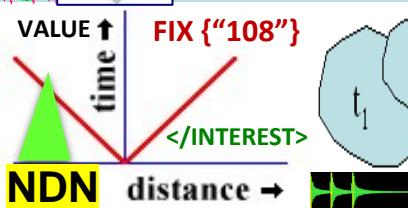


The Volumetric Weight is often referred to as dimensional weight

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



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



"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.



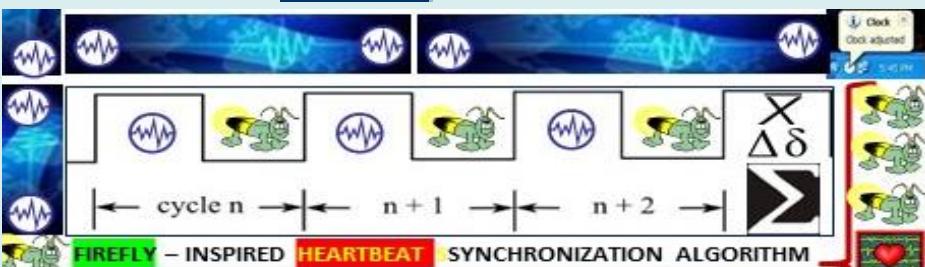
DISTRIBUTED AUTONOMOUS ORGANIZATIONS DAO

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 2 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.



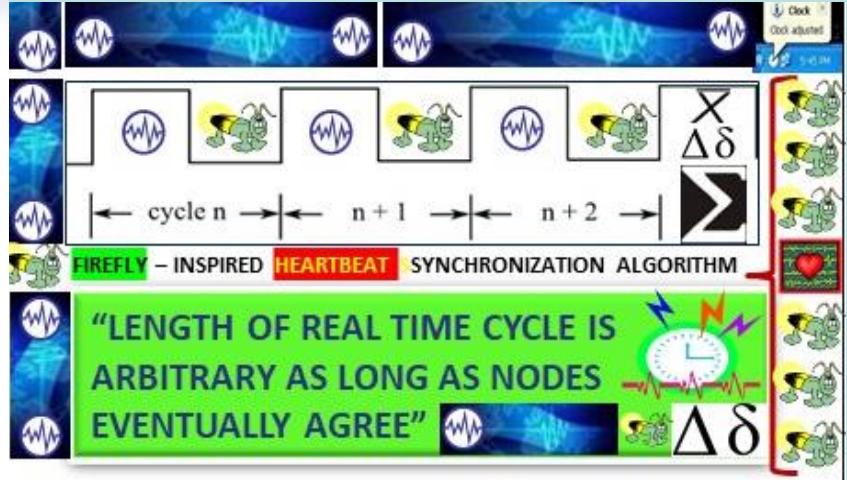
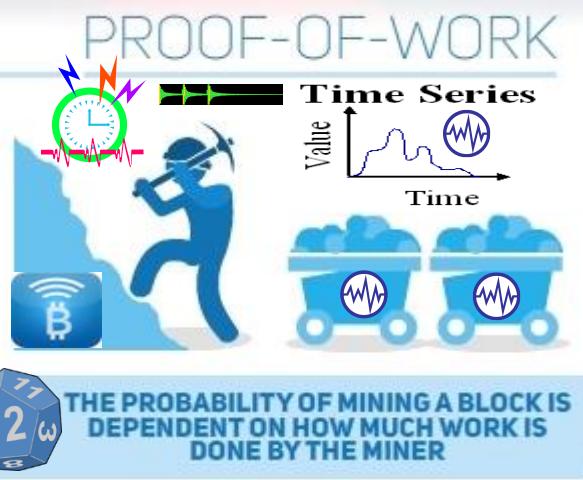
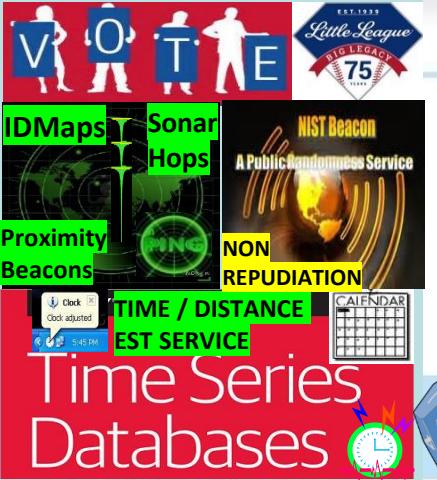


Adaptive
Procedural
Checklist

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

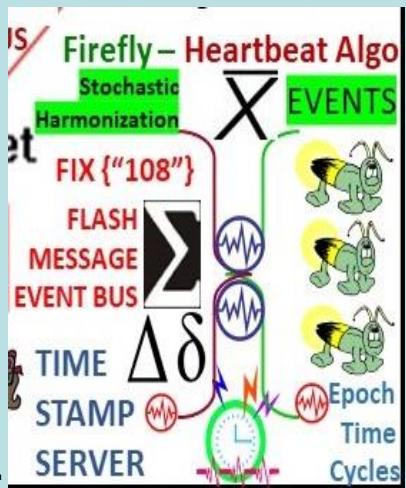
Example of Proof-of-Activity (PoA)

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.



PROOF-OF-WORK

HEART BEACON CYCLE 13/573,002

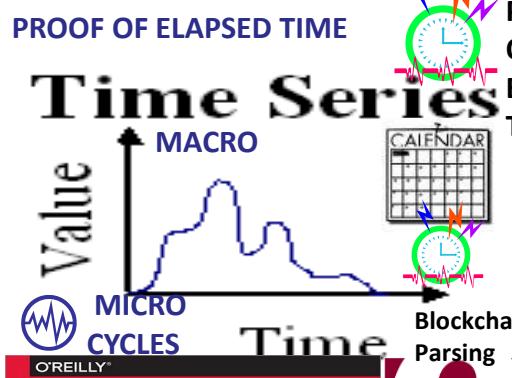


SAWTOOTH LAKE POETIC CONSENSUS PROOF OF ELAPSED TIME: POET

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



PROOF OF ELAPSED TIME



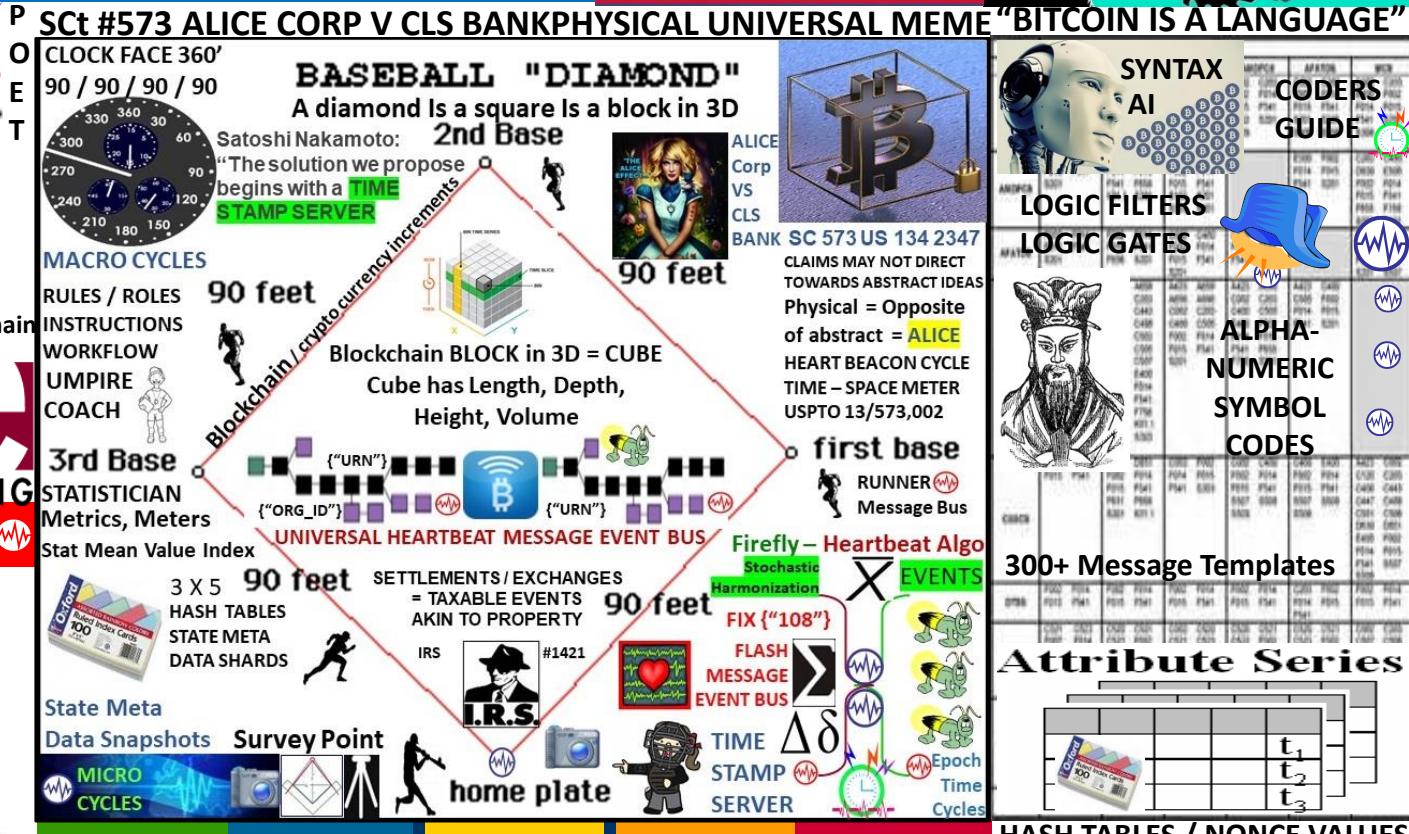
Voting Based Selection: stake size & block generators selected by votes

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

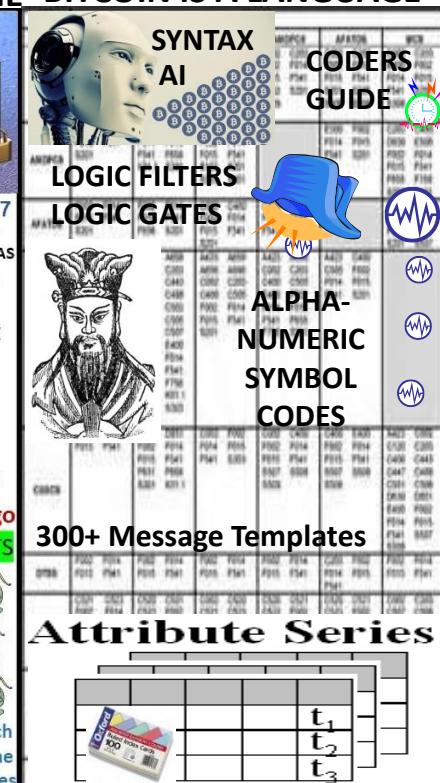


Robert's Rules quorum = minimum # of voting members who must be present at meetings to conduct business of the group

TOURNAMENT LEAGUE BOARD



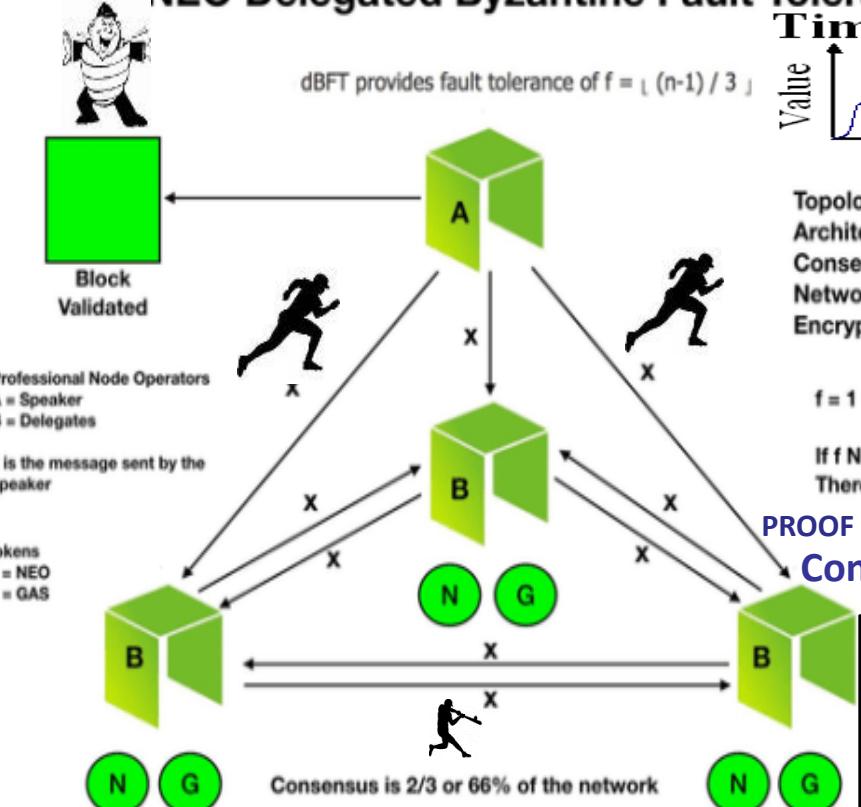
FIREFLY-HEARTBEAT FLASH MESSAGES UNIVERSAL EVENT BUS



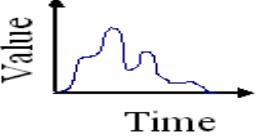
Capture ledger's state $\Delta\delta$
Transaction language changes ledger state
Consensus, transaction acceptance protocol



NEO Delegated Byzantine Fault Tolerance (dBFT)



Time Series



dBFT provides fault tolerance of $f = \lfloor (n-1) / 3 \rfloor$

Topology: Hierarchical Star
Architecture: Distributed
Consensus: dBFT
Network: TCP/IP
Encryption: ECDH

$f = 1 \text{ OR } 0.66$

If $f \text{ NOT } 1 \text{ OR } < 0.66$
There is no consensus

PROOF OF ELAPSED TIME Consensus Order



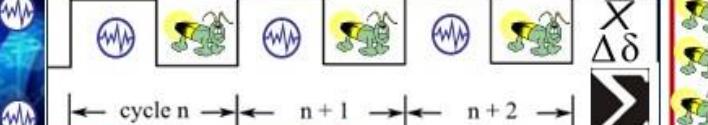
USPTO 13/573,002
sawconcepts.com/index

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

TRIANGULATION



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



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

LOCKED QUOTED ACCEPT / DENY In Progress SUCCEEDED



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

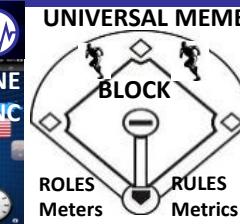


Micro-Cycle

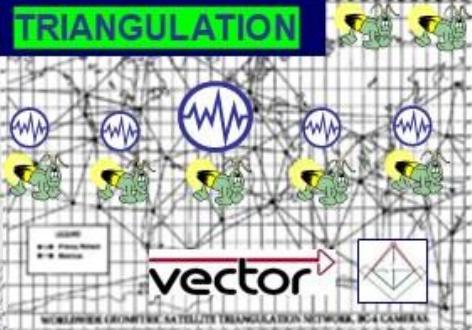
State Meta Data Snapshots

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



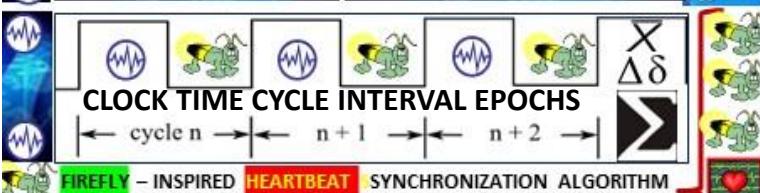
Heart Beacon Cycle Time – Space Meter
Geo-Spatial Temporal Intensity Metrics



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.

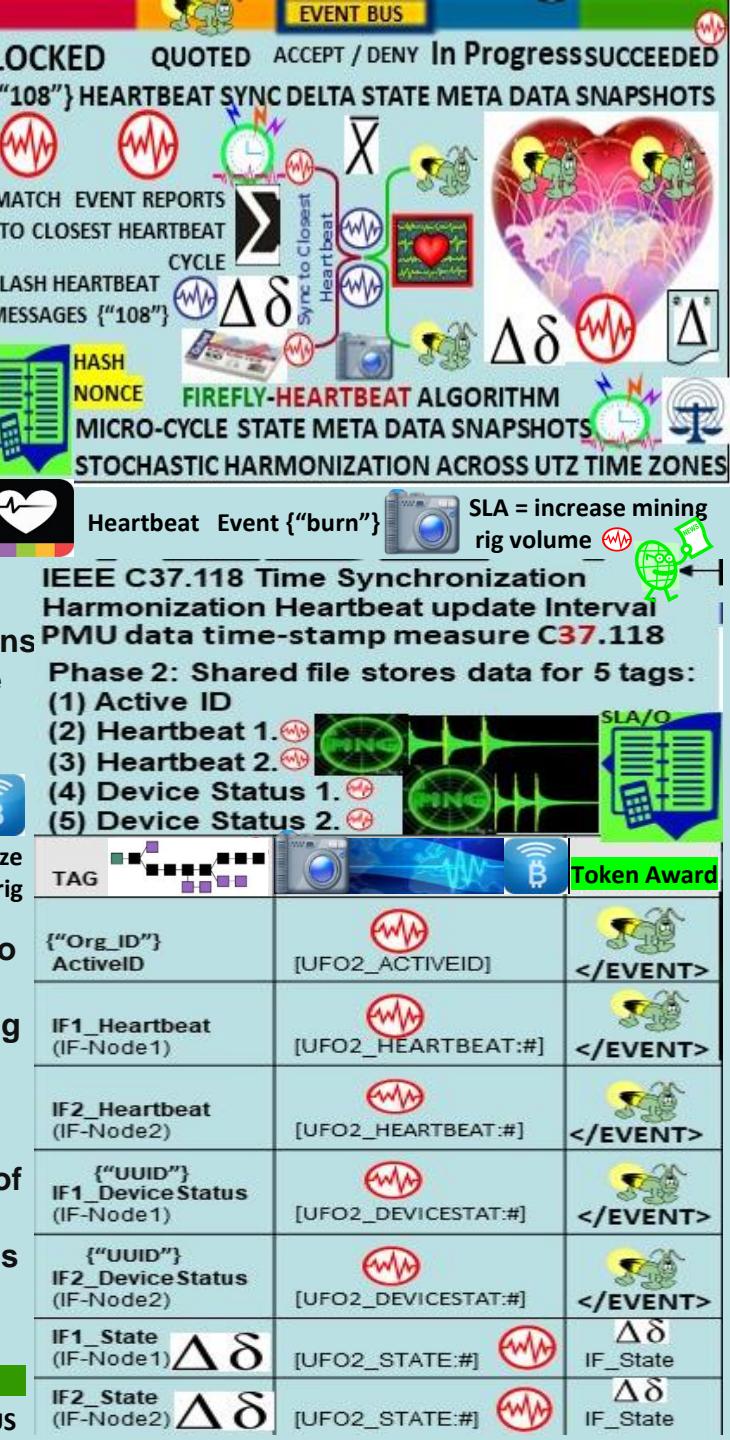
Iain Stewart, the inventor of the POB algorithm, uses an analogy to describe the algorithm: burnt coins are like mining rigs. In this analogy, a miner burns their coins to buy a virtual mining rig that gives them the power to mine blocks. The more coins burned by the miner, the bigger their virtual mining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

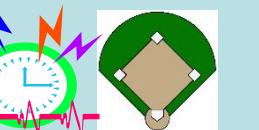


Proof of Capacity PoC



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



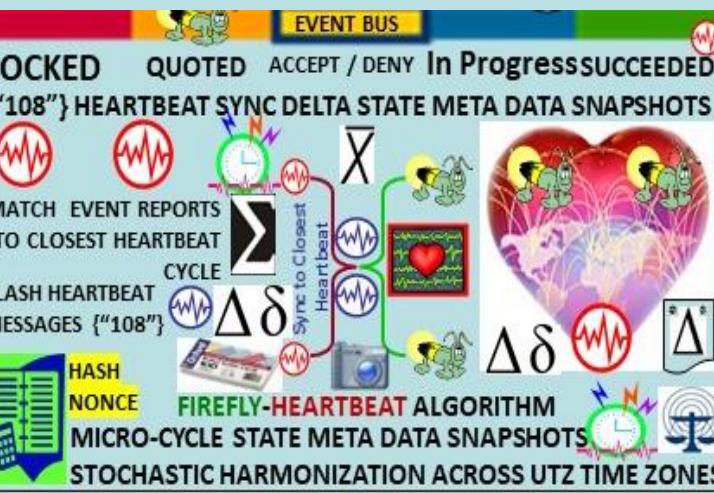
The larger the hard drive, the > possible solution values one can store on the hard drive, the more chances a miner has to match required hash value from his list, resulting in more chances to win the mining reward.



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



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



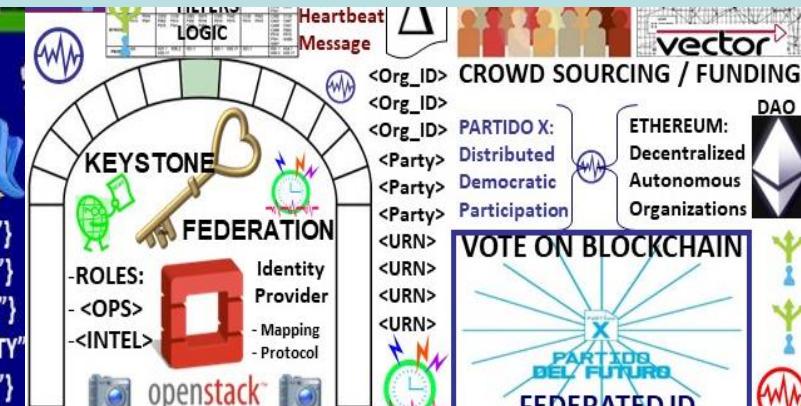
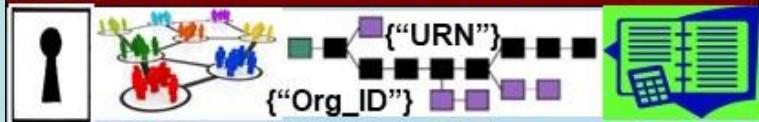
Net joins, drops, splits, merges, moves

Agile, adhoc NETOPS Vs acquisition preserves the

DISTRIBUTED AUTONOMOUS ORGANIZATIONS DAO

Heart Beacon Cycle

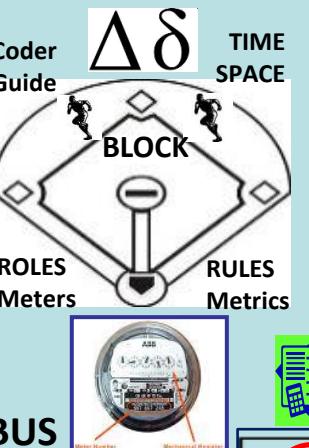
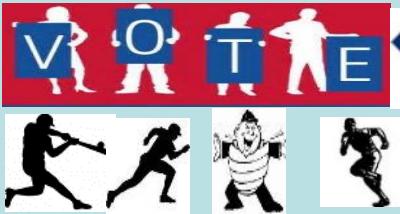
FEDERATE / TRADE FEDERATIONS



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

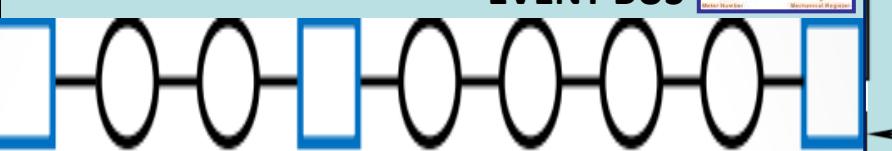
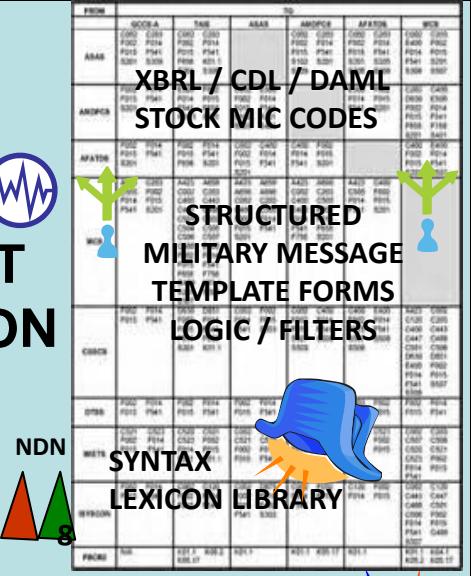
KEY BLOCKS:

- NO CONTENT = NULL
 - LEADER ELECTION

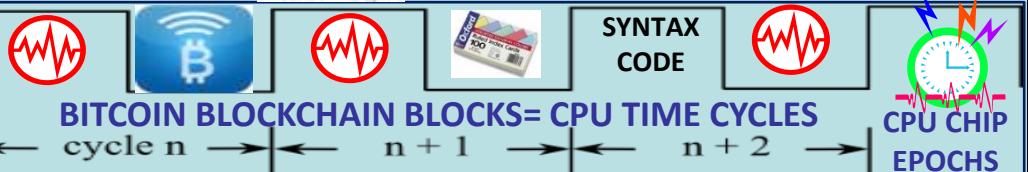


MICRO BLOCKS:

- ## - ONLY CONTENT - NO CONTENTION

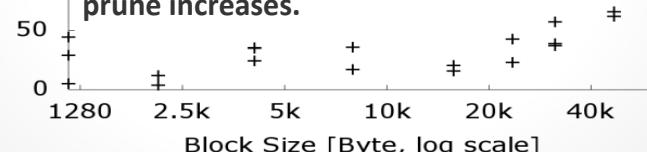


long exponential intervals (10 min)



Subjective Time to Prune

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



short deterministic intervals (10 sec)



MICRO-CYCLES



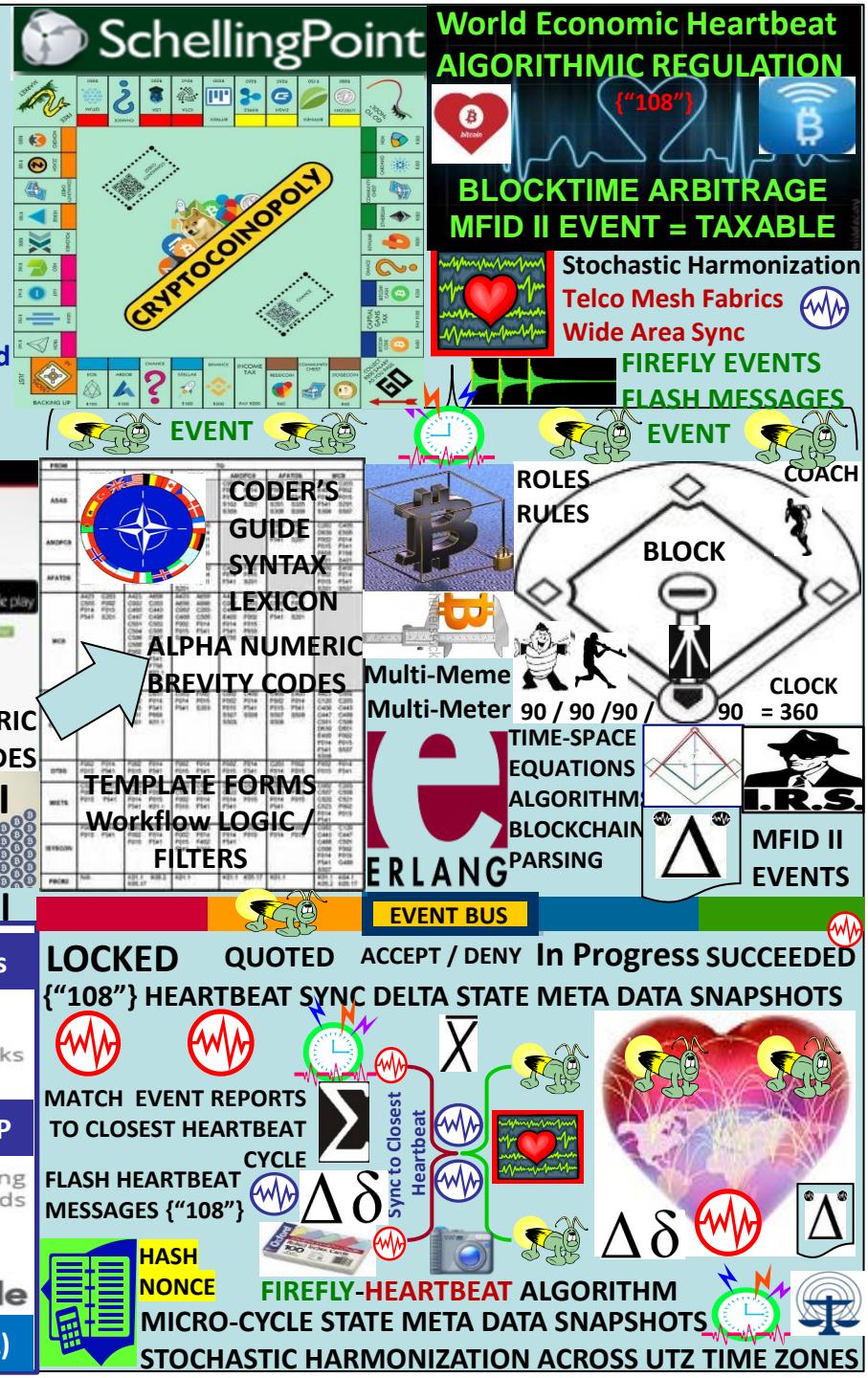
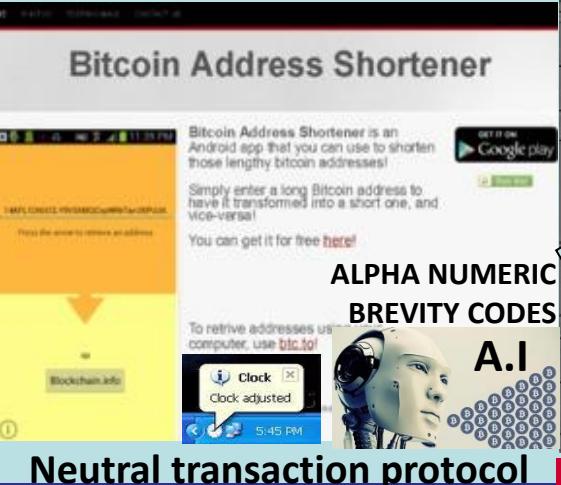
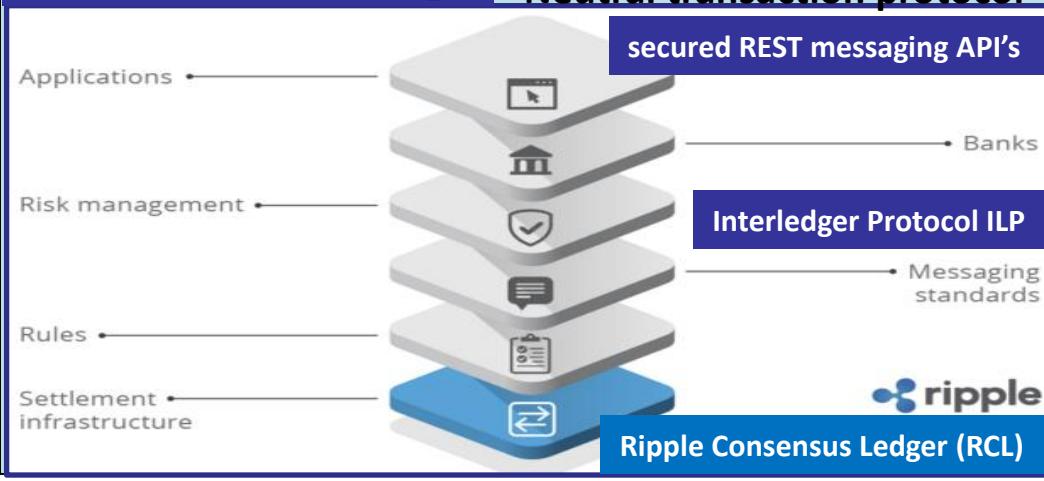
**real-time gross settlement system,
currency exchange, remittance network**

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



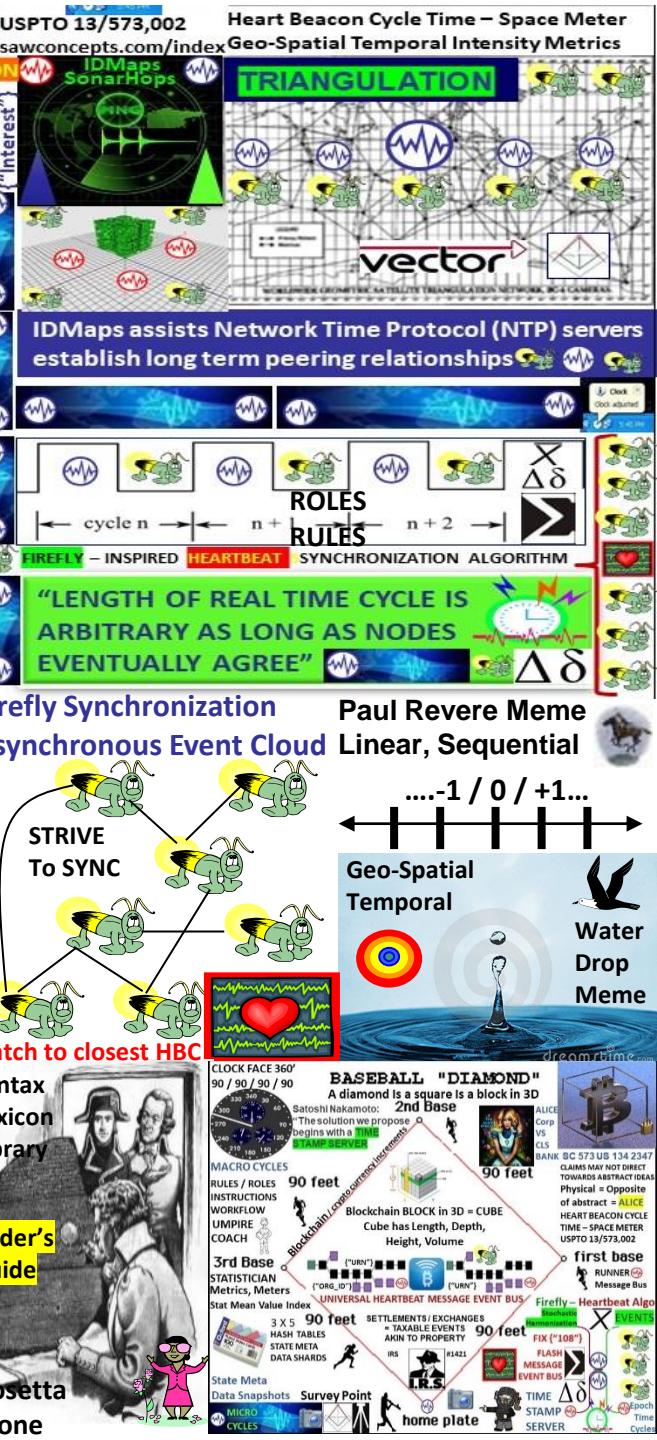
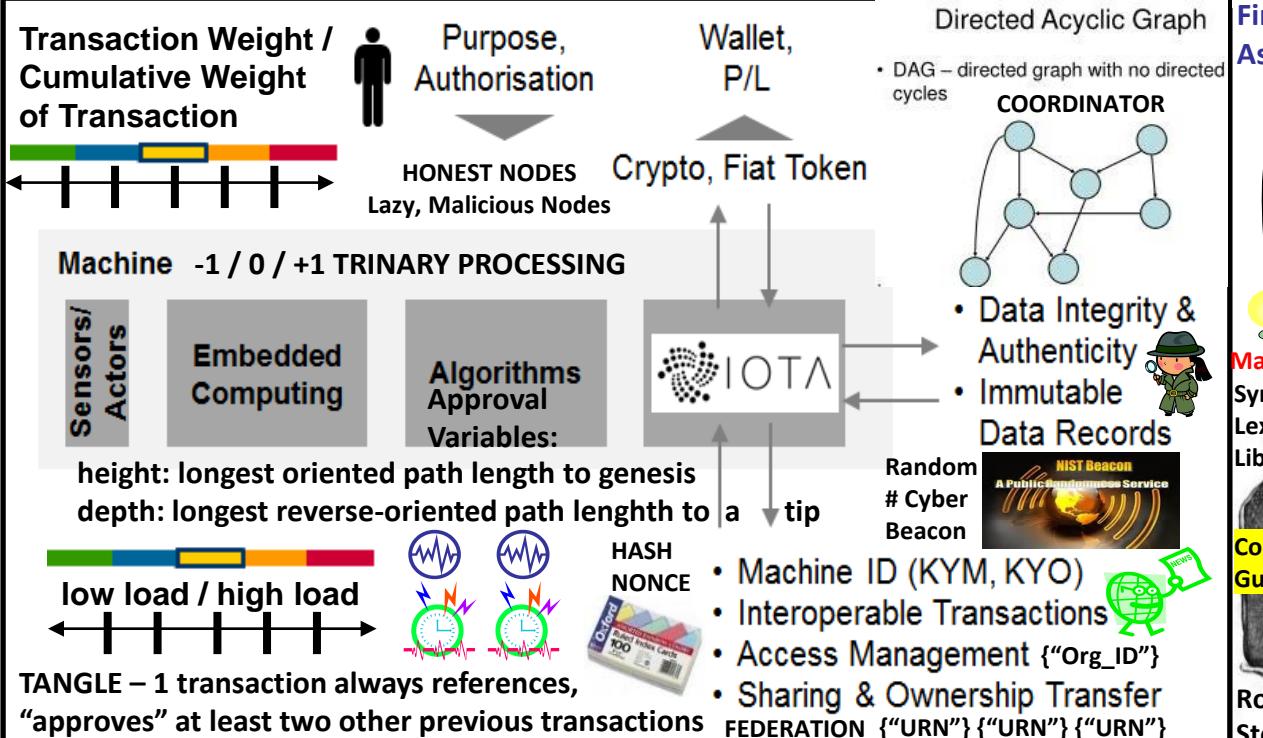


OTA: Internet Of Things IOT distributed ledger
with microtransactions without fees

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

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

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





ZEPPELIN

ZEPPELIN OPEN, GLOBAL ECONOMY

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

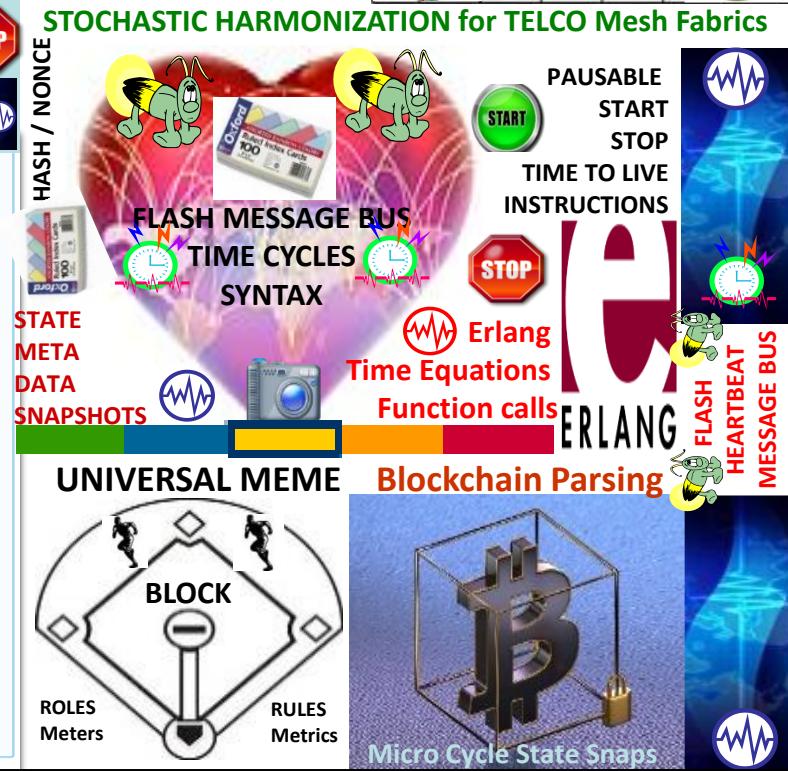
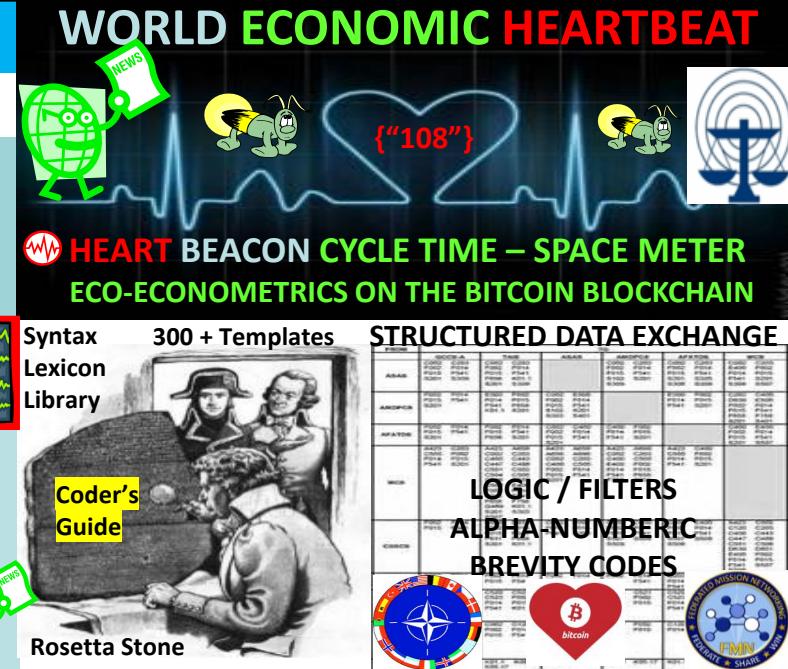
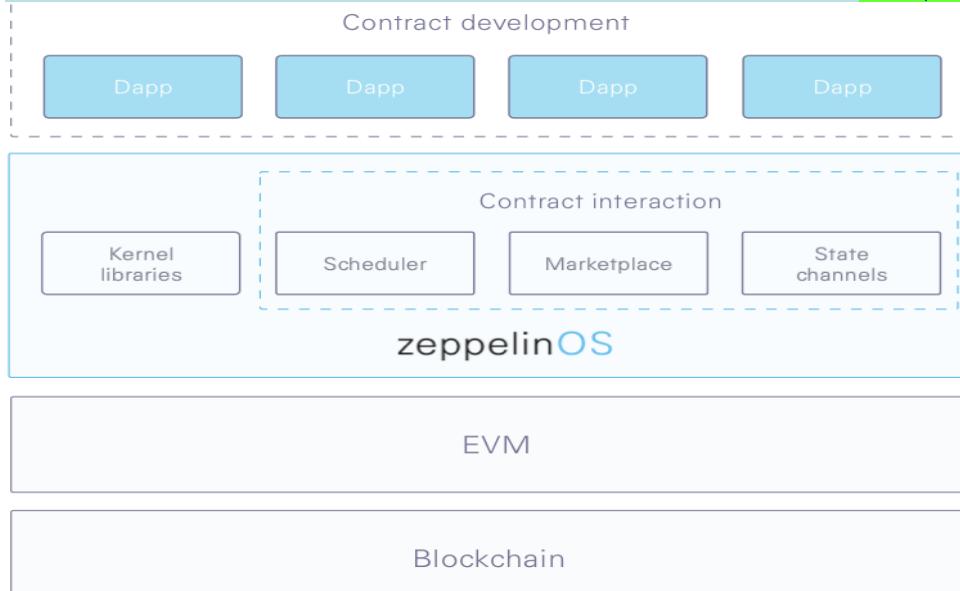
zeppelinOS, operating system for smart contracts
“the rate of innovation in building decentralized applications is limited by the manual and duplicative efforts developers must make to ensure basic usability and security.”

ZEPPELIN / zeppelinOS Common Functionality:

zeppelinOS Kernel common set of functions for smart contracts requesting services from the OS rather than re-implementing them from scratch. Functions will be available as an on-chain standard library of reusable contracts and functions, inspired by [OpenZeppelin](#) Libraries. Create and customize your own ERC20 Token.

Create and customize your own ERC20 Token.

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

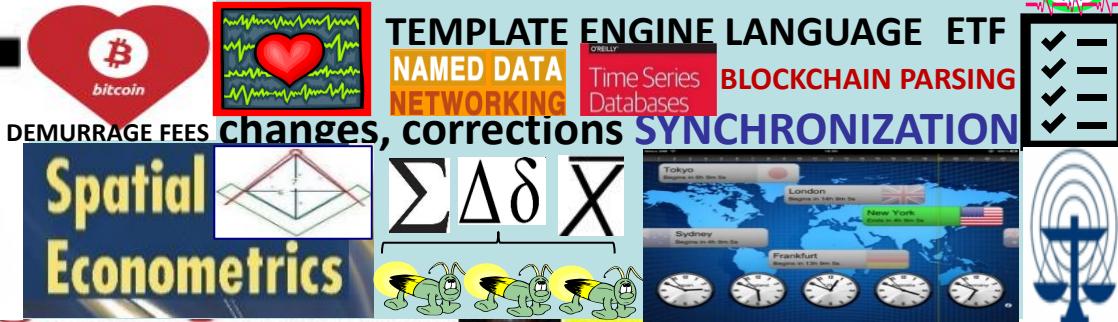
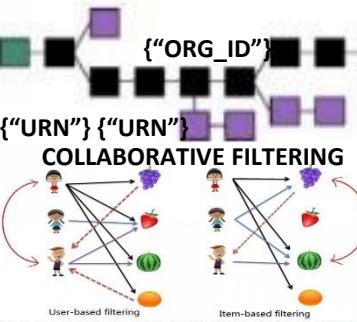




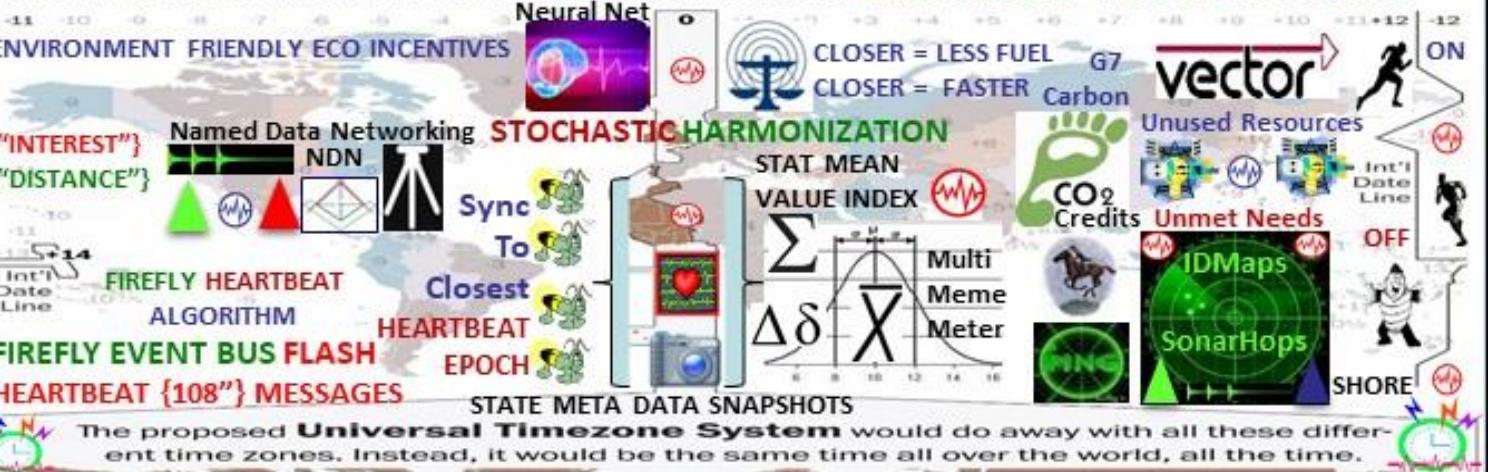
EGaaS

ELECTRONIC GOVERNMENT AS A SERVICE

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



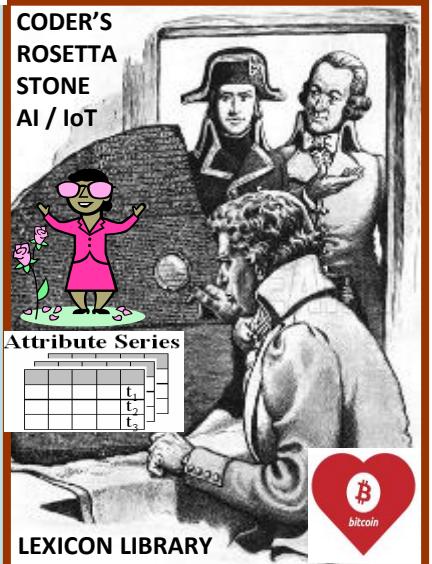
The current standard time common throughout the world is based on a 24-hour clock, with zones that are either 12 hours ahead or behind Coordinated Universal Time (UTC). However, these time zones are decided upon by individual governments, without overall coordination and can even extend fourteen hours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



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



FORM	CODEC-A	CODEC-B	CODEC-C	CODEC-D	CODEC-E	CODEC-F	CODEC-G	CODEC-H	CODEC-I	CODEC-J	CODEC-K	CODEC-L	CODEC-M	CODEC-N	CODEC-O	CODEC-P	CODEC-Q	CODEC-R	CODEC-S	CODEC-T	CODEC-U	CODEC-V	CODEC-W	CODEC-X	CODEC-Y	CODEC-Z
ASAB	PRES1	PRES2	PRES3	PRES4	PRES5	PRES6	PRES7	PRES8	PRES9	PRES10	PRES11	PRES12	PRES13	PRES14	PRES15	PRES16	PRES17	PRES18	PRES19	PRES20	PRES21	PRES22	PRES23	PRES24	PRES25	
ANAMOR	PRES1	PRES2	PRES3	PRES4	PRES5	PRES6	PRES7	PRES8	PRES9	PRES10	PRES11	PRES12	PRES13	PRES14	PRES15	PRES16	PRES17	PRES18	PRES19	PRES20	PRES21	PRES22	PRES23	PRES24	PRES25	
AFATOR	PRES1	PRES2	PRES3	PRES4	PRES5	PRES6	PRES7	PRES8	PRES9	PRES10	PRES11	PRES12	PRES13	PRES14	PRES15	PRES16	PRES17	PRES18	PRES19	PRES20	PRES21	PRES22	PRES23	PRES24	PRES25	





"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.

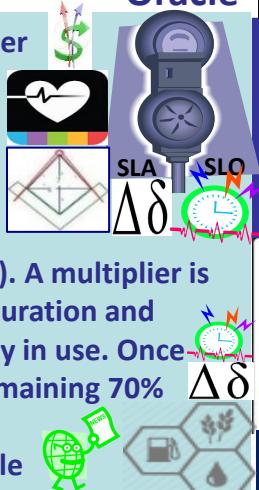


"Our mission is to build an accessible prediction market platform enabling free flow of useful information / the "Google" of Customized Information Searching"

Futarchy PREDICTION MARKETS
GnosisAMA

Gnosis trading interface alpha
WIZ token fee payment
INFORMATION ARBITRAGE ECONOMICS

TERRACYCLE Price Oracle

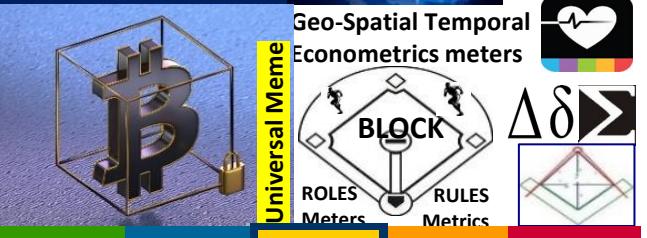


THE TERRA (TRC)

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"

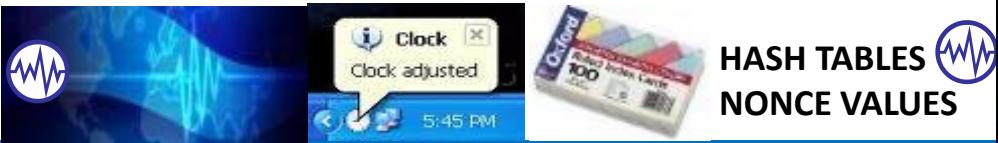




Bitcoin Classic seeks to mitigate the problem of more transactions, which are causing transaction backlogs and increased transaction costs, by increasing the block size - the number of kilobytes in a block of transactions - from 1MB to 2MB.



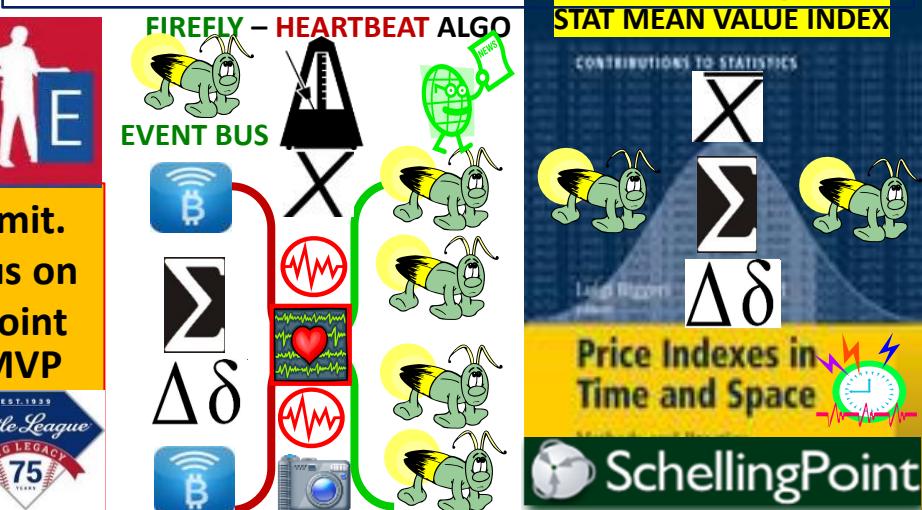
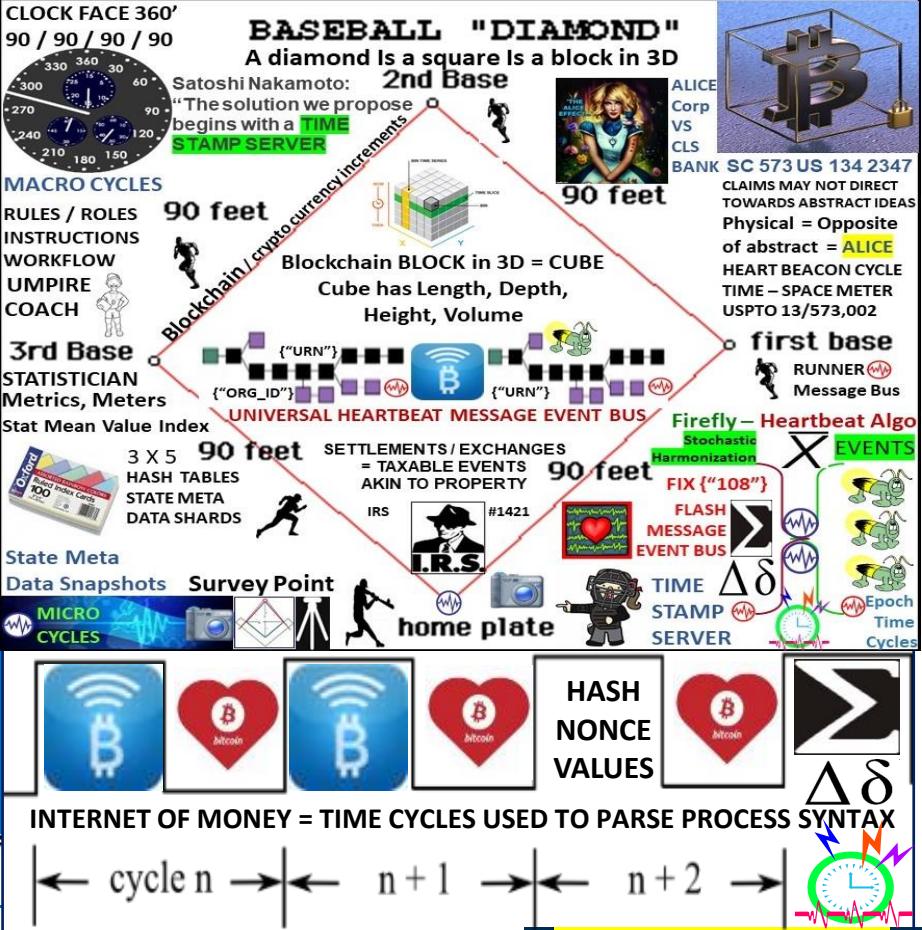
ALL THINGS INTERNET FORMED W 1) TIME EPOCHS 2) SYNTAX



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

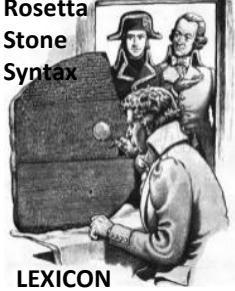
Blockchain middleware: identity and operations management, data, intelligence services like analytics and machine learning. New middleware works with existing Azure services, like Active Directory and Key Vault

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



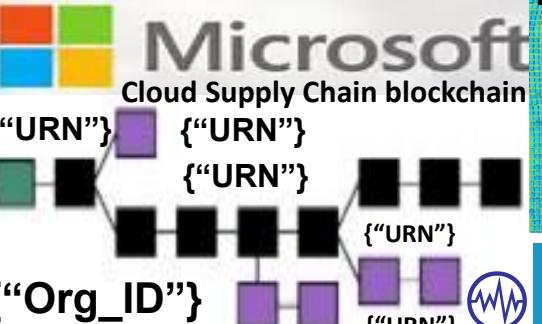
ALPHA NUMERIC
BREVITY CODES
SYMBOL CODES
STRUCTURED MILITARY MESSAGE
TEMPLATE FORMS
LOGIC / FILTERS

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.

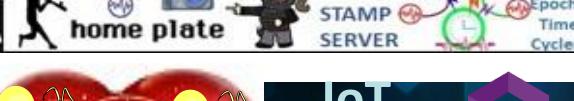
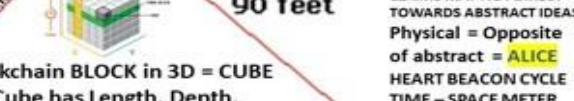
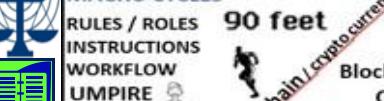
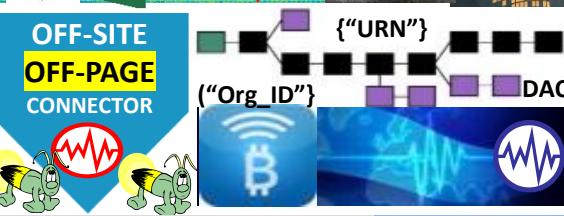
FIREFLY EVENTS
FLASH MESSAGES
SYNC TO CLOSEST HEARTBEAT EPOCH

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

MULTI-MEME MULTI-METER

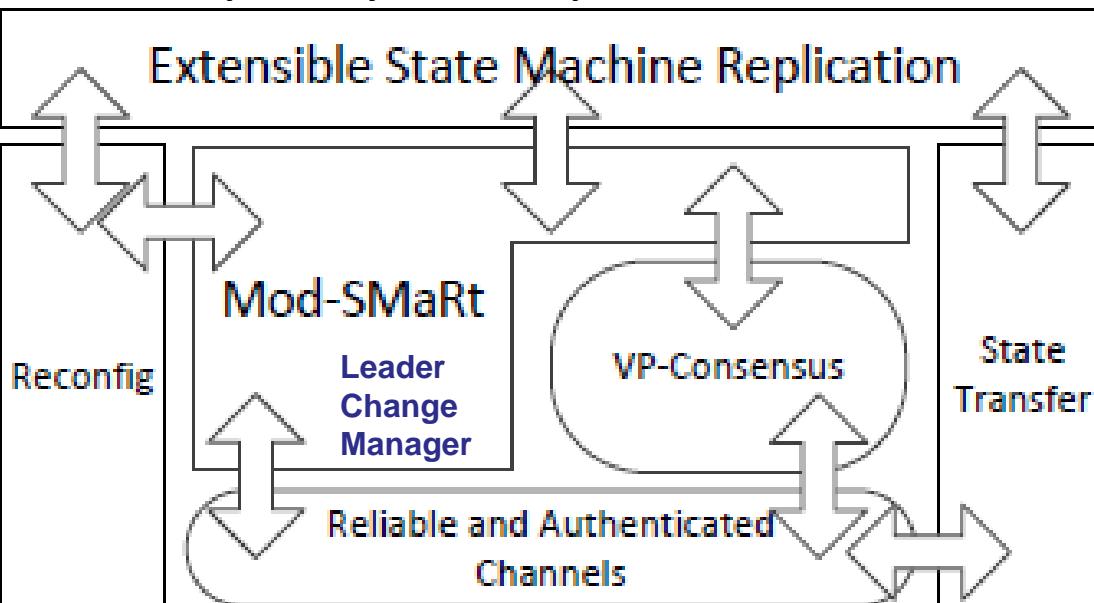


MYRIAD MEMES MEDiation



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



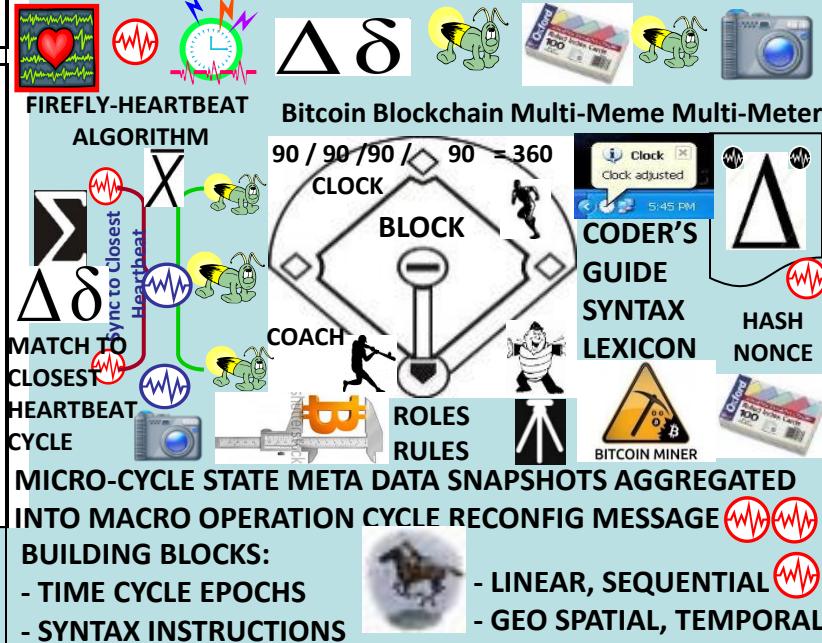
DERIVED FROM BATTLEFIELD DIGITIZATION DISTRIBUTED AUTONOMOUS ORGANIZATION DAO SYSTEM OF SYSTEMS

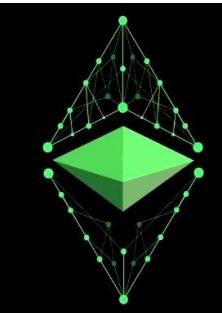
FEDERATED ID / ORGANIZATIONAL IDENTIFIER {"ORG_ID"}

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

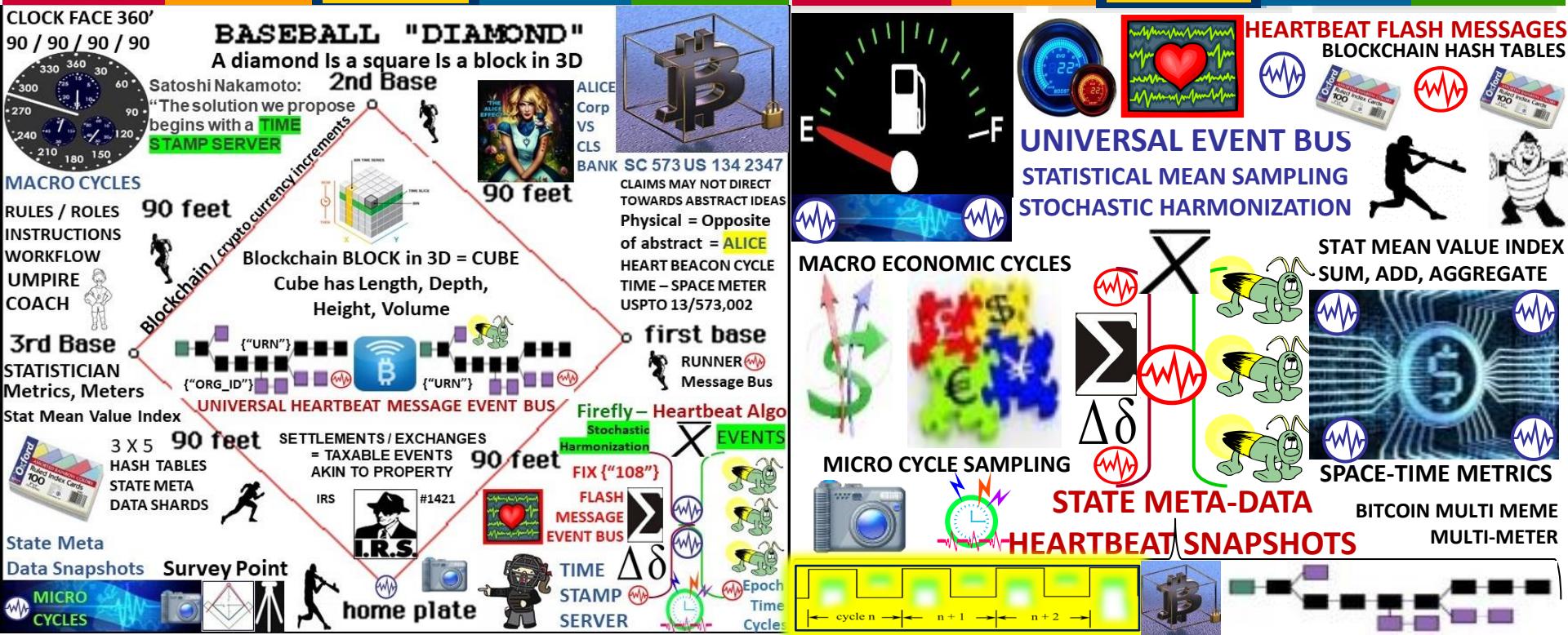
ethereum

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



Ether hedged against
other crypto / FIAT
currencies price chan $\Delta\delta$

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**





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

ERLANG API FOR BLOCKCHAIN



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

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

CROSS – CHAIN ATOMIC SWAPS

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



Aeons: energy for applications implemented on the platform.

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



("ORG_ID")
("ORG_ID")

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



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

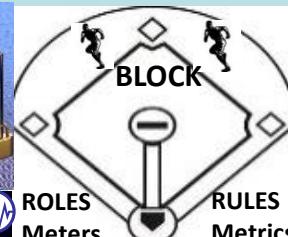
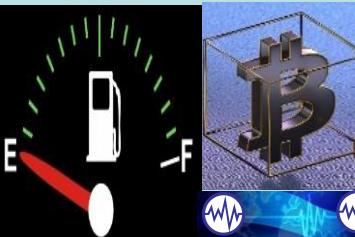
AETERNITY CROSS-CHAIN ATOMIC SWAPS CORRESPOND TO HEART BEACON CYCLE'S USE OF BATTLEFIELD DIGITIZATION DERIVED HEARTBEAT SYNC DELTAS



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

TOKENS REPRESENT REAL WORLD VALUE URN RESOURCES

ETHEREUM USES GAS GUAGE MEME INDICATING THRESHOLD MET / NOT MET



BLOCK
ROLES Meters
RULES Metrics

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

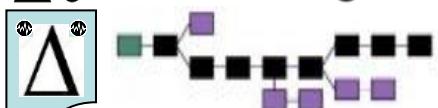
Federation Gateway
("ORG_ID")



HYPER LEDGER OPEN SOURCE BLOCKCHAIN

Core APIs, & SDKs

$\Delta\delta$ Shared Ledger



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

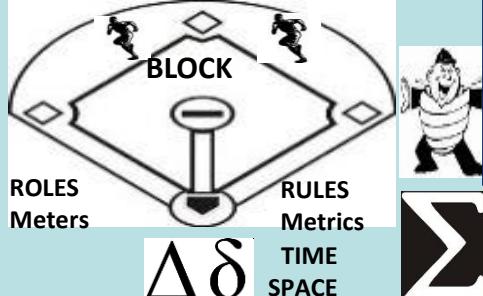
FEDERATION
Federation Gateway

METRICS ("Organization ID")
METERS

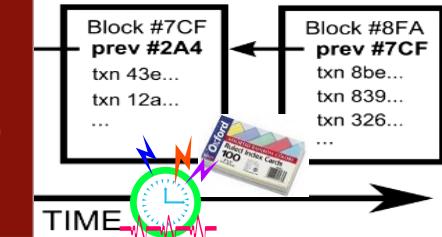
RESTFUL SYNC DELTA
CHANGE MANAGEMENT
MICRO-MACRO CYCLE



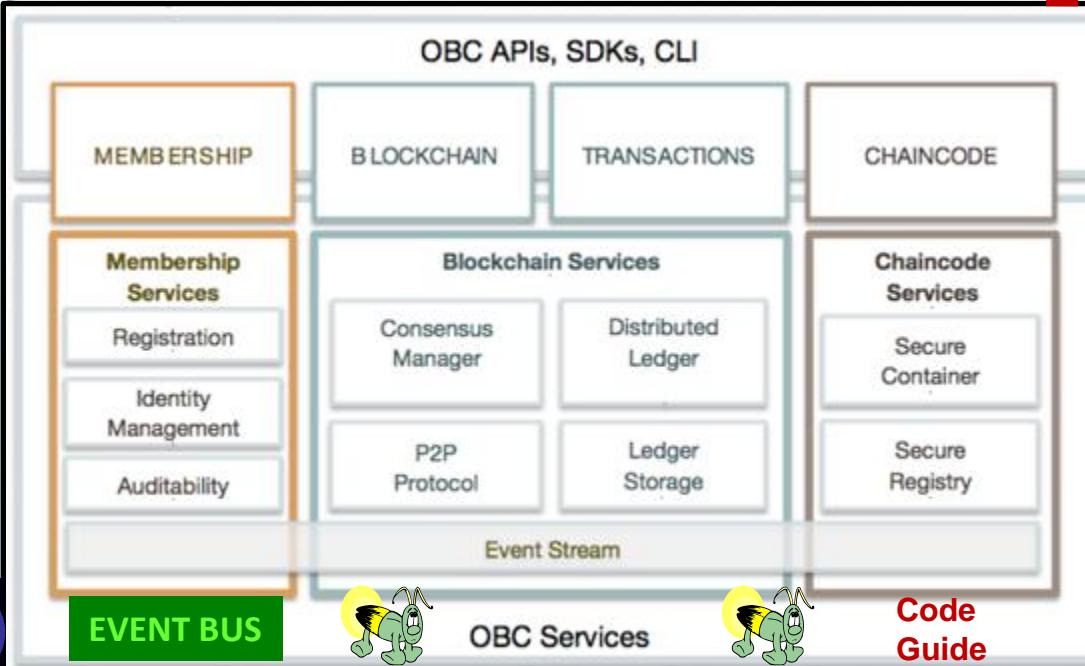
BLOCKTIME ARBITRAGE



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



Alpha-Numerics



ROSETTA STONE

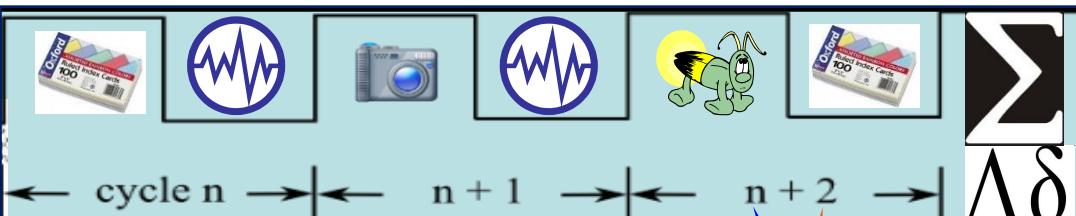
XBR / CDL / DAML
STOCK MIC CODES

STRUCTURED
MILITARY MESSAGE
TEMPLATE FORMS
LOGIC / FILTERS

SYNTAX
SYMBOL LIBRARY

300 + MESSAGE
TEMPLATES
USE CASES / GROUPED
DATA TRANSACTIONS

Alpha-Numeric Data
Element ID -- #'s are the
UNIVERSAL LANGUAGE



MICRO-MACRO CYCLE SCHEDULE

FFIRNS
FFUDNS

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



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

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

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

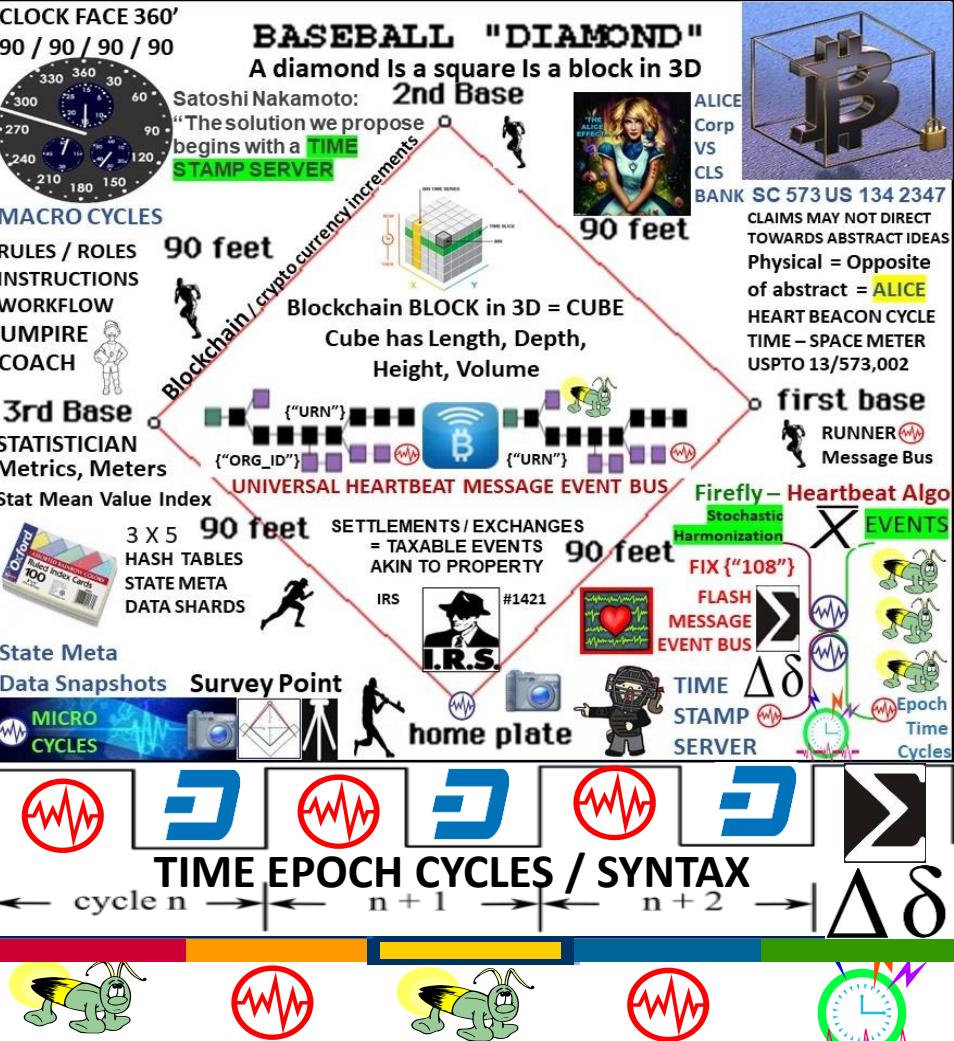
"all digital currency networks, the base layer of people generating the blockchain — "miners," "stakers," "witnesses," "validators," or "forgers" — all get paid to do so" "consensus," or an agreement upon what the rules should be; and second, the execution of said rules.

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

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

Masternodes receive payments for their service to the network.

DAO: RAND THINK TANK TERM COINED + / - 2001



STATE: stored data at a given instant in time

STATE CHANNELS: blockchain interactions

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



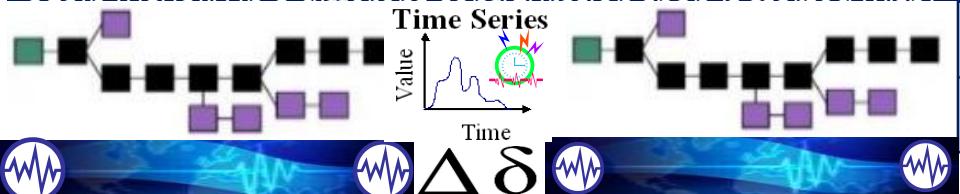
1. Part of the blockchain state is locked via multisignature or smart contract convention, so that a specific set of participants must completely agree with each other to update it.



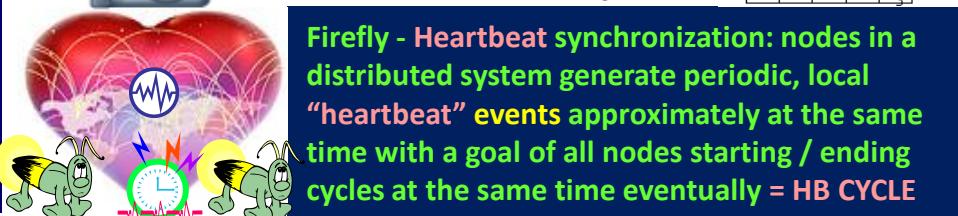
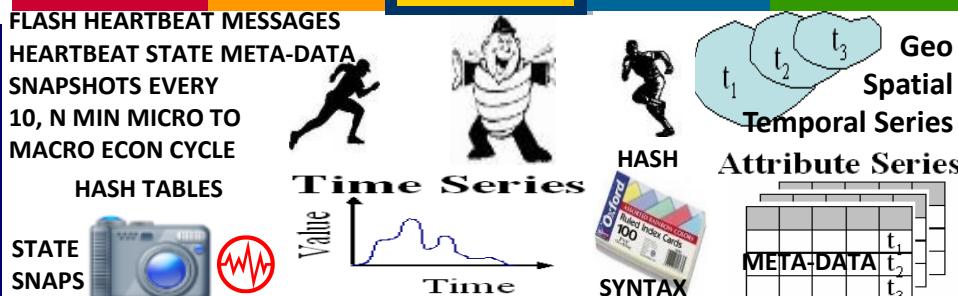
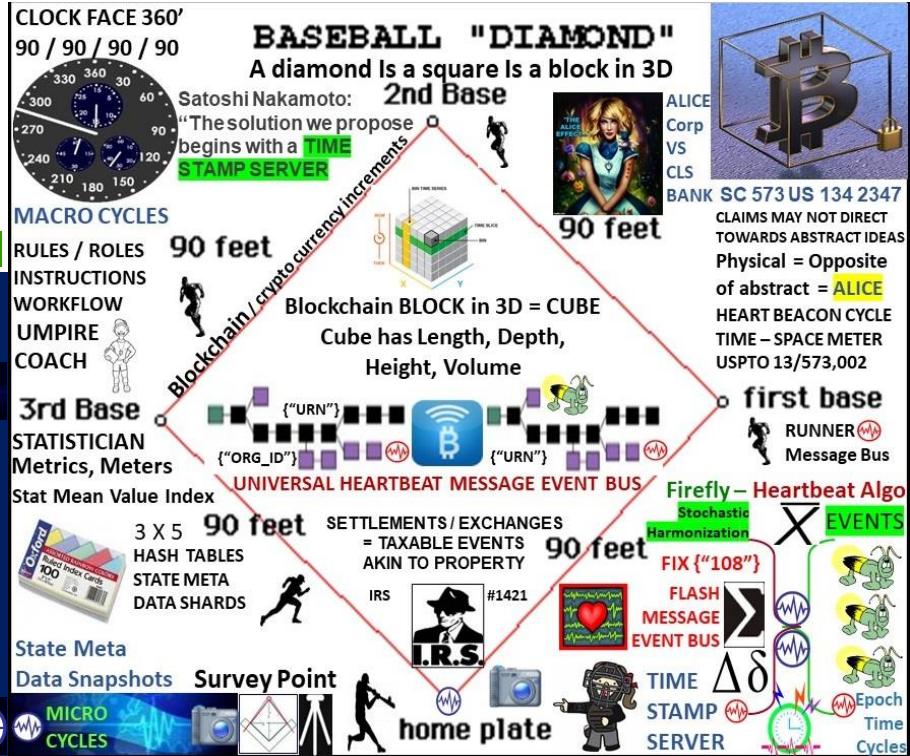
2. Participants update the state amongst themselves by constructing and signing transactions that *could* be submitted to the blockchain, but instead are made public before a new update "trumps" previous updates.



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



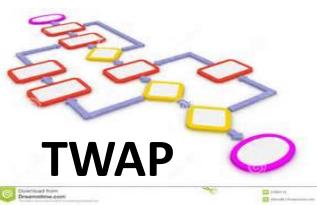
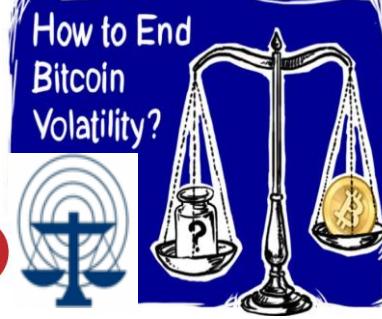
NEW UPDATES OVERWRITE THE PREVIOUS: simplest way is to have any unlocking attempt start a timer, during which any *newer* update can replace the old update (restarting the timer). When the timer completes, the channel is closed and the state adjusted to reflect the last update received. The length of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



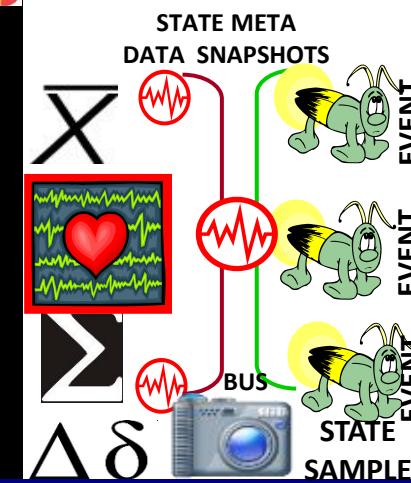
Firefly - Heartbeat synchronization: nodes in a distributed system generate periodic, local "heartbeat" events approximately at the same time with a goal of all nodes starting / ending cycles at the same time eventually = HB CYCLE

TWAP Algorithm Manages Bitcoin Price Volatility Algorithm

TWAP GOAL: provide a Time Weighted Average Price Benchmark



FIREFLY HEARTBEAT ALGO
STAT MEAN VALUE INDEX



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



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



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

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

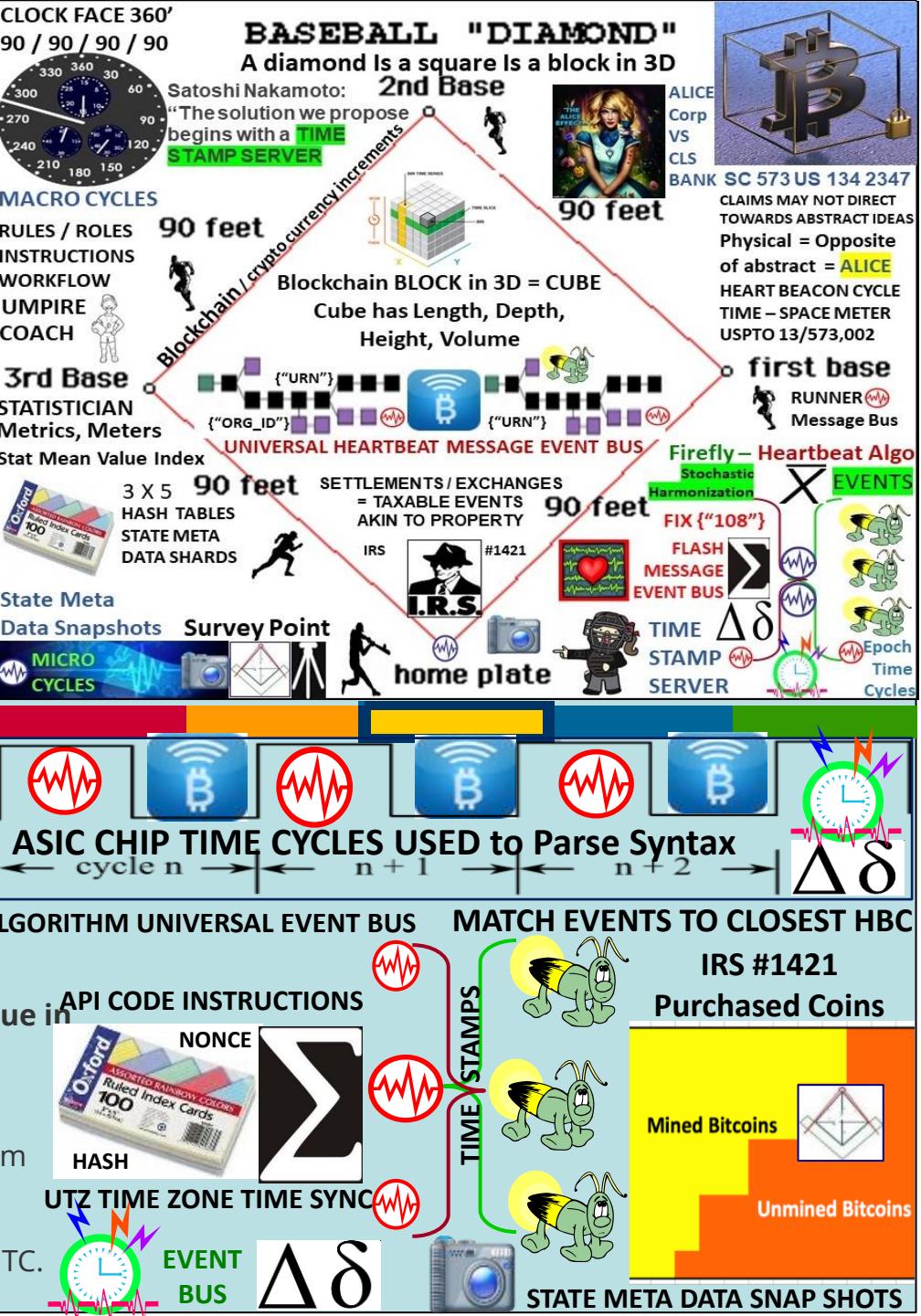
Transaction ID, Block ID, time-stamp, BWAP per block, Value in USD. BTC per transaction, bitcoin transaction fees per transaction.

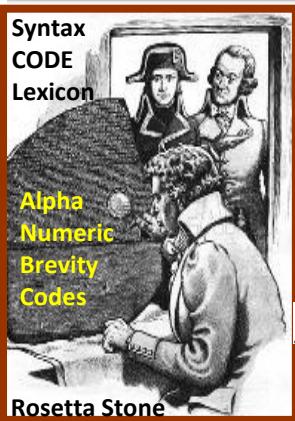
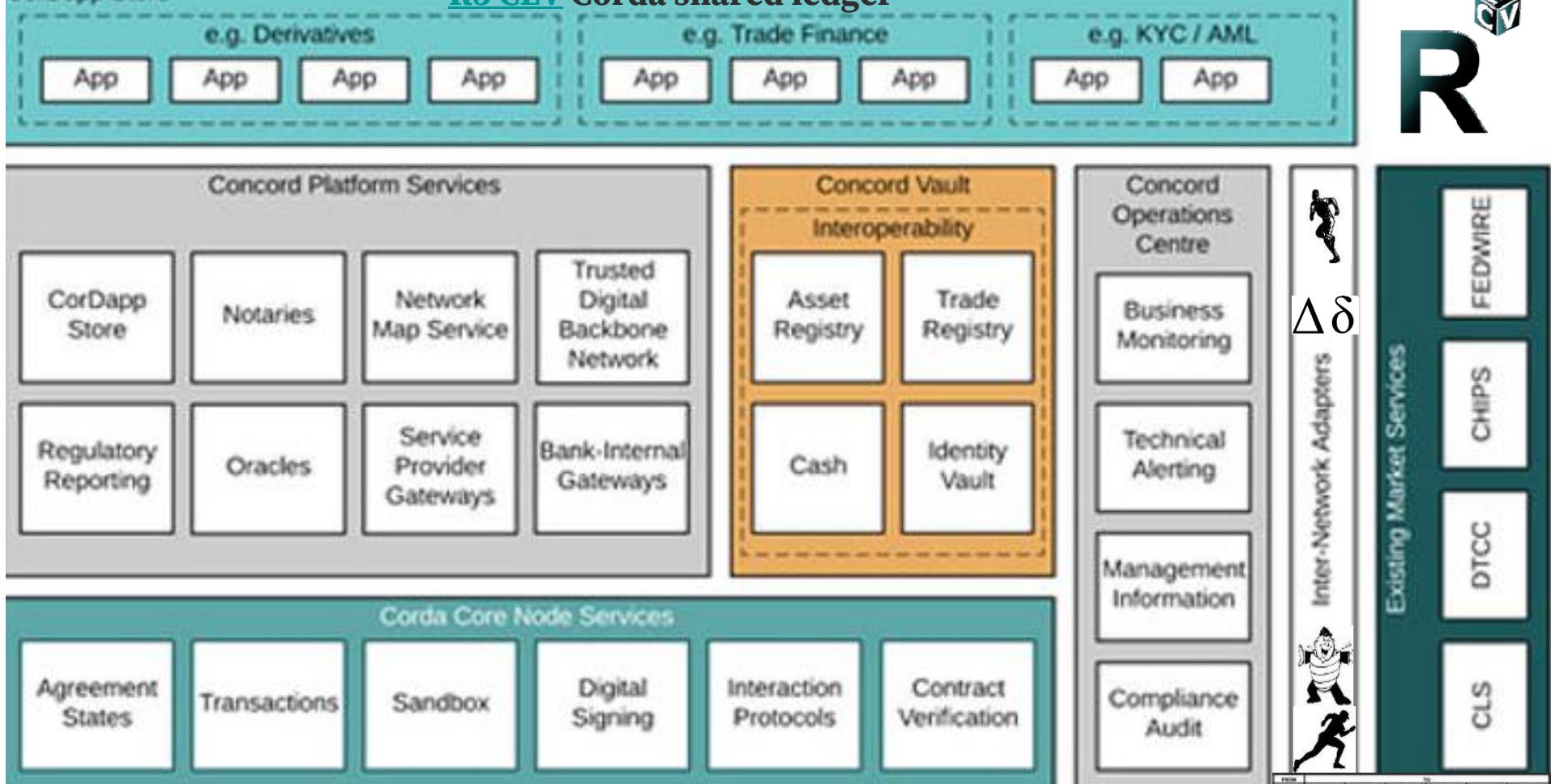
"Blocks are a measure of time":

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

	Q1Q2A	T4T1A	A2A3A	A4P1C2	A5A7A8	W2C
ABAR	F002	F003	F004	F005	F006	F007
AMDFPS	F008	F009	F010	F011	F012	F013
AFATON	F014	F015	F016	F017	F018	F019
AFATON	F020	F021	F022	F023	F024	F025
AFATON	F026	F027	F028	F029	F030	F031
AFATON	F032	F033	F034	F035	F036	F037
AFATON	F038	F039	F040	F041	F042	F043
AFATON	F044	F045	F046	F047	F048	F049
AFATON	F050	F051	F052	F053	F054	F055
AFATON	F056	F057	F058	F059	F060	F061
AFATON	F062	F063	F064	F065	F066	F067
AFATON	F068	F069	F070	F071	F072	F073
AFATON	F074	F075	F076	F077	F078	F079
AFATON	F080	F081	F082	F083	F084	F085
AFATON	F086	F087	F088	F089	F090	F091
AFATON	F092	F093	F094	F095	F096	F097
AFATON	F098	F099	F100	F101	F102	F103
AFATON	F104	F105	F106	F107	F108	F109
AFATON	F110	F111	F112	F113	F114	F115
AFATON	F116	F117	F118	F119	F120	F121
AFATON	F122	F123	F124	F125	F126	F127
AFATON	F128	F129	F130	F131	F132	F133
AFATON	F134	F135	F136	F137	F138	F139
AFATON	F140	F141	F142	F143	F144	F145
AFATON	F146	F147	F148	F149	F150	F151
AFATON	F152	F153	F154	F155	F156	F157
AFATON	F158	F159	F160	F161	F162	F163
AFATON	F164	F165	F166	F167	F168	F169
AFATON	F170	F171	F172	F173	F174	F175
AFATON	F176	F177	F178	F179	F180	F181
AFATON	F182	F183	F184	F185	F186	F187
AFATON	F188	F189	F190	F191	F192	F193
AFATON	F194	F195	F196	F197	F198	F199
AFATON	F199	F200	F201	F202	F203	F204
AFATON	F205	F206	F207	F208	F209	F210
AFATON	F211	F212	F213	F214	F215	F216
AFATON	F217	F218	F219	F220	F221	F222
AFATON	F223	F224	F225	F226	F227	F228
AFATON	F229	F230	F231	F232	F233	F234
AFATON	F235	F236	F237	F238	F239	F240
AFATON	F241	F242	F243	F244	F245	F246
AFATON	F247	F248	F249	F250	F251	F252
AFATON	F253	F254	F255	F256	F257	F258
AFATON	F259	F260	F261	F262	F263	F264
AFATON	F265	F266	F267	F268	F269	F270
AFATON	F271	F272	F273	F274	F275	F276
AFATON	F277	F278	F279	F280	F281	F282
AFATON	F283	F284	F285	F286	F287	F288
AFATON	F289	F290	F291	F292	F293	F294
AFATON	F295	F296	F297	F298	F299	F300

	Q1Q2A	T4T1A	A2A3A	A4P1C2	A5A7A8	W2C
ABAR	F002	F003	F004	F005	F006	F007
AMDFPS	F008	F009	F010	F011	F012	F013
AFATON	F014	F015	F016	F017	F018	F019
AFATON	F020	F021	F022	F023	F024	F025
AFATON	F026	F027	F028	F029	F030	F031
AFATON	F032	F033	F034	F035	F036	F037
AFATON	F038	F039	F040	F041	F042	F043
AFATON	F044	F045	F046	F047	F048	F049
AFATON	F050	F051	F052	F053	F054	F055
AFATON	F056	F057	F058	F059	F060	F061
AFATON	F062	F063	F064	F065	F066	F067
AFATON	F068	F069	F070	F071	F072	F073
AFATON	F074	F075	F076	F077	F078	F079
AFATON	F080	F081	F082	F083	F084	F085
AFATON	F086	F087	F088	F089	F090	F091
AFATON	F092	F093	F094	F095	F096	F097
AFATON	F098	F099	F100	F101	F102	F103
AFATON	F104	F105	F106	F107	F108	F109
AFATON	F110	F111	F112	F113	F114	F115
AFATON	F116	F117	F118	F119	F120	F121
AFATON	F122	F123	F124	F125	F126	F127
AFATON	F128	F129	F130	F131	F132	F133
AFATON	F134	F135	F136	F137	F138	F139
AFATON	F140	F141	F142	F143	F144	F145
AFATON	F146	F147	F148	F149	F150	F151
AFATON	F152	F153	F154	F155	F156	F157
AFATON	F158	F159	F160	F161	F162	F163
AFATON	F164	F165	F166	F167	F168	F169
AFATON	F170	F171	F172	F173	F174	F175
AFATON	F176	F177	F178	F179	F180	F181
AFATON	F182	F183	F184	F185	F186	F187
AFATON	F188	F189	F190	F191	F192	F193
AFATON	F194	F195	F196	F197	F198	F199
AFATON	F199	F200	F201	F202	F203	F204
AFATON	F205	F206	F207	F208	F209	F210
AFATON	F211	F212	F213	F214	F215	F216
AFATON	F217	F218	F219	F220	F221	F222
AFATON	F223	F224	F225	F226	F227	F228
AFATON	F229	F230	F231	F232	F233	F234
AFATON	F235	F236	F237	F238	F239	F240
AFATON	F241	F242	F243	F244	F245	F246
AFATON	F247	F248	F249	F250	F251	F252
AFATON	F253	F254	F255	F256	F257	F258
AFATON	F259	F260	F261	F262	F263	F264
AFATON	F265	F266	F267	F268	F269	F270
AFATON	F271	F272	F273	F274	F275	F276
AFATON	F277	F278	F279	F280	F281	F282
AFATON	F283	F284	F285	F286	F287	F288
AFATON	F289	F290	F291	F292	F293	F294
AFATON	F295	F296	F297	F298	F299	F300

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



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

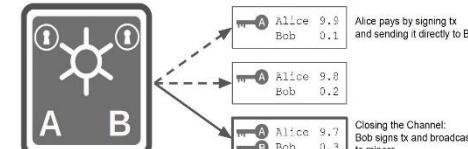




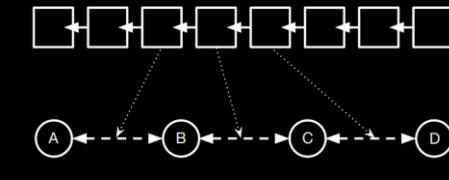
**transactions sent over / off chain
micropayment channels**

Micropayment Channels

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



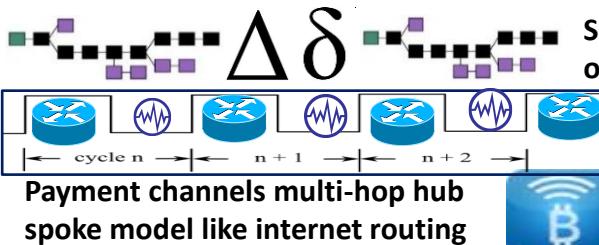
LIGHTNING



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



COACH

3rd Base

STATISTICIAN
Metrics, Meters

Stat Mean Value Index



3 X 5 HASH TABLES
STATE META
DATA SHARDS

State Meta

Data Snapshots

Survey Point

MICRO CYCLES

home plate

time stamp server

epoch time cycles

Server nodes, miners
only keep recent blocks



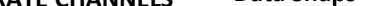
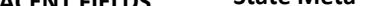
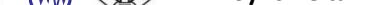
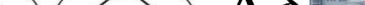
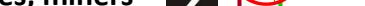
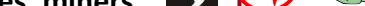
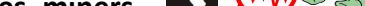
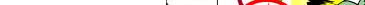
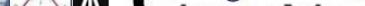
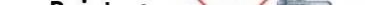
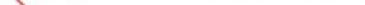
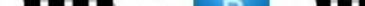
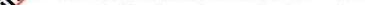
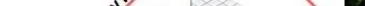
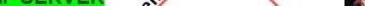
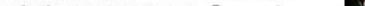
Sync Delta
State Meta
Data Snaps

ADJACENT FIELDS
SEPARATE CHANNELS

FIREFLY – HEARTBEAT



FIREFLY – HEARTBEAT



Electronic Product Code Information Services (EPCIS) GS1 Standard for creating, sharing visibility event data

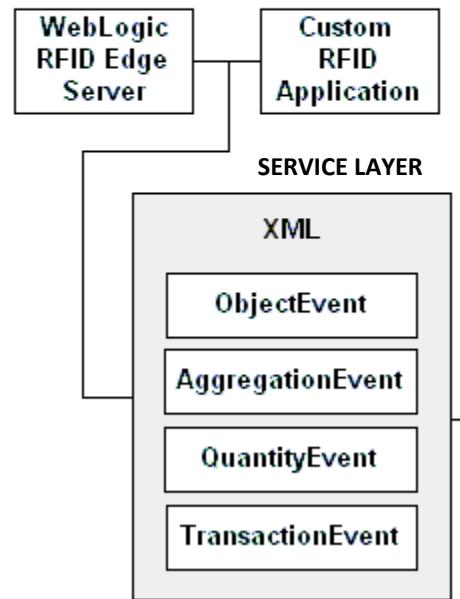


HBC
SYSTEM OF SYSTEMS
TIME-SPACE SYNC

UNIVERSAL EVENT BUS

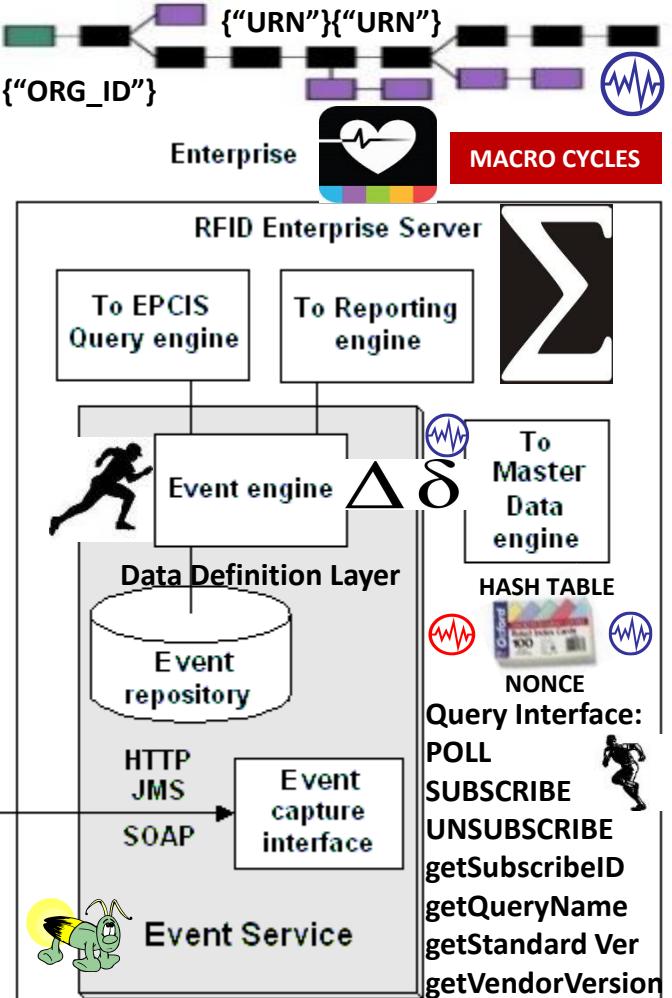


**EPCIS
EPCIS DATA MODEL**



Core Business Vocabulary (CBV)

- What identifiers of object(s) or entities / subject of the event
- When date time when event took place, local time zone in effect
- Where location identifier where event occurred, identifier of location where object(s) are expected to be following the event
- Why Information about the business context, including:
 - a Identifier that indicates the business step taking place

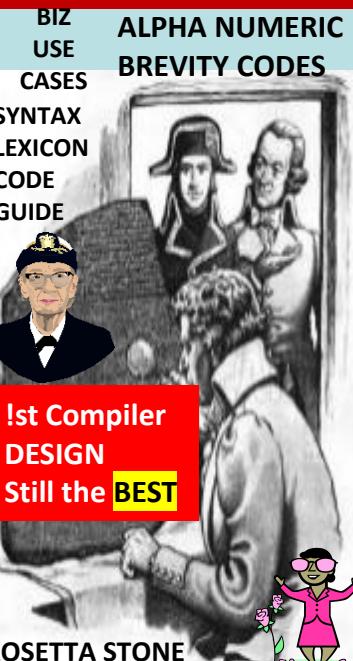


CLOSER IS CHEAPER

CLOSER IS FASTER

!st Compiler DESIGN Still the **BEST**

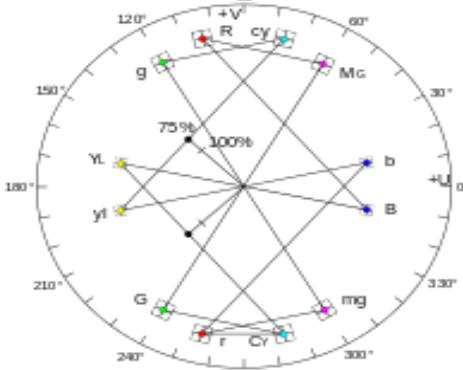
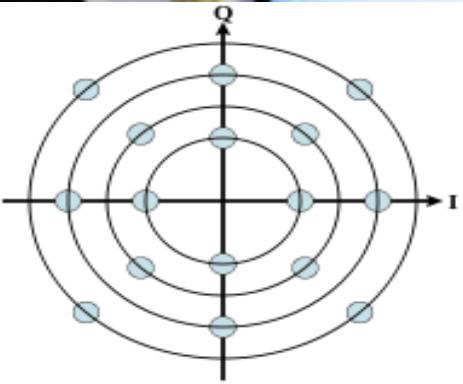
ROSETTA STONE



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”

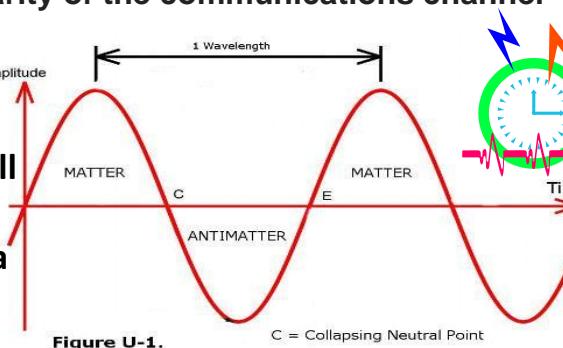


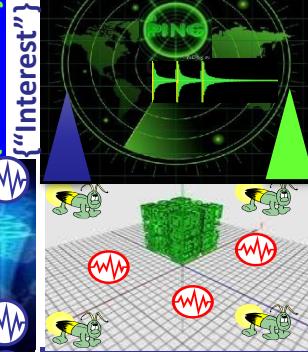
Figure U-1.

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



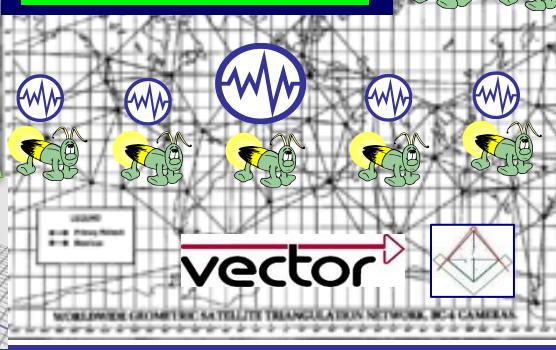
USPTO 13/573,002
sawconcepts.com/index

NDN
IDMaps
SonarHops

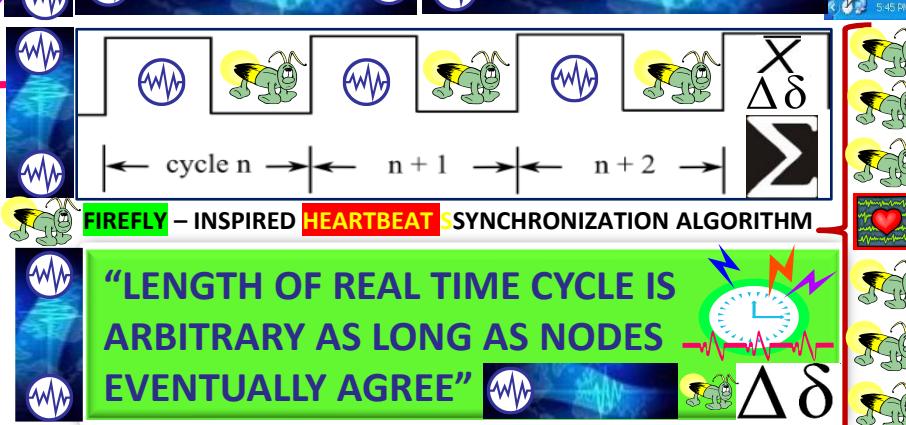


Heart Beacon Cycle Time – Space Meter
Geo-Spatial Temporal Intensity Metrics

TRIANGULATION



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



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



TERRA
TRC



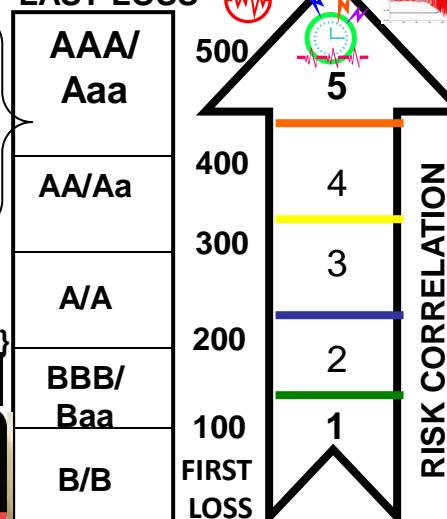
ECONOMIC HEARTBEAT



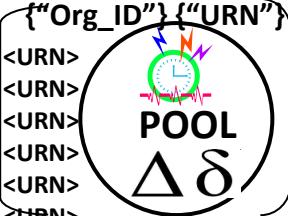
HB MSG </108>
PROTOCOL

INDUSTRY-DRIVEN MESSAGING STANDARD

LAST LOSS



RISK CORRELATION



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

POOL
 $\Delta\delta$



Spatial Econometrics



PROCESS BY </PRECEDENCE>
SonarMaps ID_Hops

Bitcoin = Property



ON / OFF SHORE
PROXIMITY BEACONS

IRS Memo #1421



NDN NDN

% Block Mined
% Block owned
Mined Bitcoins



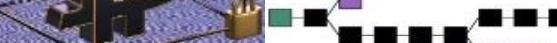
ON / OFF SHORE
PROXIMITY BEACONS

Unmined Bitcoin:
 $\Delta\delta$ Land Use Meme



NDN NDN

Triangulation



ON / OFF SHORE
PROXIMITY BEACONS

Euclidian Geo



NDN NDN

GPS GEO LOC



ON / OFF SHORE
PROXIMITY BEACONS

DATE TIME STAMP



NDN NDN

NDN </INTEREST>



ON / OFF SHORE
PROXIMITY BEACONS

NDN {"DISTANCE"}
Demurrage Charges



ON / OFF SHORE
PROXIMITY BEACONS

vector



ON / OFF SHORE
PROXIMITY BEACONS

Heartbeat Snapshots



ON / OFF SHORE
PROXIMITY BEACONS

ALGORITHM



ON / OFF SHORE
PROXIMITY BEACONS

Heartbeat Cycles



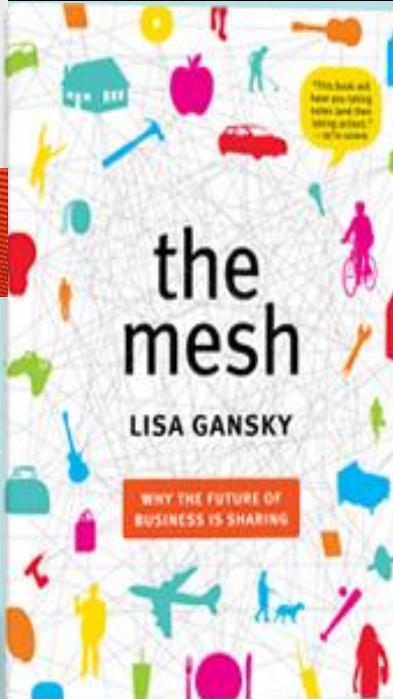
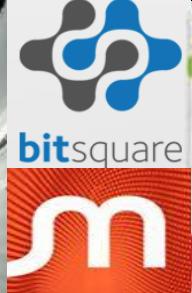
ON / OFF SHORE
PROXIMITY BEACONS



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



Rules of engagement

FEDERATION AGREEMENTS
PROCEDURAL TEMPLATE

Registration

Authentication

Proximity based rules

Consensus based rules

Contracts

Checklists

FEDERATION

<UUID> <ORG_ID> <URN>

LDAP DIRECTORY

Physical proximity

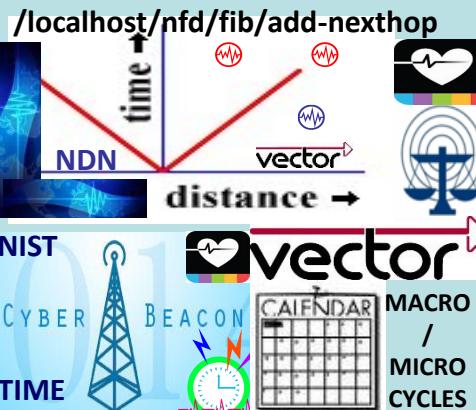
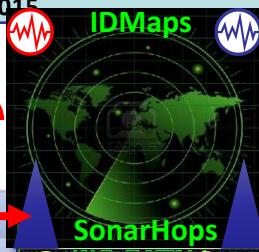
Social proximity

Temporal proximity

Agreements

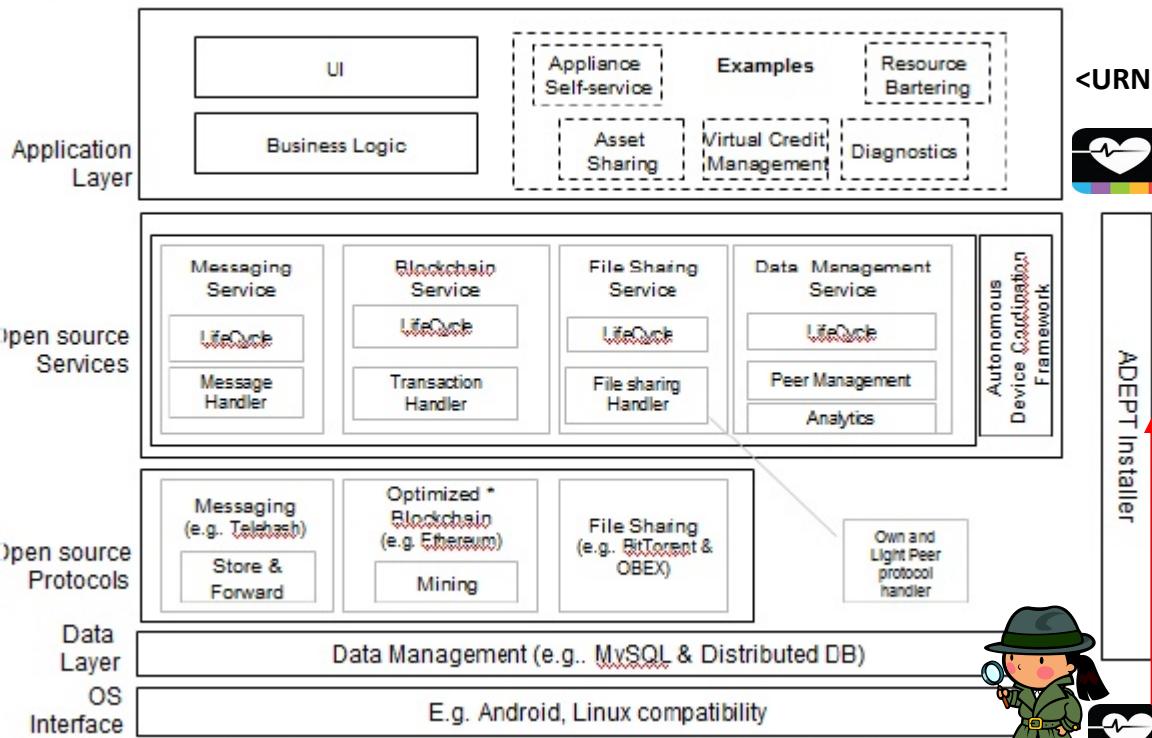
Payments

Barter



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

ADEPT Standard Peer Architecture – Logical View

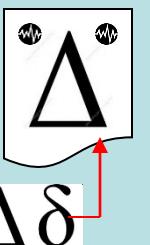


ASSET SHARING WITHIN FEDERATION

BUSINESS LOGIC = WORKFLOW <XML_Wf>

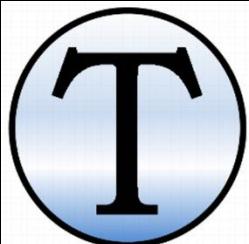


FILE SHARING = CYCLIC SYNC DELTA LEDGER / DOCUMENT REFRESH



OPEN SOURCE = HBC = PROTOCOL AGNOSTIC

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



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.

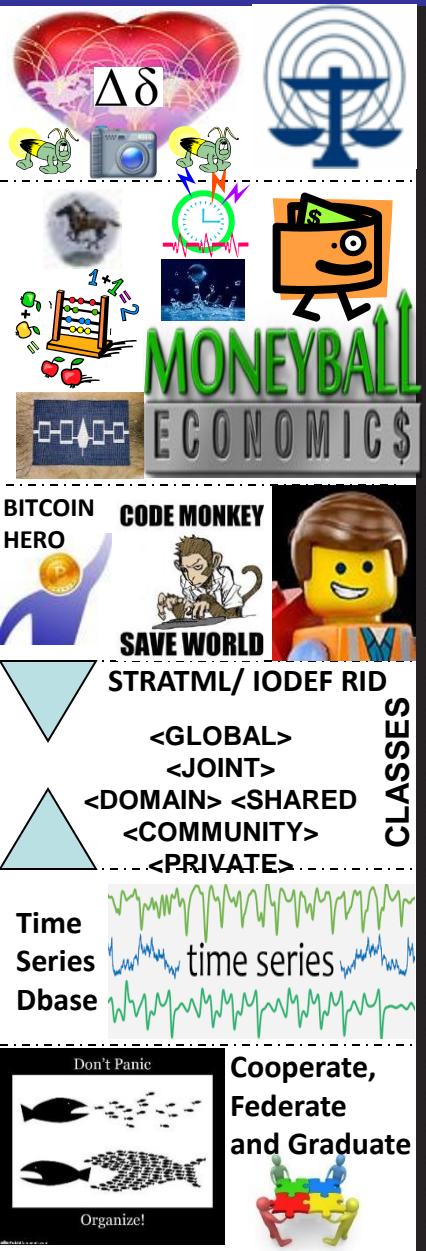
How 'Bitbanks' Could Solve Bitcoin's Volatility Problem

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

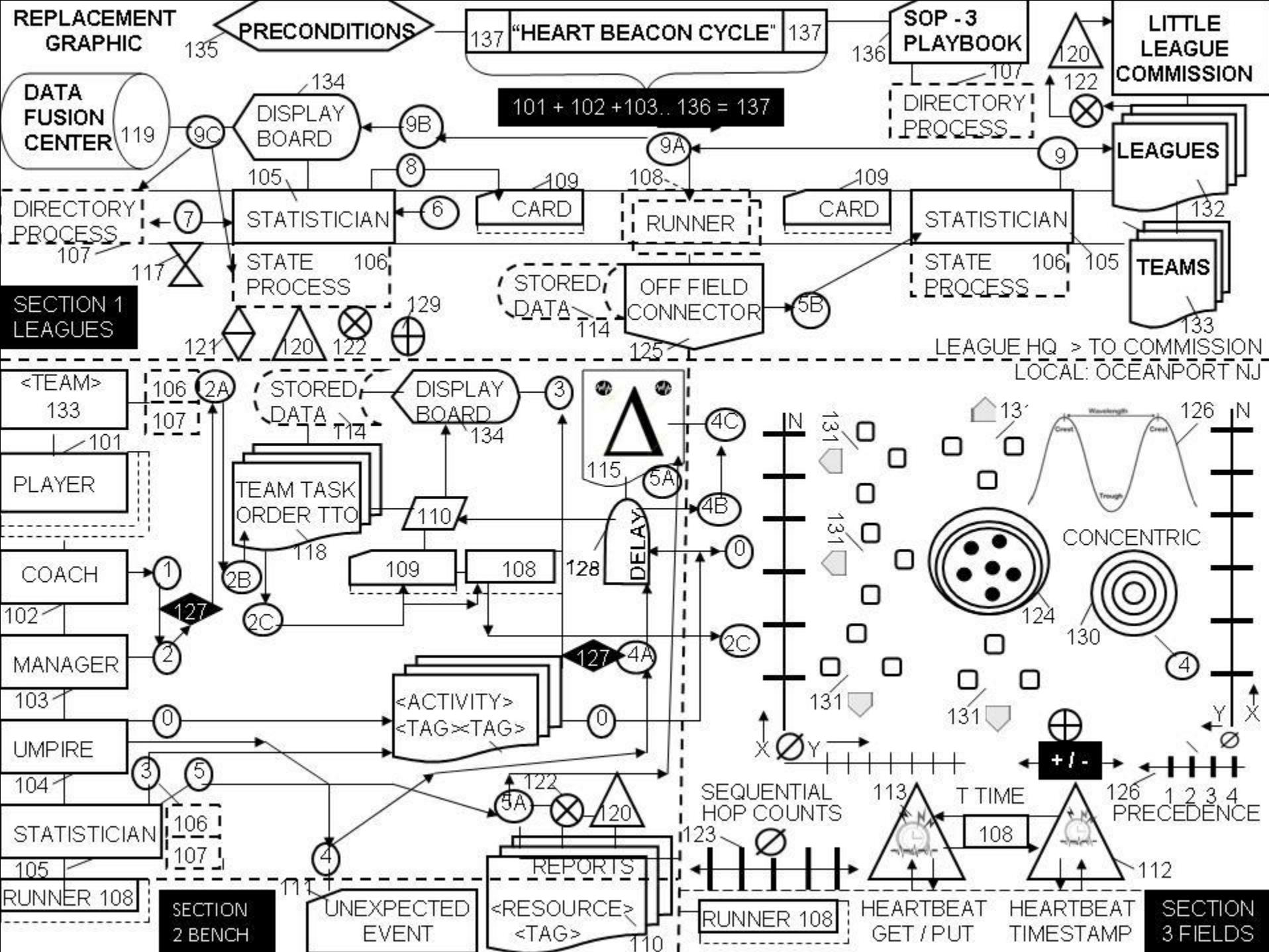
The most important equation in monetary economics, the equation of exchange: $MV=PQ$. The quantity of money (M) times the rate spent (V for velocity) equals the price of everything bought (P) times the amount bought (Q for quantity). In Bitcoin, M Money is on a predetermined path, converging to 21m bitcoins.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

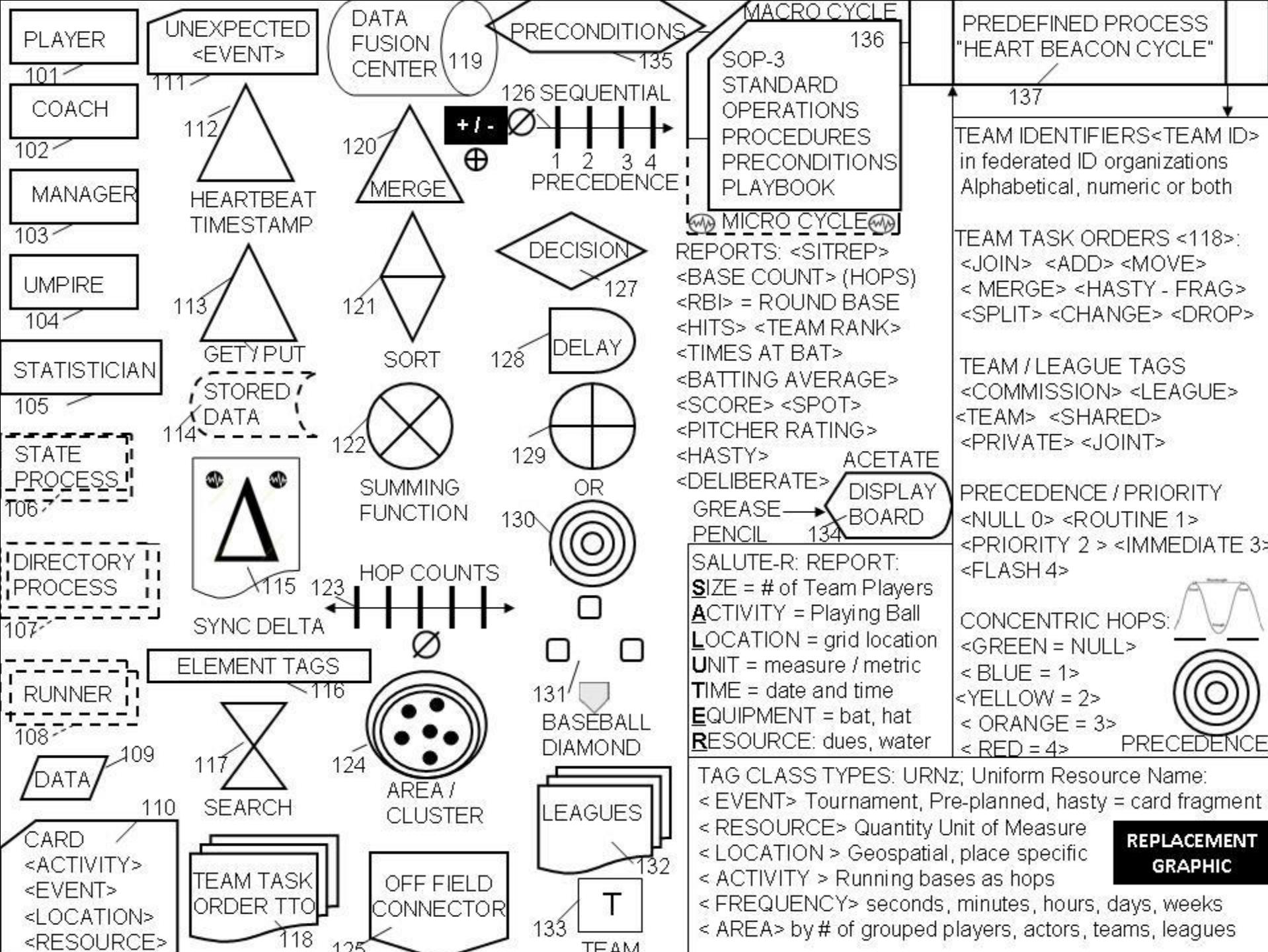


Gamification is the use of game thinking and game mechanics in non-game contexts to engage users in solving problems. Gamification techniques strive to leverage people's natural desires for competition, achievement, status, self-expression, altruism, closure.









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



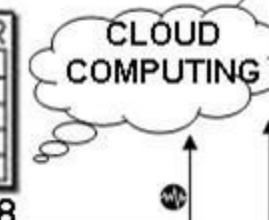
.0001

MICRO CYCLES

216



218



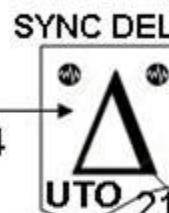
219

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

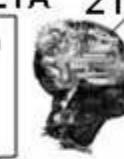


214

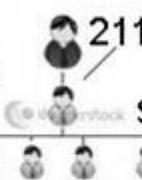


UTO 213

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



215 LEADER'S
INTENT
DECISIONS



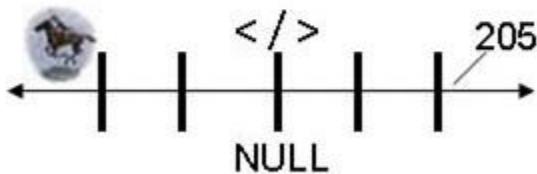
210

203

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



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



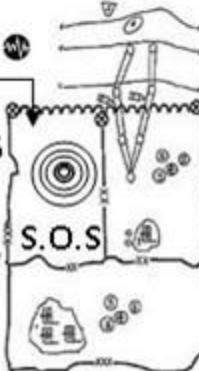
LENGTH, THRESHOLD, INTENSITY, DURATION



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



APPLIQUE' OVERLAYS



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

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



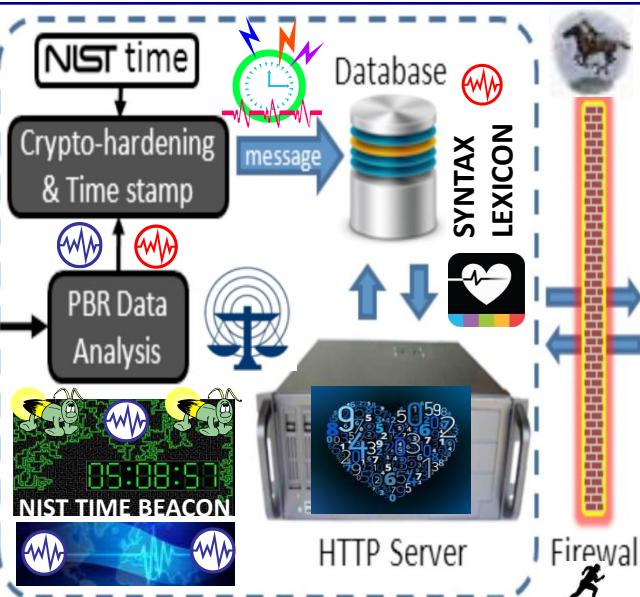
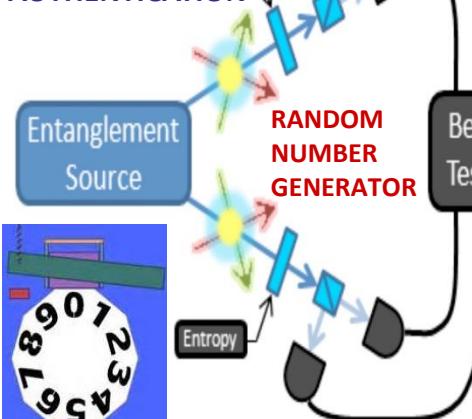
NIST QUANTUM ENCRYPTION RANDOMIZATION BEACON

UNPREDICTABLE SAMPLING

SECURE AUTHENTICATION

SECURE MULTI

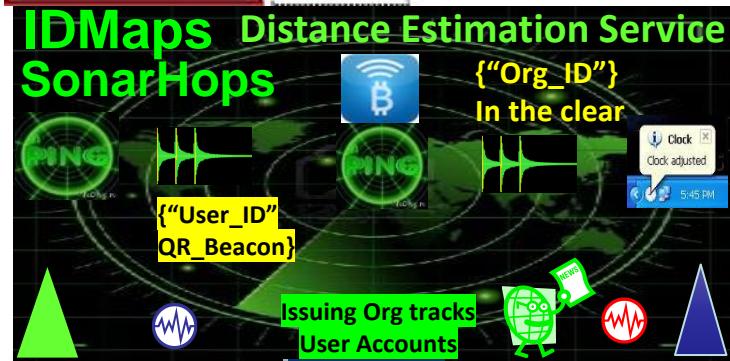
PARTY /
AUTHENTICATION



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



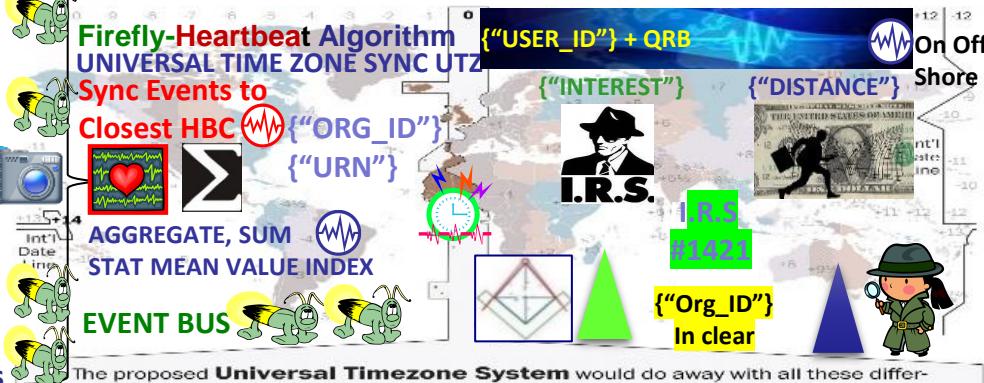
PROXIMITY

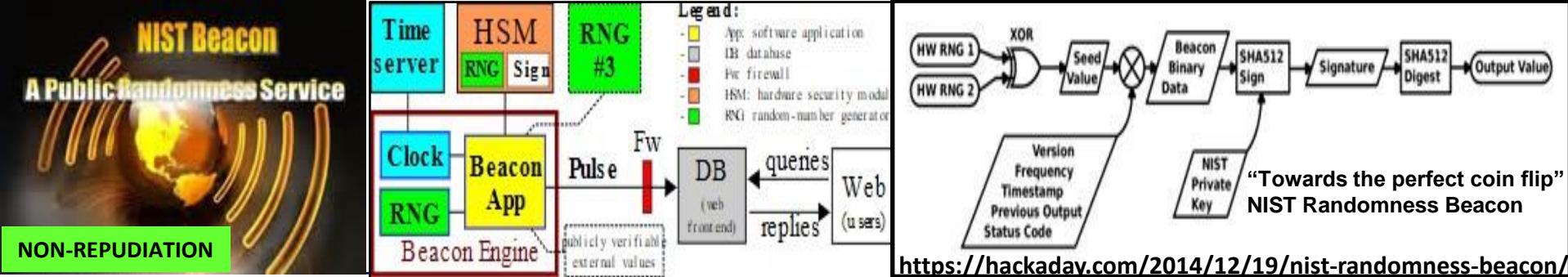
OFFSHORE BEACONS ONSHORE

NDN

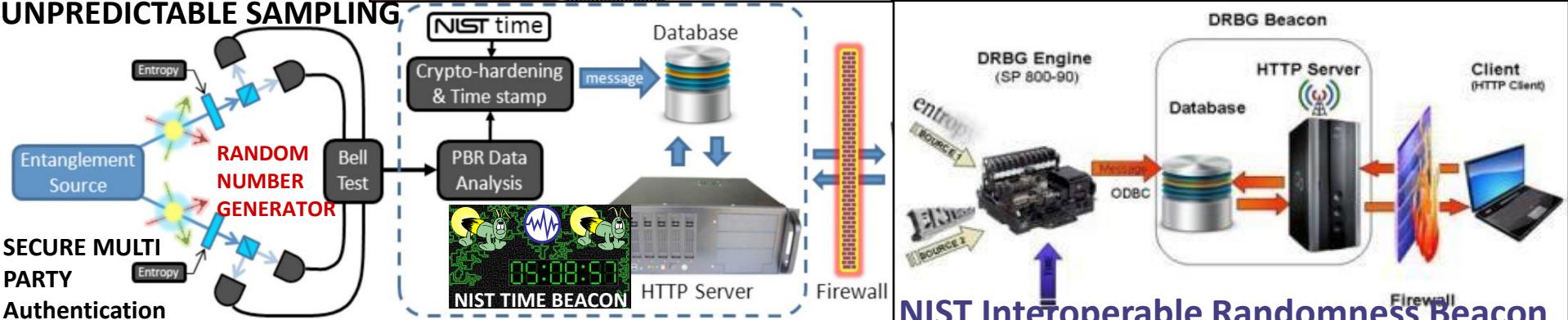
</interest></distance>

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





<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

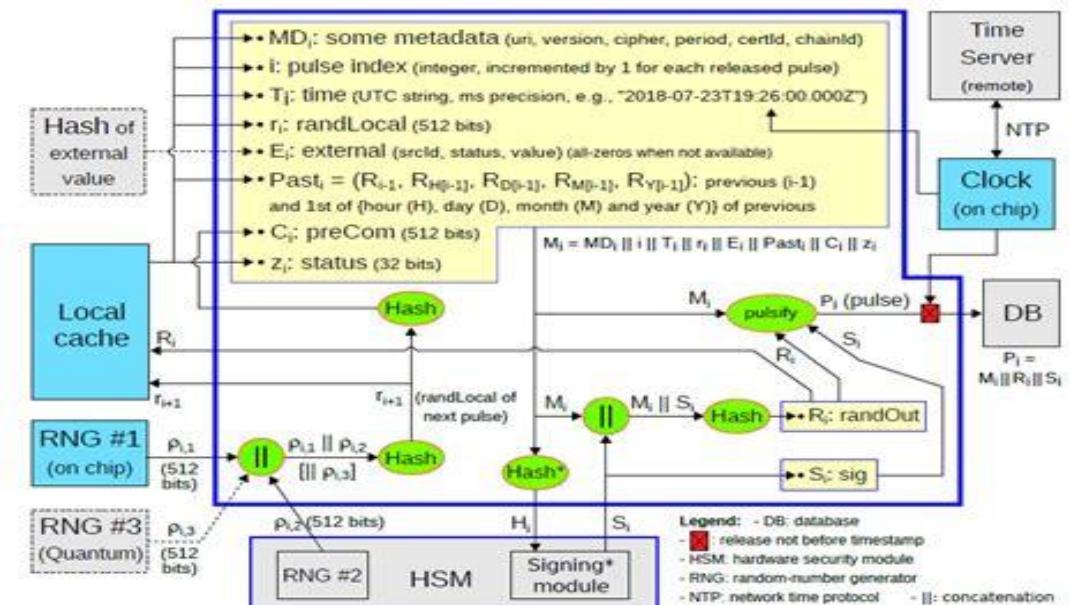
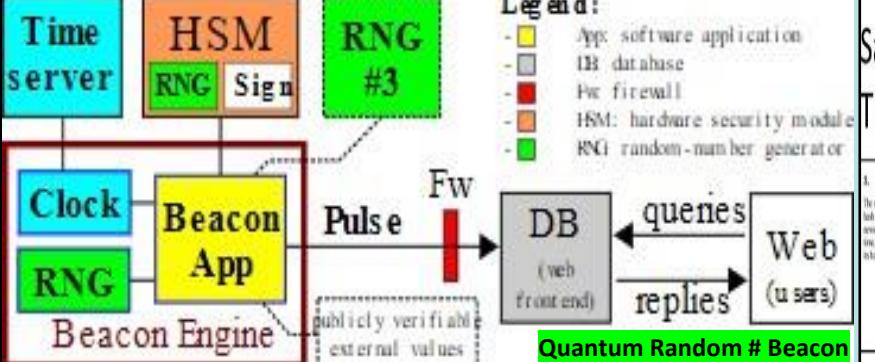


Figure 2. Illustration of the generation of the i^{th} pulse by a Beacon App (2.0)

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

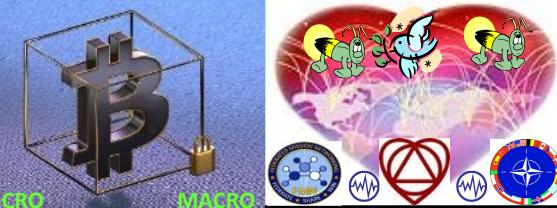
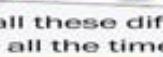
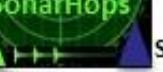
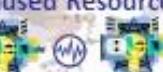
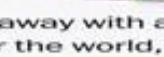
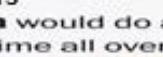
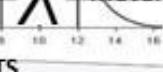
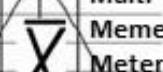
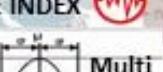
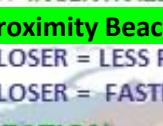
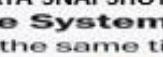
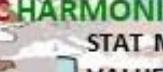
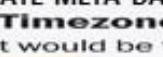
["INTEREST"]
["DISTANCE"]

NDN
FIREFLY HEARTBEAT ALGORITHM

HEARTBEAT {108"} MESSAGES

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.



THE SOLUTION WE PROPOSE BEGINS WITH A TIME STAMP SERVER



TIME SPACE

Metrics / Meters

05:08:57

NIST TIME BEACON

Metrics / Meters

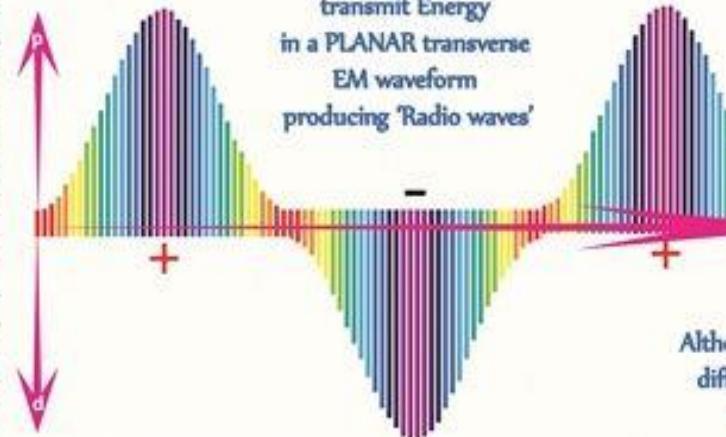
CLOSER = < Infrastructure
= CHEAPER SLA

ElectroMagnetic waveforms



ENERGY / DATA
Over
Transmission
Lines / Airwaves

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



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



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

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

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

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

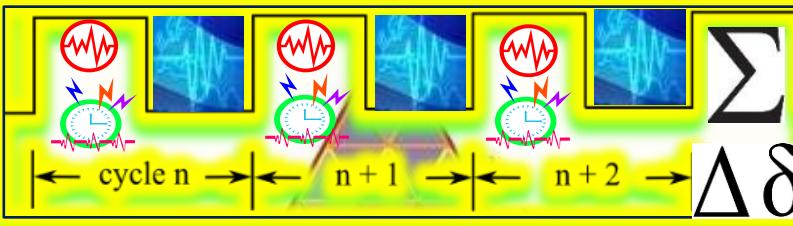
Through longitudinal waves, Tesla transferred energy to receiving devices. He sent electrostatic forces through the air, transferred electrical energies and noted the lethal forces produced by these waves.

Heinrich Hertz



(22 February 1857 - January 1 1894)

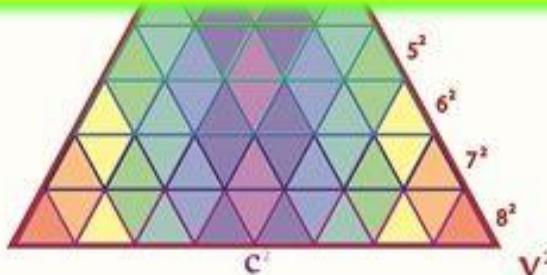
INTERNET = 1. TIME EPOCH CYCLES 2. Syntax (not) Processed in cycle



Nikola Tesla



(10 July 1856 - 7 January 1943)

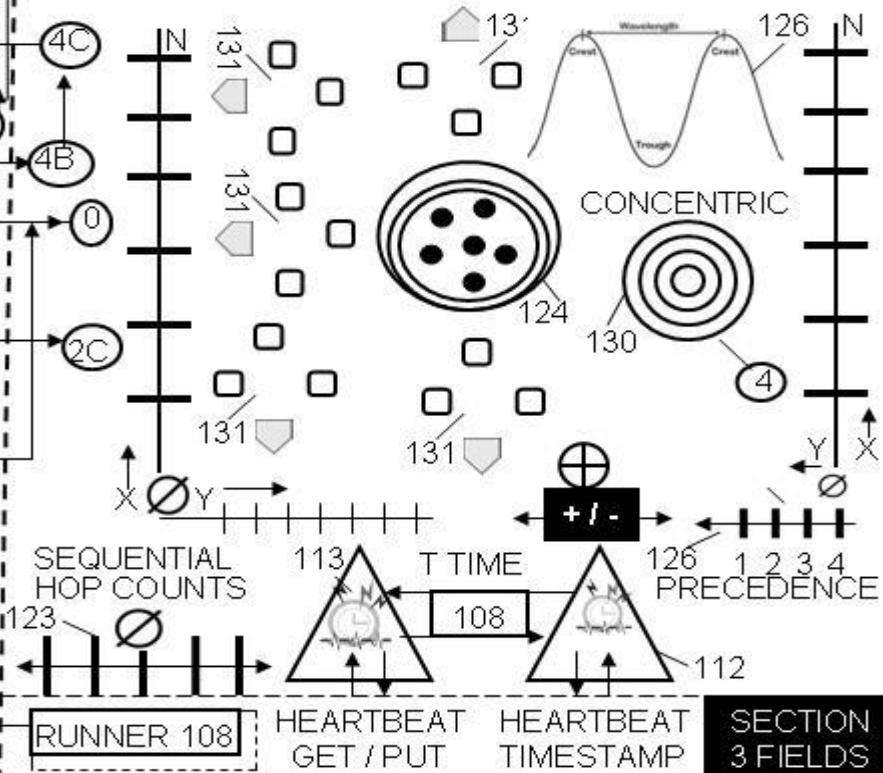
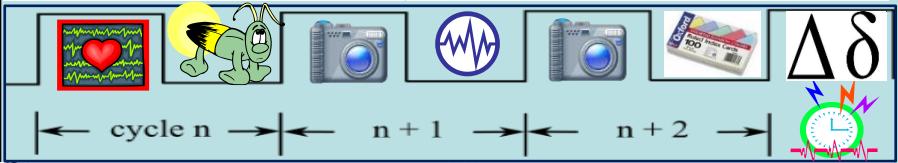
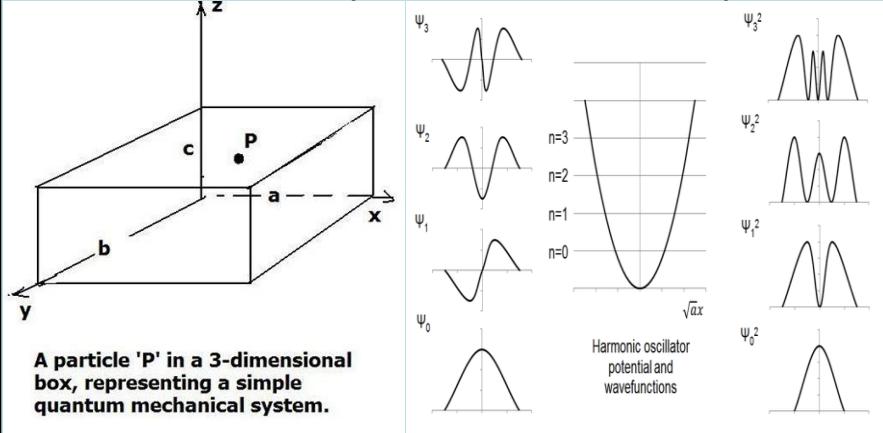


Cycles per Second

Volts 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

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

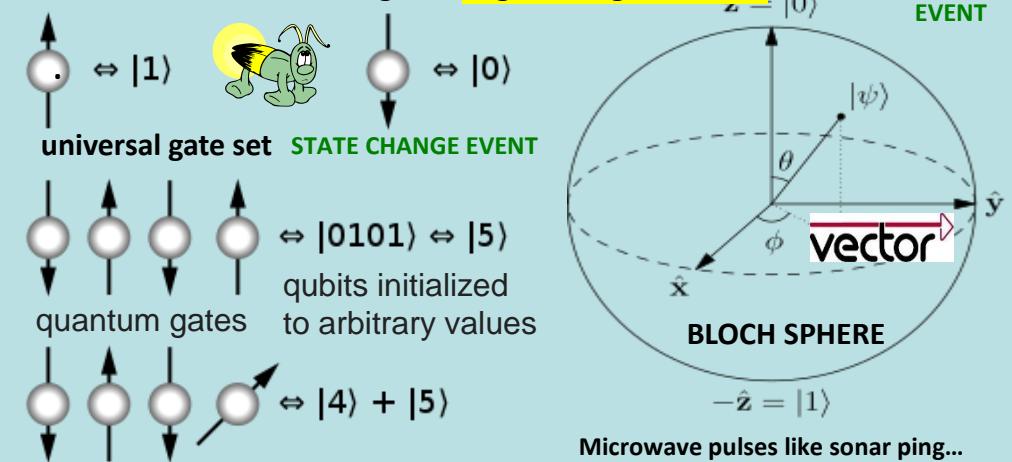
Vertical polarization vectors from a known point 0 null Sonar Hop meme



particle representation / samples

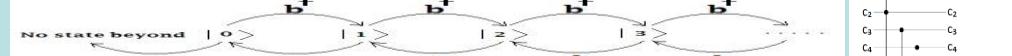


Instead of each bit having two potential states — on or off — a quantum bit or qubit has three. It can be on, off, or both, and you only know which one it is once you look at it. How can you tell if a bit of data is correct if looking at it might change its state?



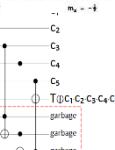
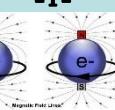
qubits can be in a superposition of all the classically allowed states

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)

STATE CHANGE EVENT



The Hopf Fibration

Edmund Harriss

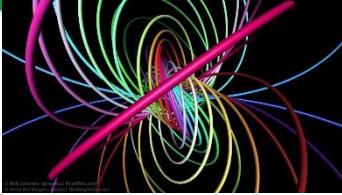
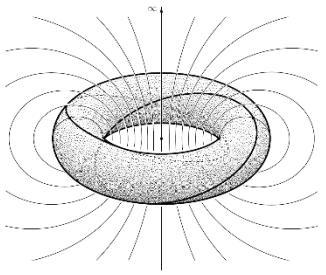
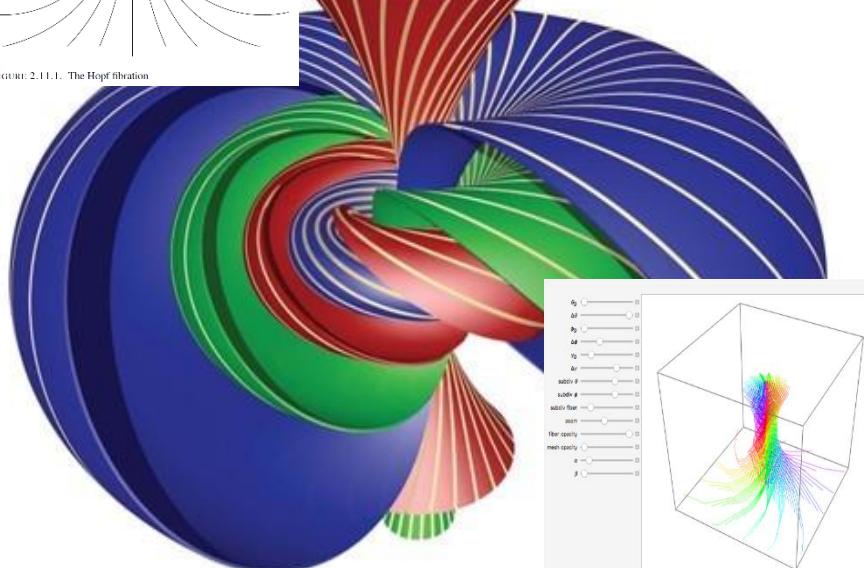
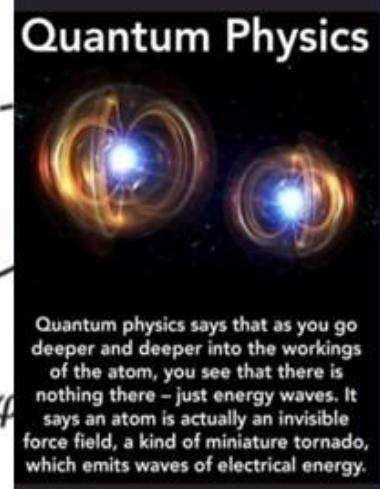
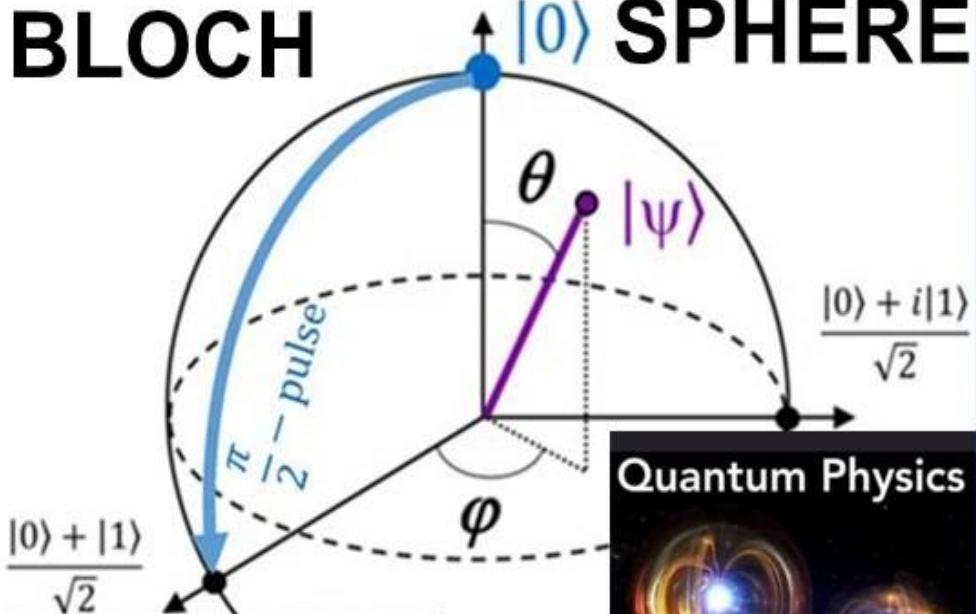


FIGURE 2.11.1. The Hopf fibration



BLOCH SPHERE



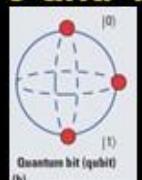
Hopf Fibration / #Bloch sphere

"the most important object in the universe"

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

Paul Revere linear - sequential hop count meme

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





THE 1919 WORLD SERIES

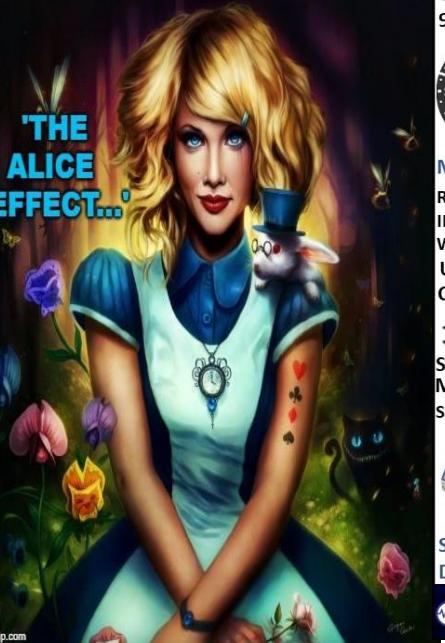
What Really Happened?

William A. Cook



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

Application Developers Alliance

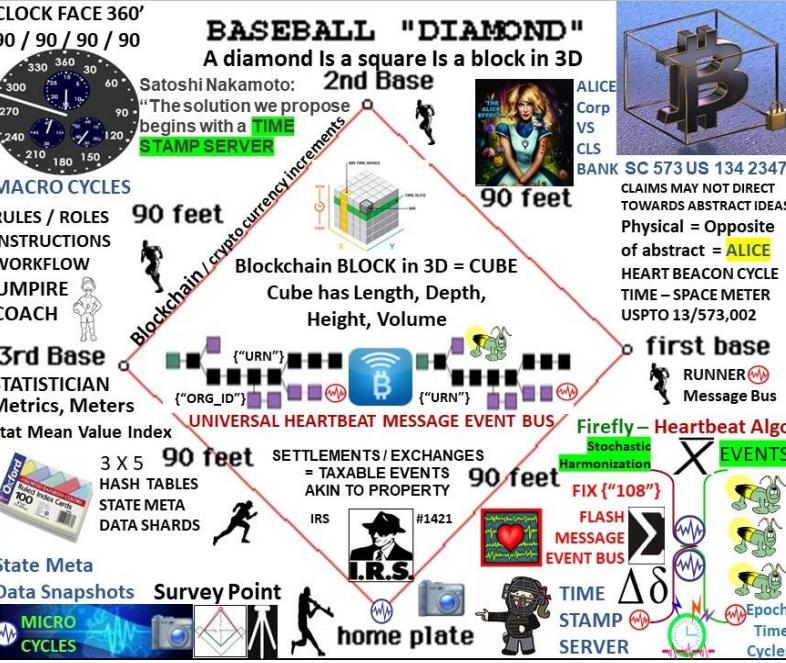


Alice Corp. v. CLS Bank International, 573 U.S. 134 S. Ct. 2347 (2014)
RULING: “claims may not direct towards abstract ideas”



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





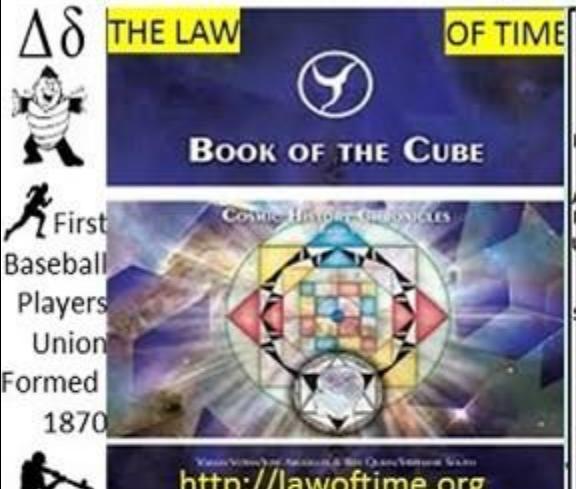
USPTO APPLICATION 13/573 002

The Heart Beacon Cycle Time-Space Meter

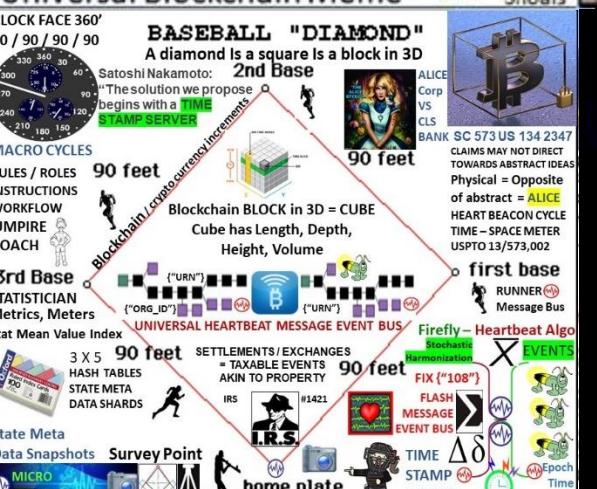
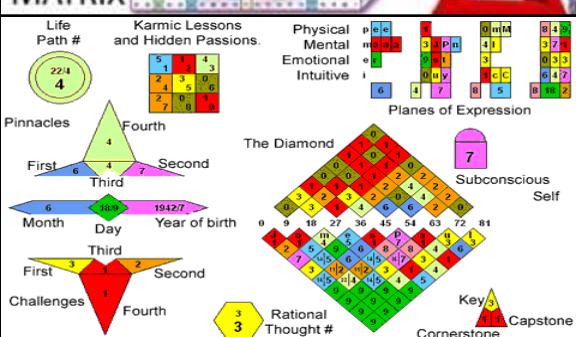
Main Embodiment: Baseball Diamond = block in 3D = cube

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

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



The image is a collage of various concepts. At the top left is a black stick figure. Next to it is a red heart icon on a green grid background. Below these are the labels "21 x 21" and "441". To the right of the 441 label is a large 3D cube divided into a 21x21 grid of smaller cubes, each containing a different color or pattern. Below the 21x21 label is the text "TIME CUBE". Below the 441 label is the text "MATRIX". To the right of the cube is a large red pyramid labeled "Pyramid In 3D = Tetrahedron". Above the pyramid is the text "Inverted Fits into cube". The background of the collage features several astronomical images of galaxies and nebulae.



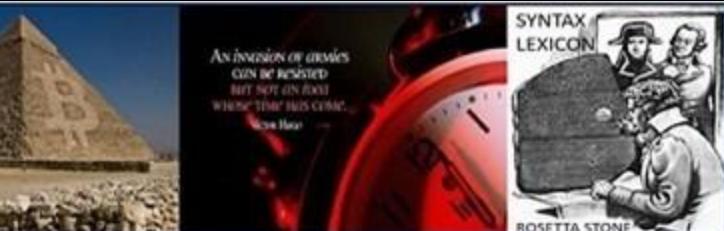
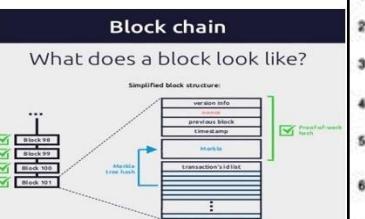
atoshi Bitcoin Blockchain
ime Stamp Server

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.



```

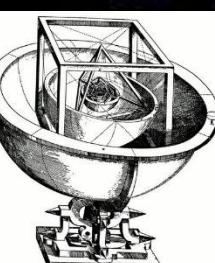
graph LR
    subgraph TS [Timestamp Server]
        direction TB
        TS_in[Blocks] --> TS_out[Hash]
    end
    TS_in --- TS_out
  
```



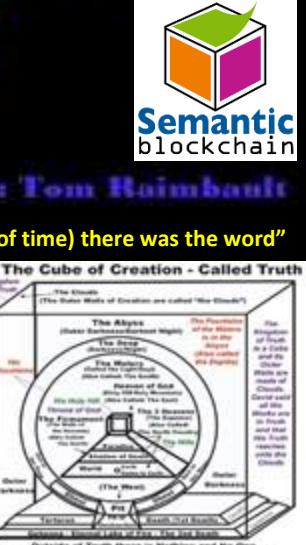
Metatron's Cube and the Platonic Solids

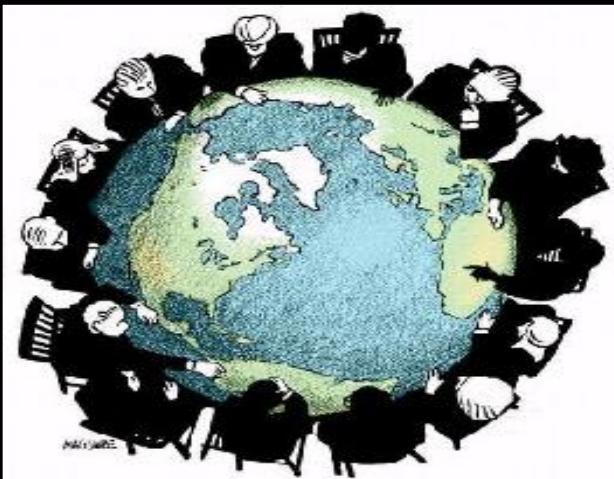


“In the beginning (of time) there was the word”



GENESIS OF ALL FORM





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



DAO: Distributed Autonomous Organization

RAND term circa 2000 / The TAO OF THE DAO

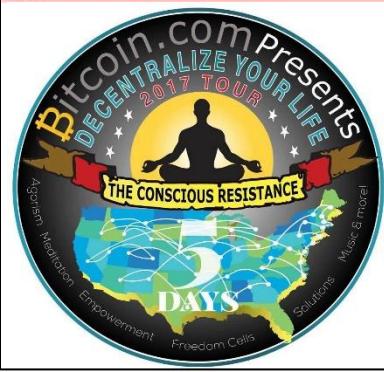
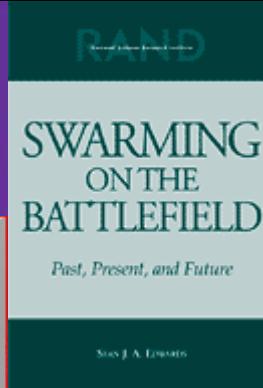
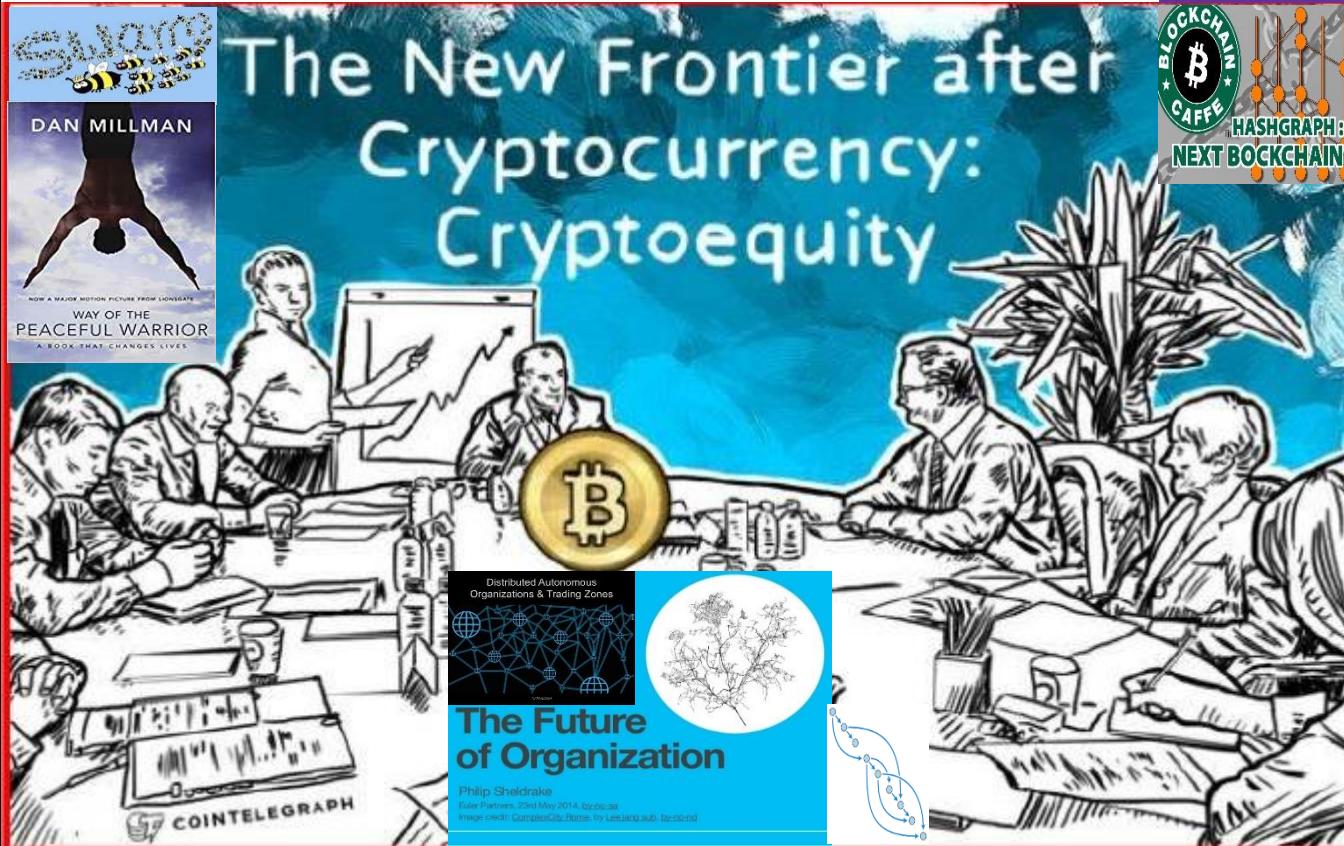
SWARMING AND THE FUTURE OF CONFLICT



RAND

RAND
Monograph
Report

THE
ADVENT
Of NETWAR



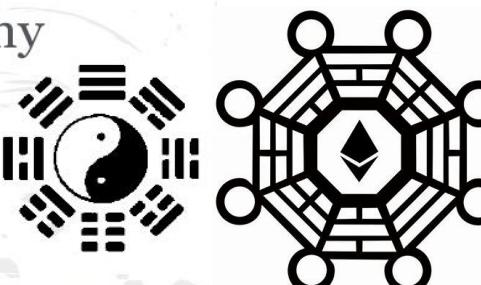
<http://cointelegraph.com/news/112077/the-new-frontier-after-cryptocurrency-cryptoequity>

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





