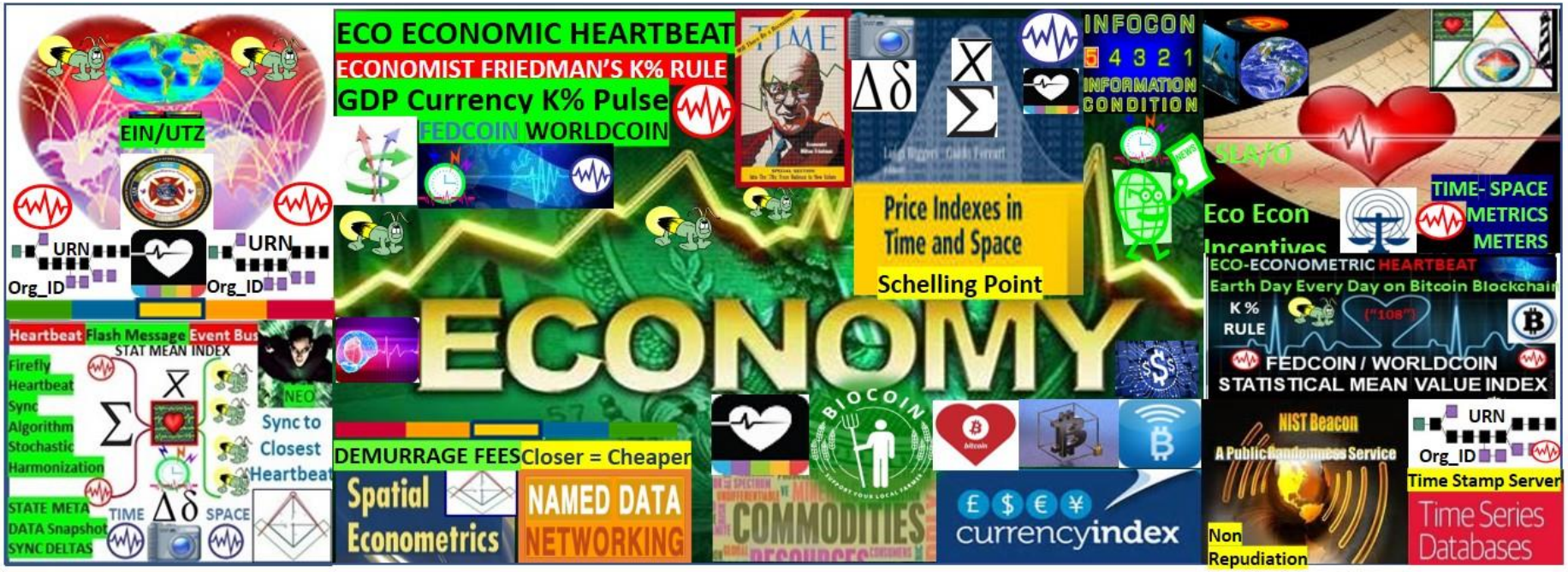

TIME – SPACE METER
ECO ECONOMIC INCENTIVES
ECO ECONOMIC HEARTBEAT
ECONOMIST FRIEDMAN'S K% RULE
GDP Currency K% Pulse
FEDCOIN WORLDCOIN
INFOCON 4 3 2 1
INFORMATION CONDITION
EIN/UTZ
ECONOMY
DEMURRAGE FEES
Closer = Cheaper
Spatial Econometrics
NAMED DATA NETWORKING
COMMODITIES
currencyindex
Eco Econ Incentives
TIME- SPACE METRICS METERS
ECO-ECONOMETRIC HEARTBEAT
Earth Day Every Day on Bitcoin Blockchain
K% RULE
FEDCOIN / WORLDCOIN STATISTICAL MEAN VALUE INDEX
HOW TO RULE THE WORLD
ADAPTIVE PROCEDURAL TEMPLATE CHECKLIST
NET
NEO
Enabled Ops
ROSETTA STONE
SYNTAX
LEXICON
STRUCTURED DATA SETS
FMN
?ETI INSTITUTE
Admiral
Amazing
Grace
OPSCODES
1st Compiler
300 + Use Case Templates
Structured Data
SIOP
Programmable $$$ / Economy
Stat Mean Value Index
SHELLING POINT
Price Indexes in Time and Space
Algorithmic Regulation
COHERENCE
Heart Math
CONSENSUS
BLOCKCHAIN CONSENSUS ALGORITHMS
Earth Intelligence Net
Structured DATA
K00.99
OPSCODE
BREVITY CODES
CSETI
FFIRNS
FFUDNS
SYMBOLS ARE THE UNIVERSAL LANGUAGE
HEART BEACON
Sculpture
K % Rule
Beacon Communities
Vernetzte Operationsführung
OOTW: Operations Other Than War
JAEGER
FIREFLY
HEARTBEAT
ALGORITHM
EVENT / ALERT Flash Heartbeat Message Bus
Federation Gateway
BLOCKTIME ARBITRAGE
TERRA TRC
OFF SHORE OUTER BANKS
KAIJU
Spatial Econometrics
TOKEN ECONOMICS
EVENT / ALERT BUS
MONEYBALL ECONOMICS
UTZ TIME ZONE SYNC PULSE
BFI
THE WORLD GAME
ANNEX
SIGNALS & TELEMETRY
r. buckminster fuller
"Build a new model
operating manual
for
spaceship earth

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




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


SIGNALS & Telemetry ANNEX K
the world famous inventor of the geodesic dome
r. buckminster fuller
operating manual for spaceship earth
Buckminster Fuller 1968 Operating Manual for Spaceship Earth
"we can make all of humanity successful through science's world-engulfing industrial evolution. We have the tools"
"The Dymaxion Map reveals a One-World Island in a One-World Ocean" which helps us to view the world as one interdependent system [of systems] of relationships. This is what is most fundamentally at HEART when we speak of Spaceship Earth "The planet is a [system of ] system (s)"
BLOCKTIME ARBITRAGE
TERRA TRC
¥EN
SPACESHIP EARTH: comprehensive planetary planning describing new strategies intended to enable all of humanity to live with freedom, comfort and dignity, without negatively impacting the earth's ecosystem's regenerative ability
INFOCON
5 4 3 2 1
INFORMATION CONDITION
GDP INDEX ECONOMY
K % RULE
{"108"}
INCENTIVIZE SUSTAINABLE
Eco-Econometrics
The World Game
TERRACYCLE
SLA / O
Algorithmic Regulation
Stat Mean Value Index
Crypto Currency
Micro Payments
Demurrage Fees
The Book Spaceship Earth relates Earth to a spaceship flying through space. Our spaceship has a finite amount of resources and cannot be resupplied.
The HEART BEACON CYCLE SIGNALING, TELEMETRY ANNEX K OPORD
BUCKMINSTER FULLER'S OPERATING MANUAL for SPACESHIP EARTH
FIREFLY SYNC PULSE MATCH TO CLOSEST HEARTBEAT CYCLE
Spatial Econometrics
UNUSED RESOURCES
NEURAL NET A.I. WORLD COMPUTER
UNIVERSAL EVENT / ALERT Message BUS
Trade w Earth ???
UNMET NEEDS
COMMODITIES
NIST Beacon
A Public Randomness Service
NON_ REPUDIATION
{"URN"}
{"Org_ID"}
vector
ENERGY / DATA PULSE
ENERGY TOKENS
ENERGY ATTENUATES
CLOSER = CHEAPER
CLOSER= LESS FUEL
< Co2 emissions
TESLA
Firefly Heartbeat Algorithm
BIOCOIN
START
Our Spaceship Earth
one island in one ocean ... from space
TTL
STOP
Heartbeat Flash Messages


THE GREAT RESET
BY KLAUS SCHWAB
PLUS: THE DUKE AND DUCHESS OF SUSSEX • BJARKE INGELS • YO-YO MA
JANE FRASER • YURIKO KOIKE • NGOZI OKONJO-IWEALA & MORE
TIME
INSIDE: ELECTION 2020: AMERICA'S TEST


ONE EARTH
ONE PEOPLE
ONE TIME
QFS
QUANTUM FINANCIAL SYSTEM


COMING WORLD CHANGES: LIFE IN THE COVID GLOBAL ORDER
Special Issue
NEW DAWN
VOL.14 NO.5
THE GREAT RESET
What You Need To Know
AUSTRALIA & NEW ZEALAND
Test Ground for Techno-Fascism
COVID-19
Hard Road to a New World Order
PANDEMIC BIOPOWER
Keep Your Personal Power in an Oppressive World
THE RUSH TO VACCINATE
Forced Inoculations & the Dangers of Profit-Driven Medicine
Shape Yourself into the Perfect Weapon Against the Empire
STORMING FORT ORTHODOX
Strategies to Break Through the Bubble
$8.95


EIN/UTZ
URN
Org_ID
URN
Org_ID
ECO ECONOMIC HEARTBEAT
ECONOMIST FRIEDMAN'S K% RULE
GDP Currency K% Pulse
FEDCOIN WORLDCOIN
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Price Indexes in Time and Space
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STATISTICAL MEAN VALUE INDEX
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Flash Message
Event Bus
STAT MEAN INDEX
Firefly
Heartbeat
Sync
Algorithm
Stochastic
Harmonization
Sync to Closest Heartbeat
STATE META DATA Snapshot SYNC DELTAS
TIME
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DEMURRAGE FEES
Closer = Cheaper
Spatial Econometrics
NAMED DATA NETWORKING
BIOCOIN
COMMODITIES
currencyindex
HIST Beacon
A Public Randomness Service
Non Repudiation
URN
Org_ID
Time Stamp Serve
Time Series Databases

# Humanitarian Assistance Networked Donor System

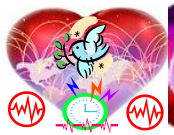
H.A.N.D.S: “Based on the need to speed up the processes of influencing an adversary, new concepts result in the adaptation of military doctrine, organization, training, material, infrastructure, interagency interaction, leadership, personnel and facilities”… German Bundeswehr : concepts of "Network Centric Warfare" in the United States of America, "Network Enabled Operations " in Great Britain or "Vernetzte Operationsführung" in Germany

JBFSA — “PAINT IT A DIFFERENT COLOR” — Joint Blue Force Situational Awareness

Federation Gateway

FMN — Federated Mission Networking — Federate * Share * Win


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



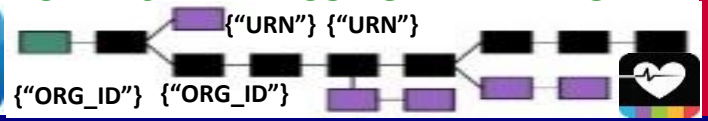

TERRACYCLE

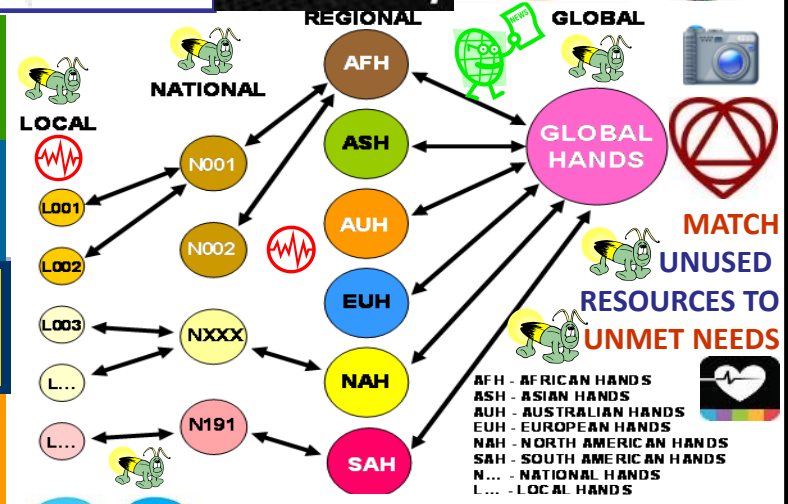
300 +TEMPLATE FORMS STUCTURED DATA EXCHANGE

https://neo.org

NEO smart economy

DISTRIBUTED SMART ECONOMY NETWORK



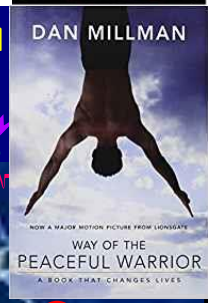

WORLDBEYONDWAR.org a global movement to end all wars

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

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




OPERATIONS OTHER THAN WAR




OFF SHORE OUTER BANKS

# Beacon Communities

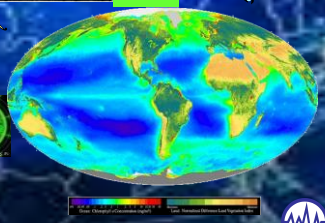
Vernetzte Operationsführung

Proximity Beacons

JAEGERS

BIOCOIN — SUPPORT YOUR LOCAL FARMER

Closer < $$$ < FUEL

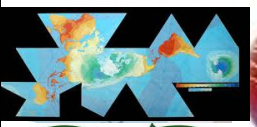


FIREFLY HEARTBEAT ALGORITHM

EVENT / ALERT Flash Heartbeat Message Bus

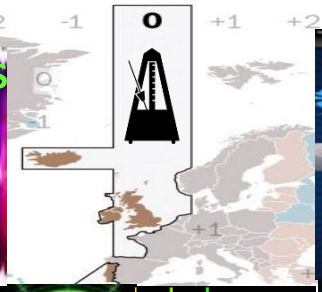
The current standard time common throughout the world is based on a 24-hour clock, with zones that are are either 12 hours ahead or behind **Coordinated Universal Time (UTC)**. However, these time zones are decided upon by individual governments, without overall coordination and can even extend fourteen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

STOCHASTIC HARMONIZATION / PROCESS BY PRECEDENCE



FIREFLY EVENTS

NEURAL NET




TERRACYCLE

SPACESHIP EARTH

{"URN"}

{"Org_ID"}

+14 NDN

Int'l Date Line

<Interest>

<Distance>

vector

HEARTBEAT SYNC DELTAS

% REAL GDP

{"108"}

ALGORITHMIC REGULATION

TIME – SPACE SYNC PULSE




Int'l Date Line

Spatial Econometrics

FRIEDMAN's K% RULE % GDP

FIX

{"108"}

Firefly Heart Beat Algo

EVENT BUS

Firefly inspired Heartbeat Synchronization nodes strive to sync in a distributed system. Nodes generate periodic "heartbeat" events approximately at the same time. There is no requirement to sync during a cycle length In real time as long as the time cycle length is bounded & all nodes agree on it eventually

Firefly Event Flash Messages

Geo-Spatial Temporal Beacon

On /Off Shore

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

Heartbeat Date Time Stamps Sync Pulse

Process transactions by precedence

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

PROXIMITY BEACONS

BLOCKCHAIN PARSING

STATE META DATA SNAPSHOTS

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

Attribute Series

TIME Function

Geo Spatial Temporal Series

Nicotib

ERLANG

BEACON BROADCAST

MICRO- CYCLES

QUANTUM RANDOM #

Arrival Rate

Queue Forms

Limited Resource

Service Rate

RFID

Time Series

Value

Time

Delay

Utilization

Service Time ($T_s$)

Erlang / Equilibrium Time – Sync Algorithms

ROLES RULES

O'REILLY TIME EQUATIONS

Time Series Databases

ATOMIC CLOCK

NIST Beacon

A Public Randomness Service

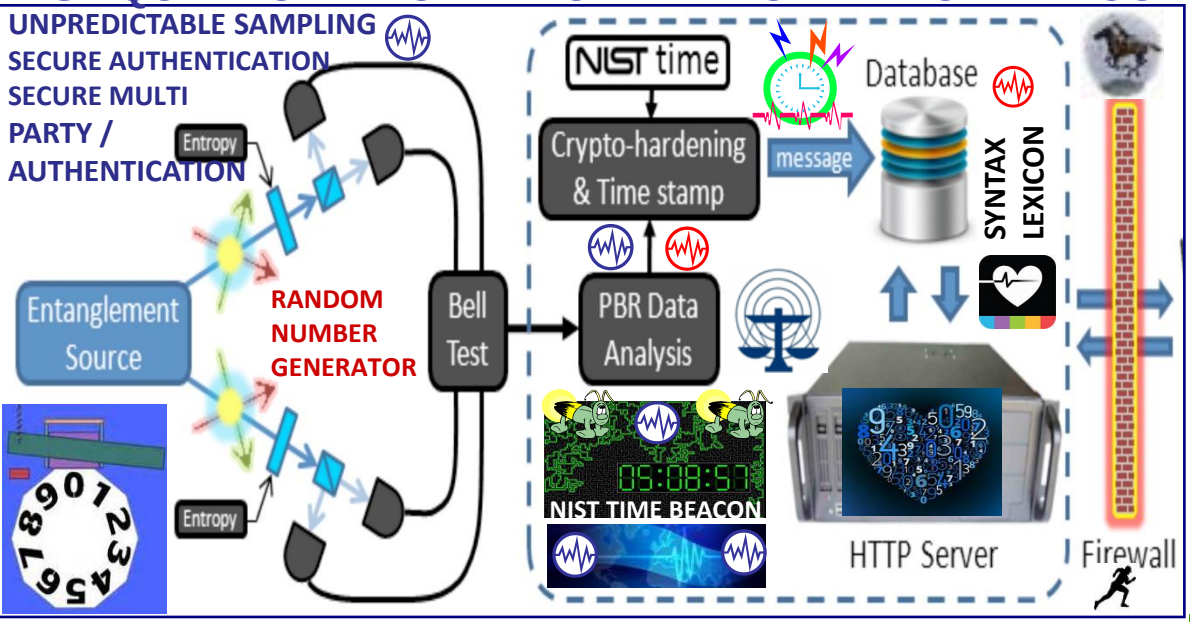
NON_ REPUDIATION

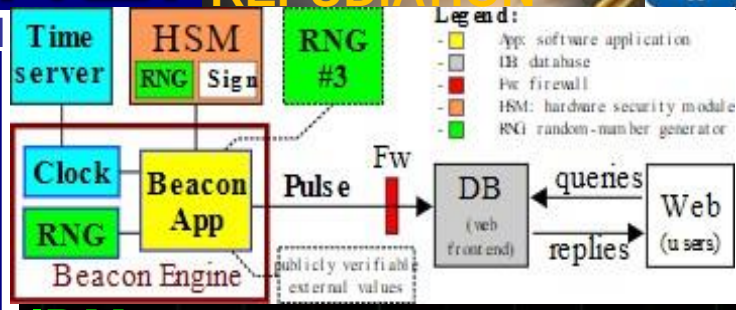
ERLANG CALENDAR: Calculate Wait Times Time Stamp to Date Time Conversion

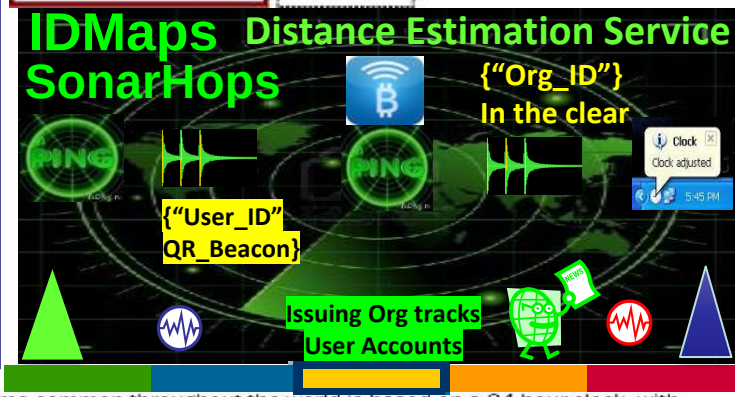
NIST RANDOMNESS BEACON: broadcast full-entropy bit-strings in blocks of 512 bits every 60 seconds. Each value is time-stamped, signed, & includes hash of previous value to chain sequence of values together. This prevents all, even the source, from retroactively changing an output packet without being 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




USPTO 13,573,002 Heart Beacon Cycle Geo-spatial, temporal Intensity Metrics and Time - Space Meter uses PHYSICAL Memes / Metaphors

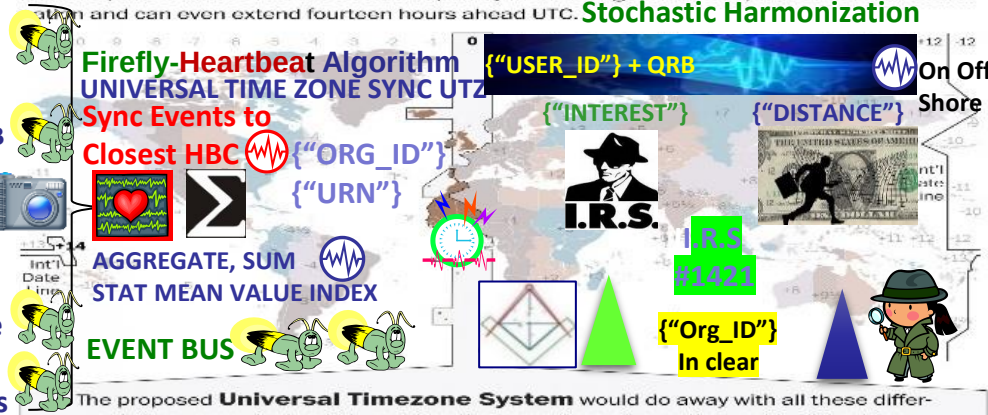

NDN
</Interest>
</Distance>

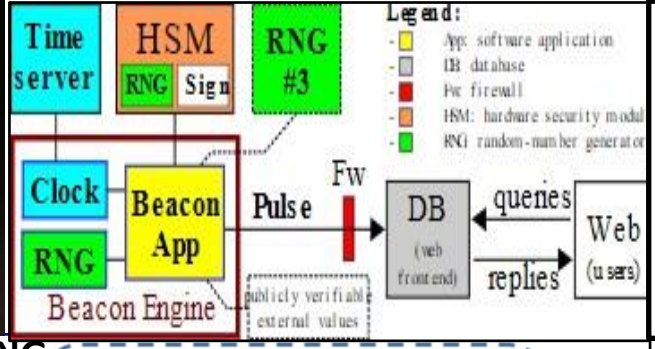
SURVEY METHODs
+ TRIANGULATION
Euclidian Geometry

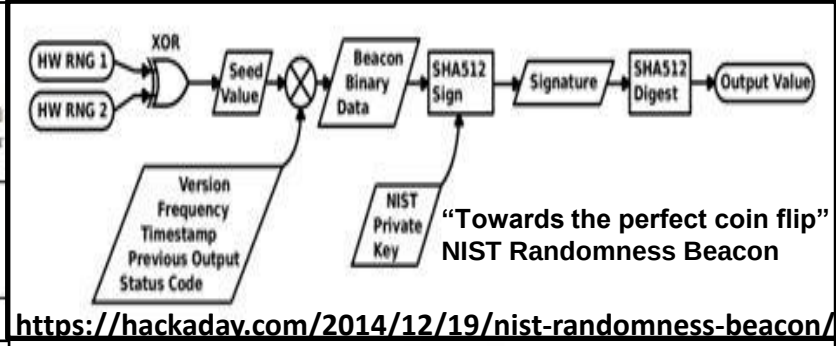
Geodesic System Routing Info Base RIB
ACCOUNT BELONGS TO </Org_ID>
RESOURCE TYPE: <URN><URN><URN>
DEVICE / SENSORS <UUID><UUID>
Higher-level services collect distance data to build virtual distance map of Internet & estimates distance between any IP address pair


State Snap Shots

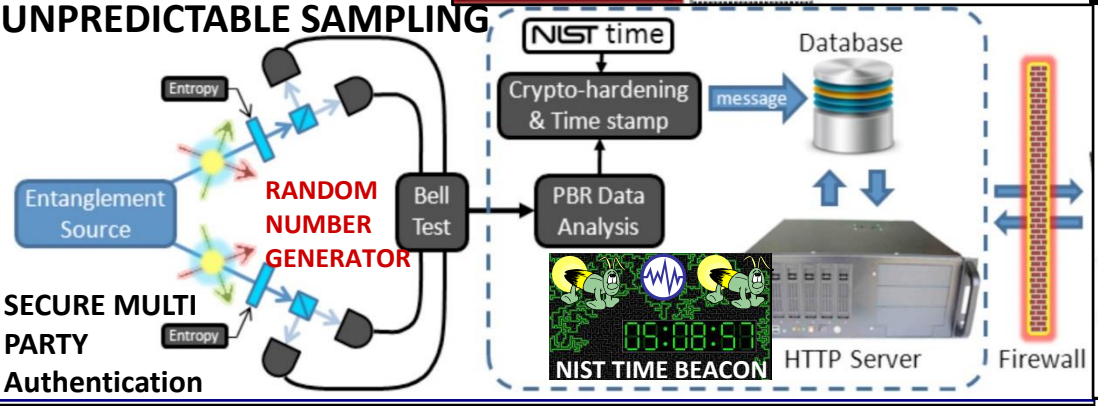
The current standard time common throughout the world is based on a 24-hour clock, with zones that are are either 12 hours ahead or behind Coordinated Universal Time (UTC). However, these time zones are decided upon by individual governments, without overall coordination and can even extend fourteen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




**UNPREDICTABLE SAMPLING**





## NIST Interoperable Randomness Beacon

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

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

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

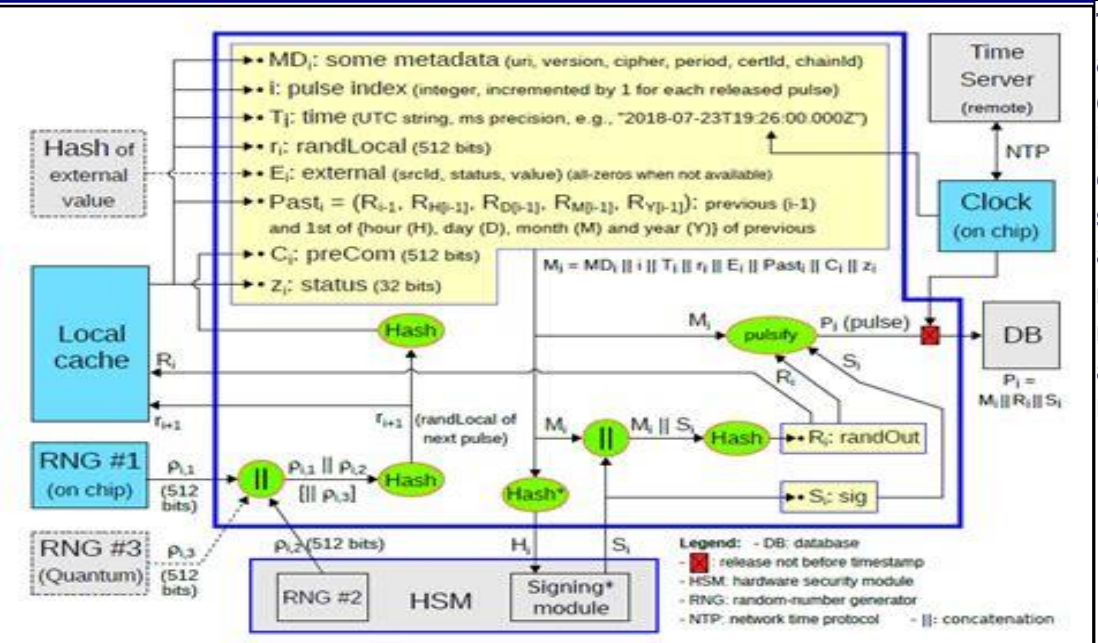
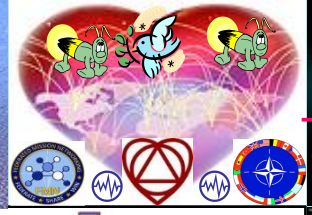


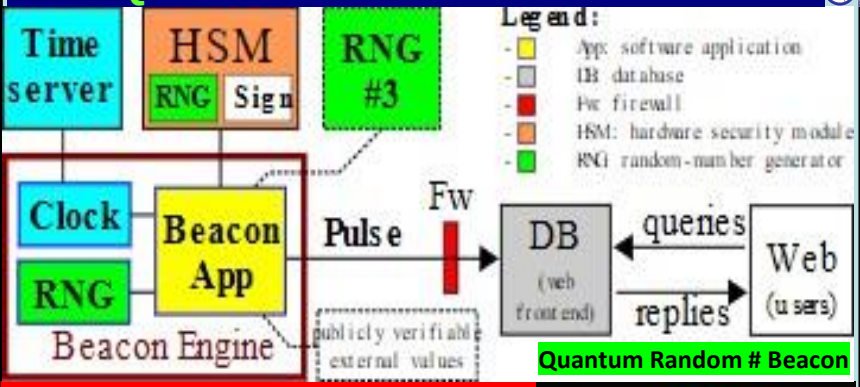

**Figure 2.** Illustration of the generation of the $i^{th}$ pulse by a Beacon App (2.0)

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

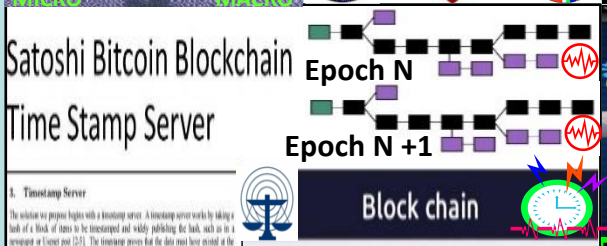
Building Blocks:
Programmable
Economy / $$$


## NIST Quantum Random Number Beacon




Quantum Random # Beacon





Firefly - Heartbeat Sync Algorithm

Heartbeat Event Message Bus

UTZ stochastic harmonization

"The external environment could update resources at random…
One solution is a heartbeat: defining a default lease duration delaying updates until the next cycle"



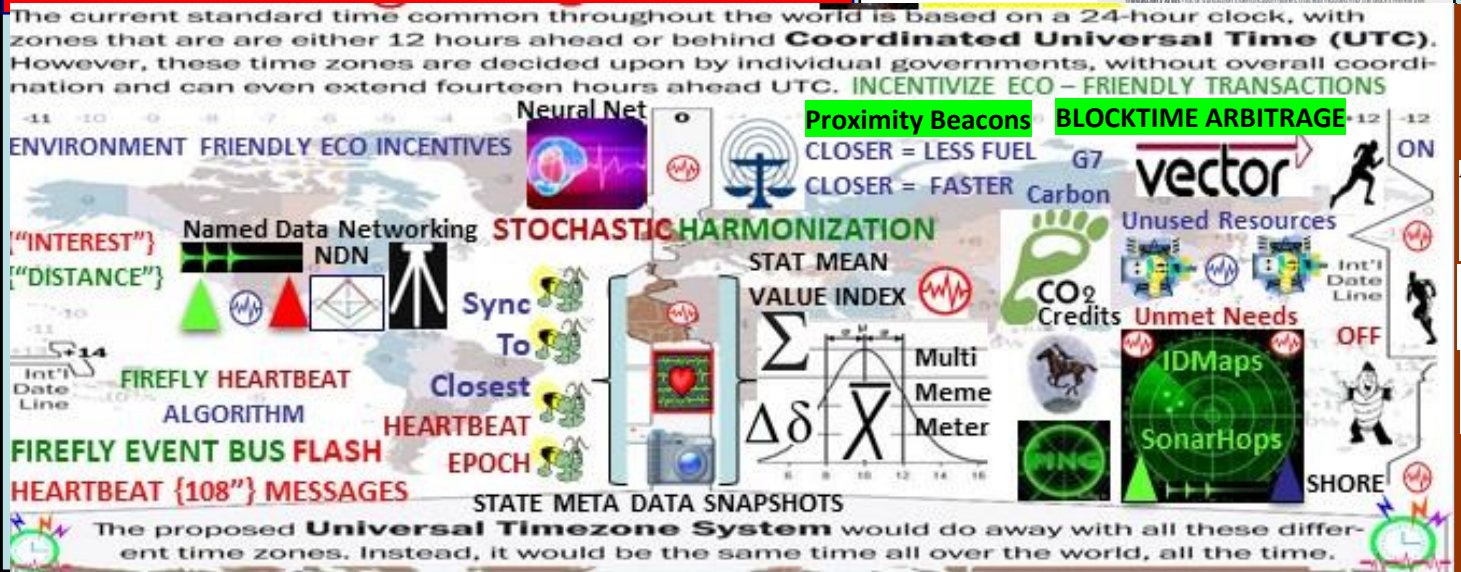
Epoch Time Cycles

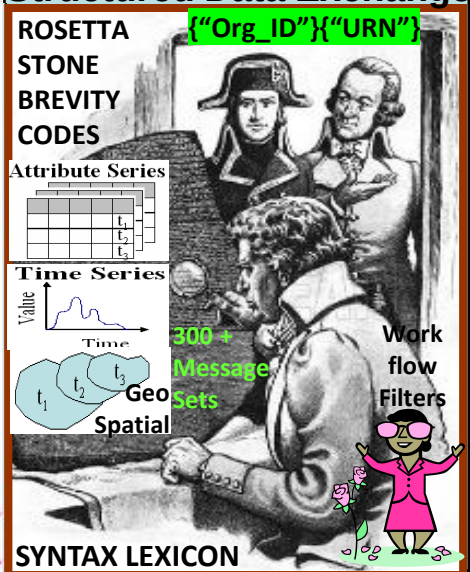
E0 E1 E2 E3…

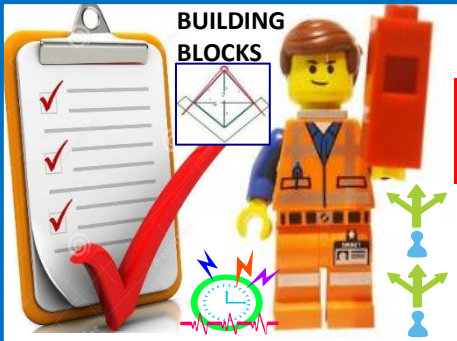
Genesis Epoch E0 | E1 | E2 | E…n

QubitCoin Interval: Every 30 Seconds

Structured Data Exchange






# HEART BEACON CYCLE

TERRACYCLE

Series of systemic actions to achieve goals ex: form, maintain ECO sustainable Trade Federations i.e., closer = < fuel, $$

PROCEDURAL TEMPLATE

Checklist Items refers to detailed treatises

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

Federation Gateway

Off Site connect

PROXIMITY BEACONS

TESLA

Cloudcenter

Sync to Closest Heartbeat

Firefly-Heartbeat Algorithm

{"EVENT_BUS"}


A continuous action, operation, or series of changes, sync deltas i.e., price indexes

Universal Event Bus Algorithm
Process Events by Precedence

Flash Heartbeat
Neural Net messages

Sync geo-spatial temporal Eco econometrics across time-space

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

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

CHECKLIST: TRADE FEDERATION ECONOMIC FRAMEWORK EX:

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

BLOCKTIME ARBITRAGE
Veritaseum
Tagged Bitcoins
TRC

Bitcoin Army

Erlang Time equations

MONEYBALL ECONOMICS

NAMED DATA NETWORKING

{"Interest"}
{"Distance"}

{"Org_ID"} {"URN"} {"URN"}
Multi-Meme Multi-Meter

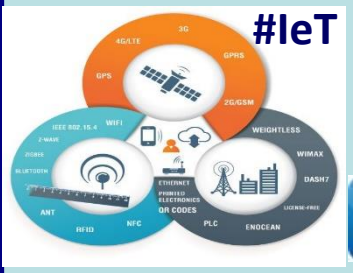
Spatial Econometrics

ERLANG

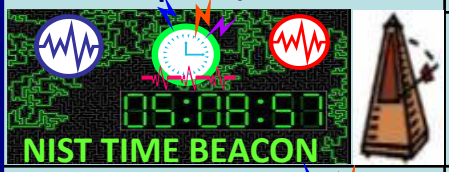
| | |
|---|---|
| Interface Name | HEARTBEAT Administration Interface [SCOP] |
| Documentation URL | http://scop.sourceforge.net/<br>http://linuxvirtualserver.org/software/index.html |


## API Information

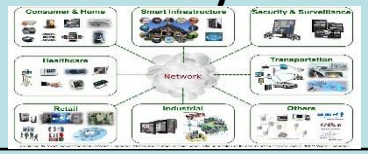
#IeT #Big_Data



Programmable Money
World Computer / Blockchain




## Functionality Areas





Cloud Interface Management configuration, start, stop cloud services, edit configuration (heartbeat messages)

## API Operation Count


Web service access type
Network Effects / A.I.

Web application, front end to [network, device, system, blockchain] heartbeat]

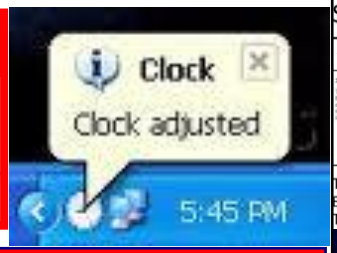
## LANGUAGE / PLATFORM BINDINGS

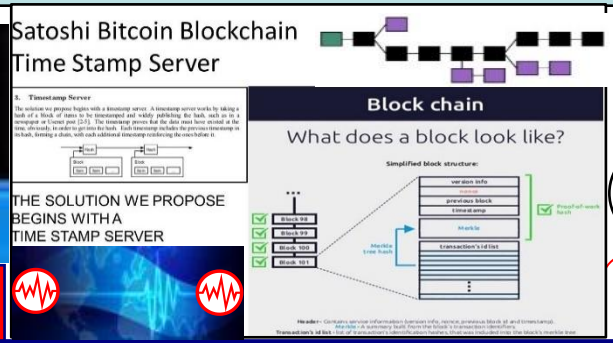
PHP Java Erlang…

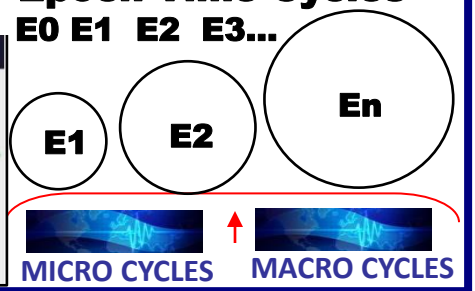

## Interface Characteristics

SCOP is a web application, PHP based front-end to heartbeat,
IP Virtual Server ipvs and ldirectord [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.

"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

**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?**

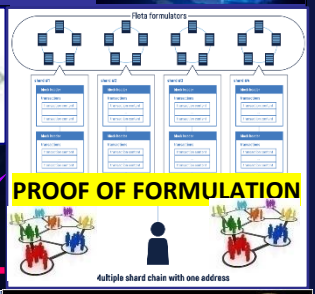
SIOP

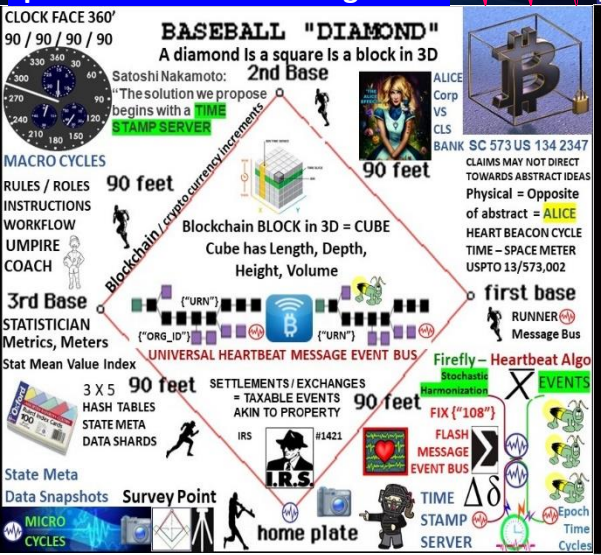
**Blockchain Consensus Algorithms & Mechanisms**

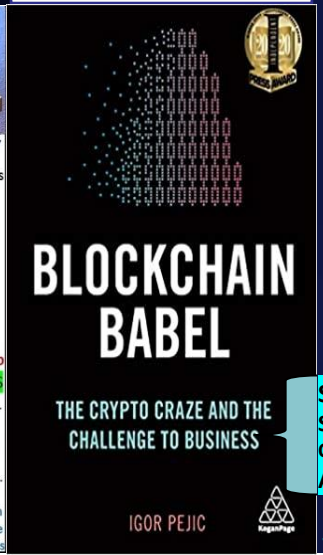
In the world of blockchain consensus algorithms, consensus is the **HEART OF THE BLOCKCHAIN NETWORK**. It's main purpose is to achieve agreement on transactions among a distributed system (s)

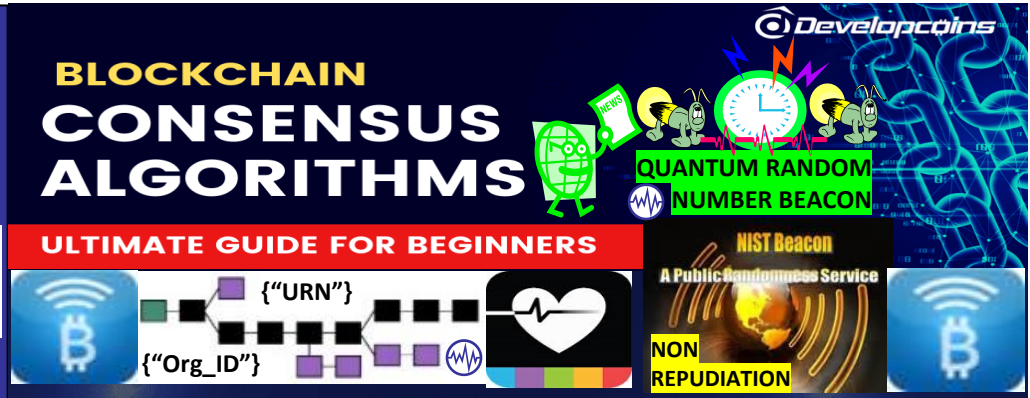
**Proof of Formulation:** *PoF:* generation / propagation of blocks using a previously agreed sequence between participants of the generation of blocks, formed by two groups: a generator group and/or Formulator and a group of synchronization.

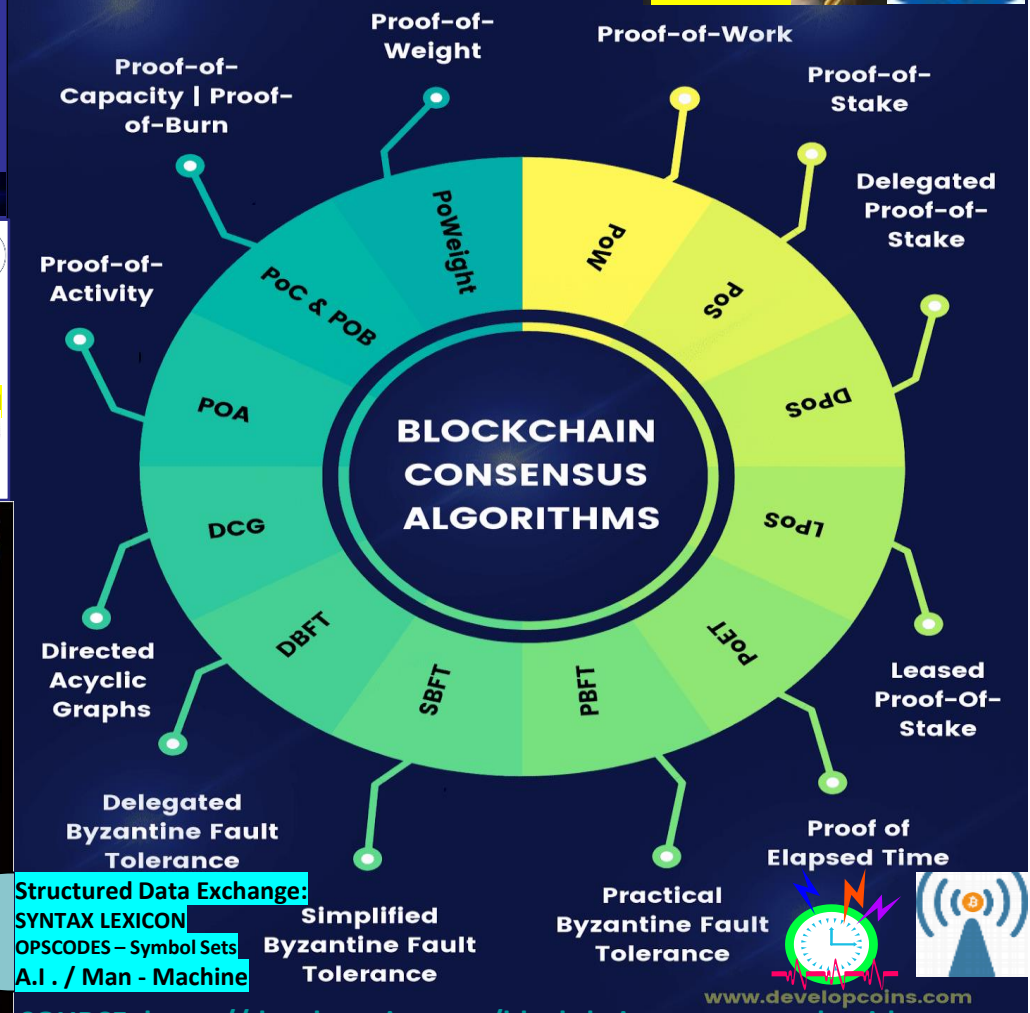

**Space-Time Consensus Algorithm**



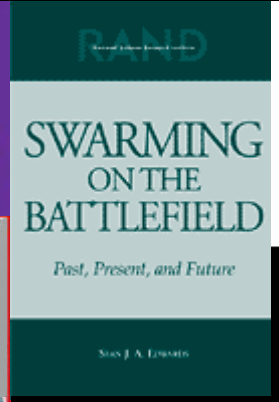




SOURCE: https://developcoins.com/blockchain-consensus-algorithms

# DAO: Distributed Autonomous Organization

RAND term circa 2000 / The TAO OF THE DAO

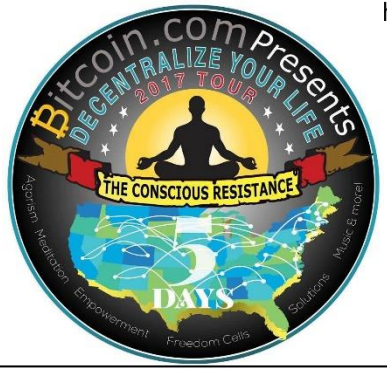
SWARMING AND THE FUTURE OF CONFLICT






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



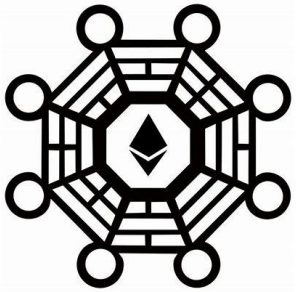

## Taoism Philosophy

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 the principle of harmony and change.)



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


# Net of $$$ formed with:
# EPOCH TIME CYCLES
# {"Syntax"} Instructions

"In the beginning" "The Word"

"Bitcoin is a LANGUAGE"
DIGINOMICS

"Bitcoin's Value is TIME itself"

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

WIRED

"BITCOIN MAKES MONEY PROGRAMMABLE. MONEY IS SIMPLY DATA"

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

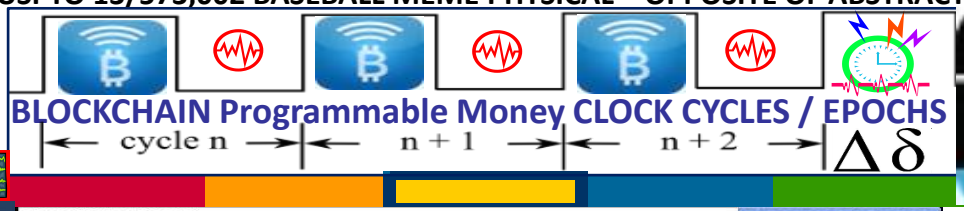
BITCOIN BLOCKCHAIN BLOCKS, AGENTS, MOTES, BOTS, PACKETS, FRAMES, HEARTBEAT, PINGS, HOPS, BEACONS ARE *METAPHORS /MEMES*

ALICE CORP VS CLS BANK
"claims may not be directed towards an abstract idea"
US SC 573 US 134 2347

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

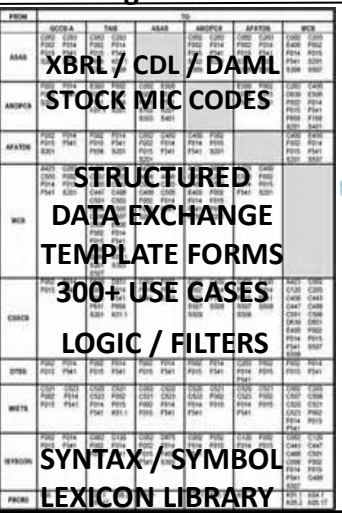
"A blockchain is a consensus-based system. It only works if all nodes reach an identical state"

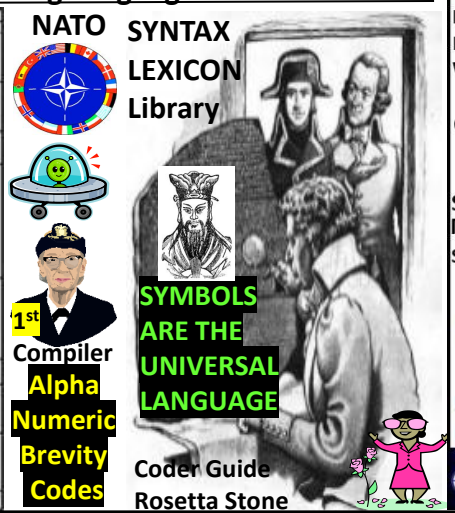
"A smart contract is a piece of code stored on a blockchain, triggered by blockchain transaction reads / writes data in the blockchain's Dbase"

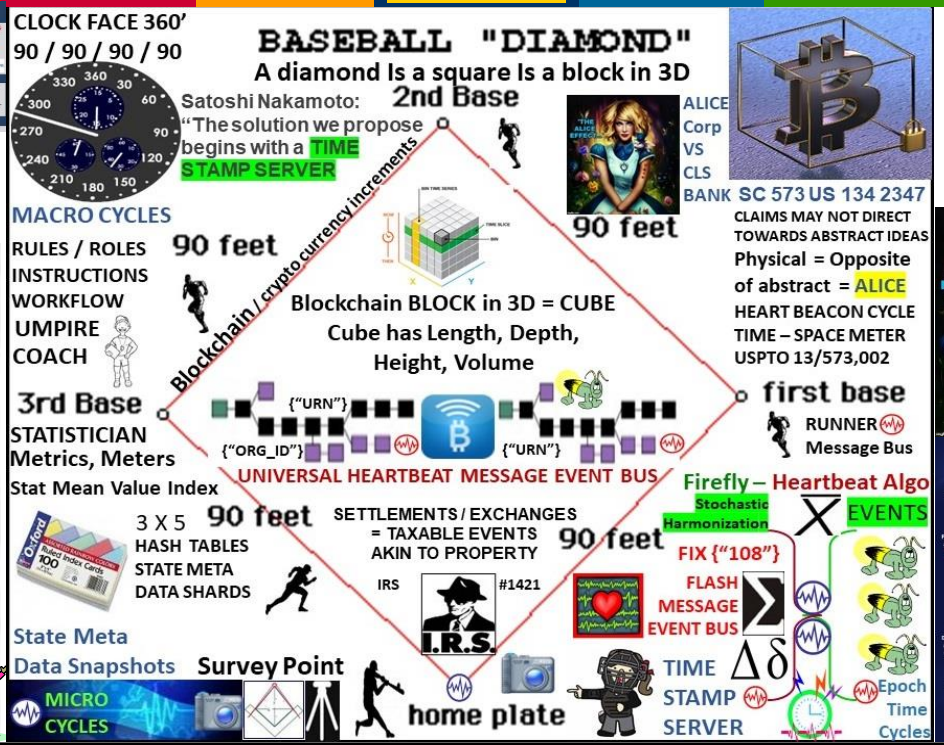


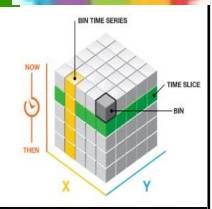


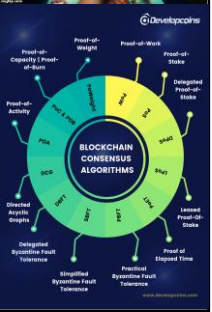
"Blockchain consortiums are working less on distributed ledgers and more on Contract Description Languages CDL, DAML Digital Asset Modeling Language" Coindesk Article



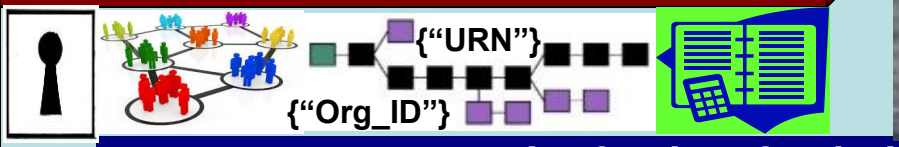





DISTRIBUTED AUTONOMOUS ORGANIZATIONS DAO

# Heart Beacon Cycle

## FEDERATE / TRADE FEDERATIONS





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

each retaining control of internal affairs

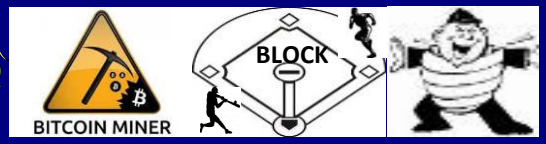

{"GLOBAL"}
{"SHARED"}
{"DOMAIN"}
{"COMMUNITY"}
{"PRIVATE"}

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

{"GROUP ID"}

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

Bitcoin Mining Pools
MEME / METAPHOR MEDIATION




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

Uniform_Resource_Name

IeT DEVICE / PLATFORM
IoT SENSOR DEVICE

{"Asset_Type"}

FIREFLY FLASH
HEARTBEAT MESSAGES
</RESOURCE> {"URN"}
{"Asset_Class"} </URN>


EVENT BUS
Signaling, Telemetry

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

STOCK EXCHANGE
MIC MARKET IDENTIFIER
CODES / BREVITY CODES

{"DUNS #"}{"Org_ID"}
QR CODE
{"URN"{"URN"}{"URN"}

Heartbeat Snaps
MICRO-CYCLES

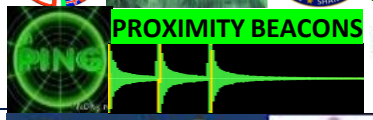


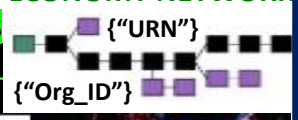


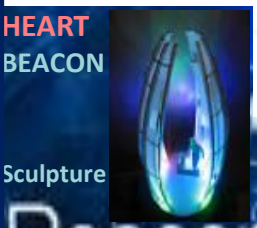
DAO TRADE FEDERATIONS USE COMMON COMPONENTS, PROCESSES, METHODS, METRICS, METERS SIGNALING TELEMETRY SCHEDULE IN SMART CONTRACTS, SERVICE LEVEL AGREEMENTS / OPERATIONS SLA/O

NEO

DISTRIBUTED SMART ECONOMY NETWORK






Federation Gateway



Vernetzte Operationsführung

OOTW: Operations Other Than War

JAEGER

FIREFLY

HEARTBEAT

ALGORITHM


OFF SHORE OUTER BANKS

KAIJU


# Firefly - Heartbeat Algo

University of Bologna Italy / Hungary

TERRACYCLE

## ECO ECONOMIC HEARTBEAT

("108")

K%

ECONOMIC MACRO CYCLES

TIME-SPACE SYNC

K% GDP ECONOMIC PULSE

FEDCOIN WORLDCOIN

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

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

Temple of Man

LUXOR EGYPT


NEURAL NET EMULATION

BLOCKCHAIN PARSING Erlang TIME EQUATIONS

{"Org_ID"}

{"URN"}

TERRA TRC

COMMODITY PRICE INDEX

LEAD ECONOMIC INDICATORS


FRIEDMAN's K% RULE

STAT MEAN VALUE INDEX

SCHELLING POINT TRUTH

Price Indexes in Time and Space

Methods and Practice

ALGORITHMIC REGULATION

TOKEN ECONOMICS

ETF

COMMODITIES

NIST Beacon
A Public Randomness Service

NON REPUDIATION

Crypto Currency TIME STAMP SERVER / SERVICE

currencyindex

**FIREFLY inspired Heartbeat Sync Algo**

PRECEDENCE PROCESSING | UTZ SYNC PULSE | SYNC DELTAS

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

UTZ TIME ZONE SYNC

SYNC TO CLOSEST HEARTBEAT

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

HEARTBEAT EVENT FLASH MESSAGE BUS

UTZ STOCHASTIC HARMONIZATION

FIX ("108") {"Org_ID"}

MFID EVENTS

Universal Metrics / Meters

Geo-spatial
Temporal
Syntax-Semantic
Sync & Consensus

$$$ CURRENCY PAIR SAMPLING

ON / OFF SHORE

SYNC DELTA STATE META DATA SNAPSHOTS

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

{"URN"} {"URN"}

{"DAO_ORG_ID"}

$$$ MICRO Payments

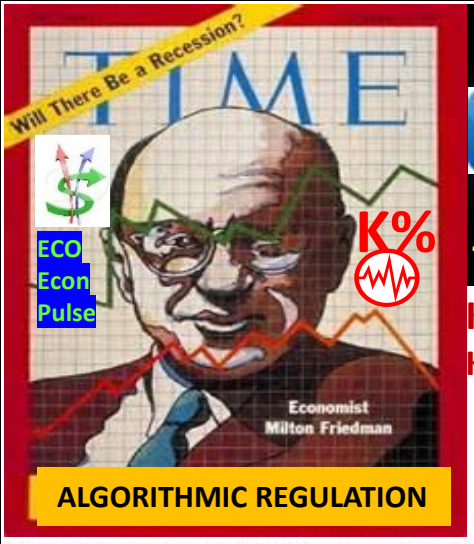
DEMURRAGE PARKING Logistic Fee Incentives

EVENT STATE SNAP | SYNTAX NONCE HASH | EVENT STATE SNAP | SYNTAX NONCE HASH | EVENT STATE SNAP

All things Net, Net of $$$ formed by Time Epoch Cycles

cycle n → n + 1 → n + 2

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



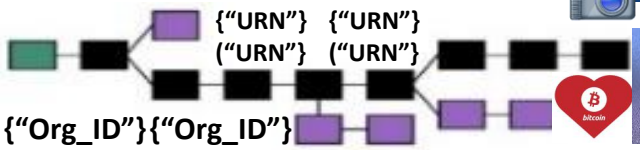




K% RULE ECONOMIC HEARTBEAT

K% VARIABLE YEARLY GDP SNAPSHOT


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





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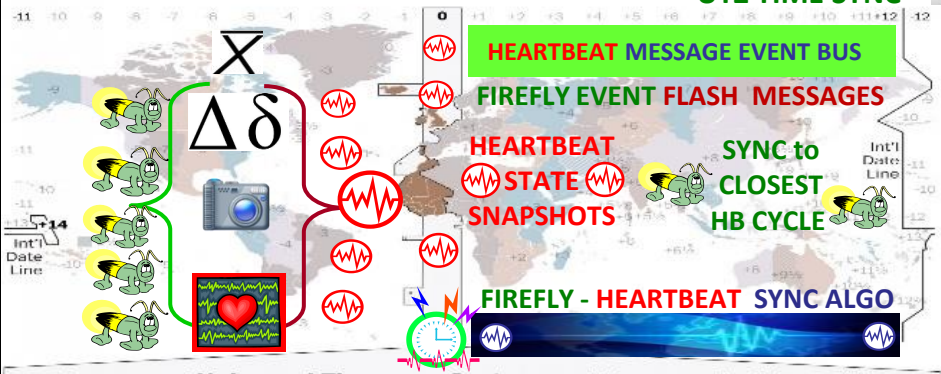
UTZ TIME SYNC

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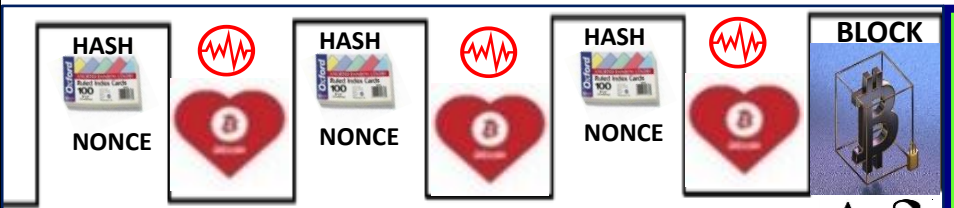
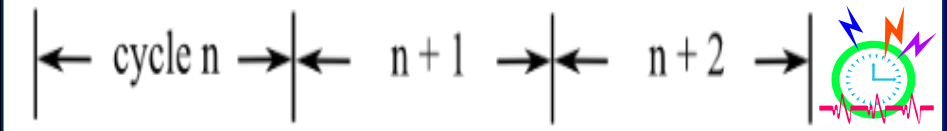



CPU CLOCK EPOCHS / HEARTBEAT CYCLES




"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 TERRA (TRC)

## Trade Reference Currency

{"URN"}
{"Org_ID"}

TERRA
TRC

TERRACYCLE

{"TAGGED BITCOINS"}
{"URN"} {"URN"}
</URN> </URN>
{"URN"} {"URN"}

SHELLING POINT

Price Indexes in Time and Space

$0.49 USD
Ƀ 0.001076 BTC

DEMURRAGE FEES

bitcoin

MICRO PAYMENTS

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

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

HOW NEW CURRENCIES TURN SCARCITY INTO PROSPERITY
RETHINKING MONEY
Bernard Lietaer and Jacqui Dunne

BIOCOIN
SUPPORT YOUR LOCAL FARMER

Spatial Econometrics

Will There Be a Recession?
TIME
Economist Milton Friedman

Friedman's K % Rule

currencyindex

ECONOMIC HEARTBEAT
FEDCOIN / WORLDCOIN
K %

ALGORITHMIC REGULATION

WAVES
TOKENIZES CURRENCIES

LEADING ECONOMIC INDICATORS

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

UNIVERSAL TIME ZONE UTZ

STOCHASTIC HARMONIZATION

UNIVERSAL MESSAGE EVENT BUS

{"Org_ID"} {"URN"}

("Commodity_Tokens"
{"TAGGED BITCOINS"}

FIREFLY – HEARTBEAT ALGO
MATCH FIREFLY EVENT SYNC
TO CLOSEST CLOCK CYCLE

vector vector

Closer is Cheaper Closer is Faster

Proximity Beacons

Int'l Date Line

Logistics Demurrage fees

Process Events By Precedence

Time Series
Value
Time

EVENT BUS
HEARTBEAT
FLASH MESSAGES
</URN> {"ORG_ID"}

Geo Spatial Temporal Series

EDISON / FORD
MONITARY
OPTION 1921

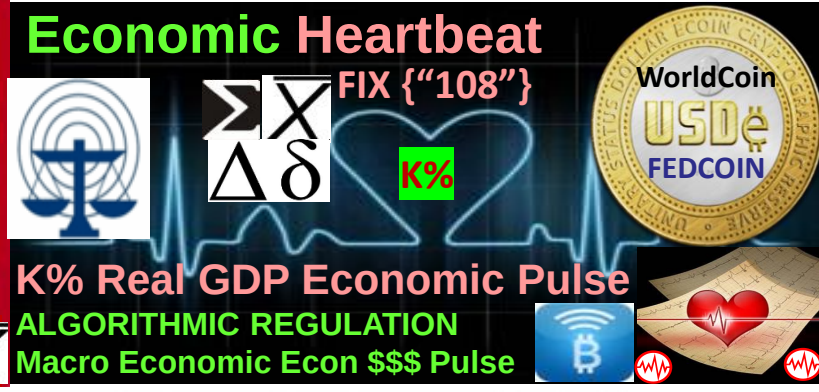
French newspaper "Le Fédériste"
"L'Europa monnaie de la paix"
Money of peace" Born Jan 1st 1933 $$$

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

EVENT BUS

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.









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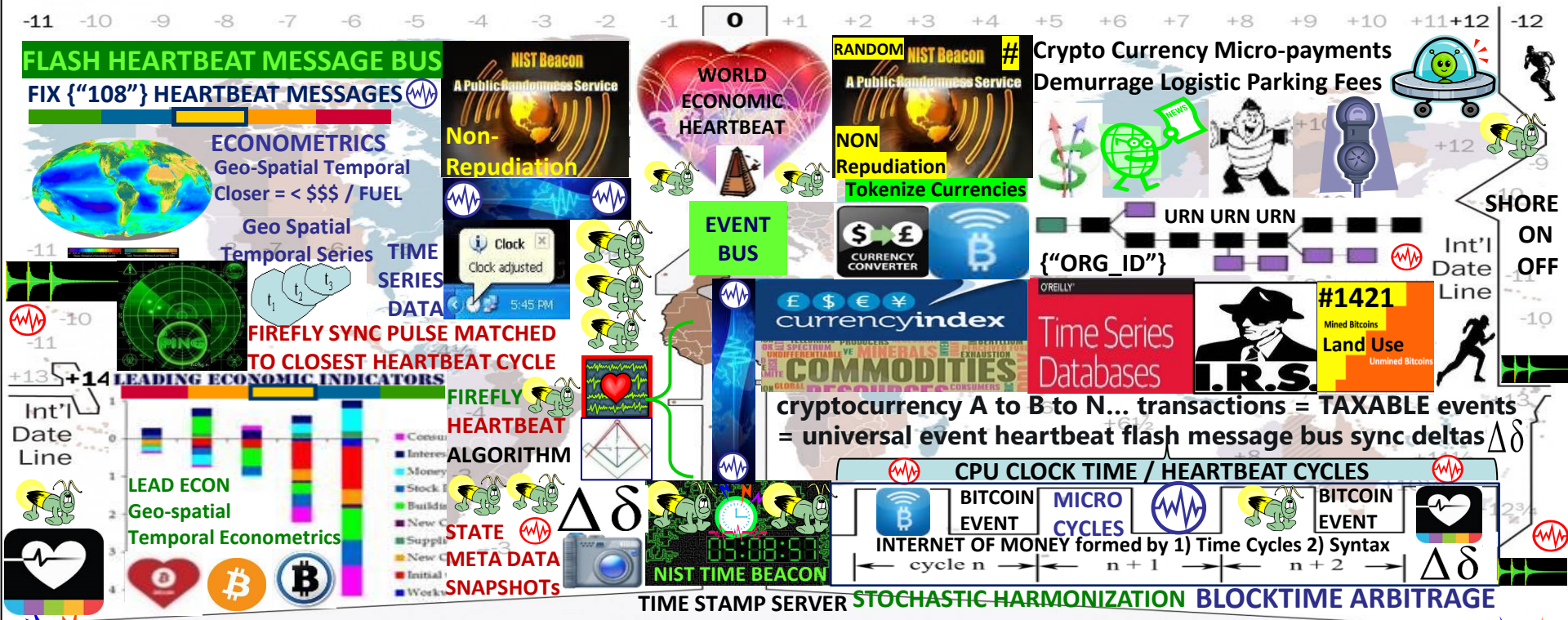


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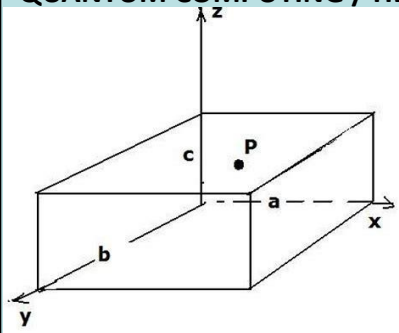
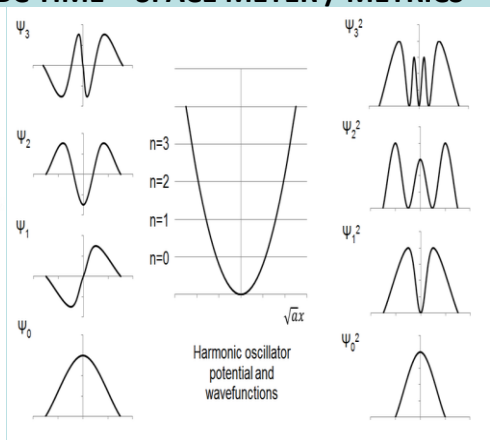
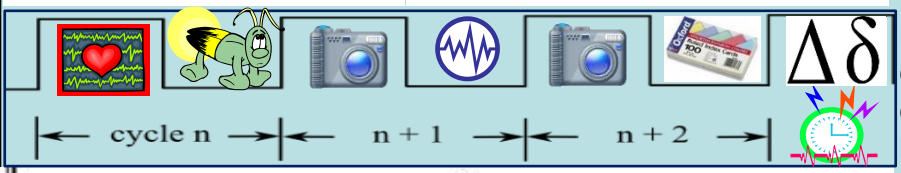
DAO
ECONOMIC HEARTBEAT
{"108"}
TRC TRADE REFERENCE CURRENCY
K %
STATISTICAL MEAN VALUE INDEX
ALGORITHMIC REGULATION
TERRA TRC
BIOCOIN
SUPPORT YOUR LOCAL FARMER
FARMERS COOP ASSOC.
Federation Gateway
SCHELLING POINT = "TRUTH"
CONTRIBUTIONS TO STATISTICS
LEADING ECONOMIC INDICATORS
{"URN"}
currencyindex
COMMODITIES
TERRACYCLE
Spatial Econometrics
{"URN"}
LEADING ECONOMIC INDICATORS
$0.49 USD
MICRO
Obitcoin
PAYMENTS
Demurrage
INFOCON
5 4 3 2 1
INFORMATION CONDITION
MONEYBALL ECONOMICS
Price Indexes in Time and Space
SchellingPoint
Service Level Agreements SLA / O incentivize Eco sustainable transactions leveraging Crypto-currency Micro - payments for TERRA Trade Reference Currency demurrage fees
smartlands
{"URN"}
{"Org_ID"}
The current standard time common throughout the world is based on a 24-hour clock, with zones that are are either 12 hours ahead or behind Coordinated Universal Time (UTC). However, these time zones are decided upon by individual governments, without overall coordination and can even extend fourteen hours ahead UTC. UTZ TIME ZONE STOCHASTIC HARMONIZATION
TIME – SPACE EQUATIONS
BLOCKCHAIN PARSING
ERLANG
ERICSSON MONEY OF PEACE
ERICSSON
PROXIMITY BEACONS
NEURAL NETWORK CONSENSUS ALGORITHM
MATCH EVENT ALERTS to CLOSEST OPTEMPO HEARTBEAT
{"URN"}
UNIVERSAL EVENT / ALERT FLASH HEARTBEAT MESSAGE BUS
Firefly- Heartbeat Algorithm
UNIVERSAL MEME METRECS / METERS
ON / OFF SHORE
INFOCON 5 4 3 2 1 INFORMATION CONDITION
I.R.S.
IRS #1421
Int'l Date Line
vector
Unused Resources
vector
UNMET NEEDS
State Meta Data
Heartbeat Snaps
MICRO CYCLES
IDMaps
SonarHops
TIME / DISTANCE ESTIMATION SERVICE
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.

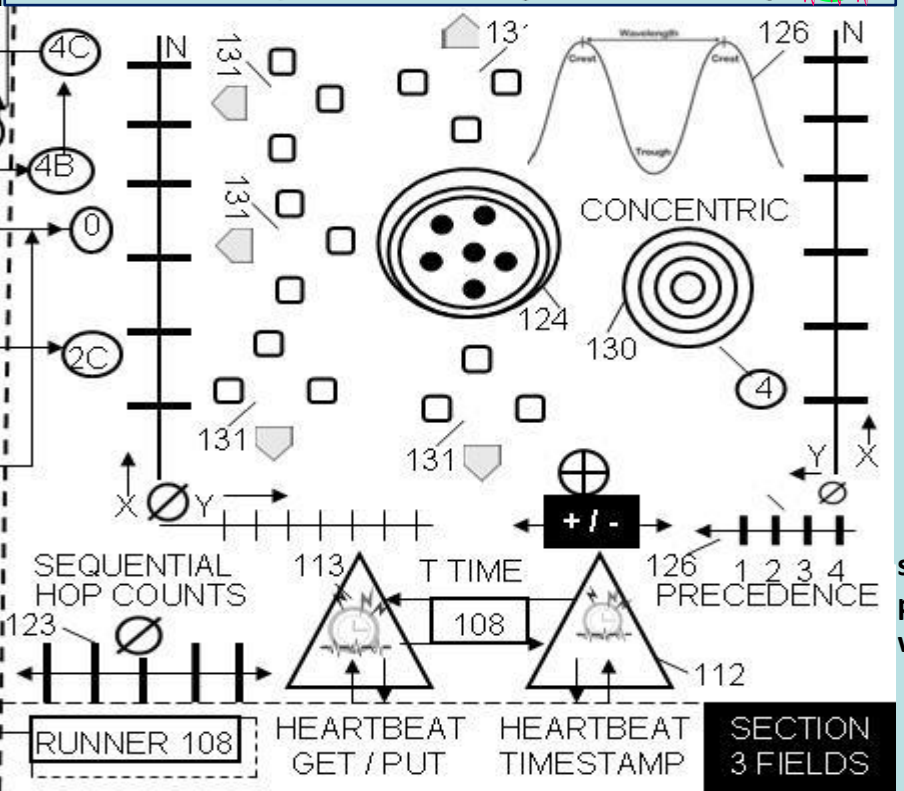
## QUANTUM COMPUTING / HBC TIME – SPACE METER / METRICS




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




## #QuantumComputing USct Alice Corp Vs CLS Bank compliant memes:

In quantum computing, a qubit (or quantum bit (sometimes qbit) is a unit of quantum information—the quantum analogue of the classical binary bit. A qubit is a two-state quantum-mechanical system, such as the polarization of a single photon: the two states are vertical polarization and horizontal polarization. In a classical system, a bit has 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

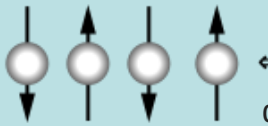
US Sct Alice Corp Vs CLS Bank Physical memes
Linear sequential "Paul Revere" meme = horizontal polarization
Vertical polarization vectors from a known point 0 null Sonar Hop meme

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?

STATE CHANGE EVENT

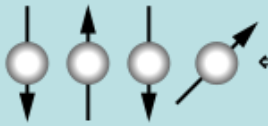

universal gate set STATE CHANGE EVENT



⇔ |0101⟩ ⇔ |5⟩

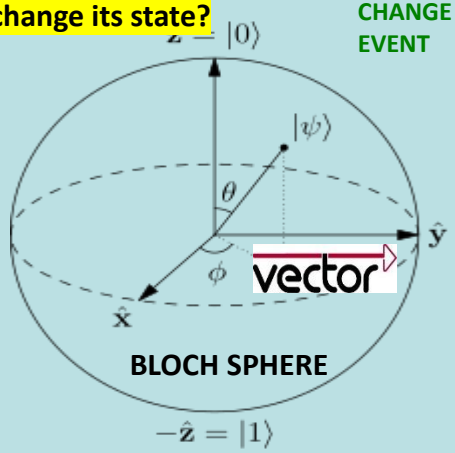
qubits initialized to arbitrary values

quantum gates



⇔ |4⟩ + |5⟩

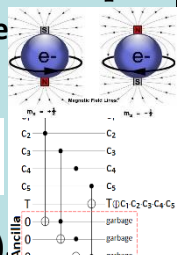
qubits can be in a superposition of all the clasically allowed states

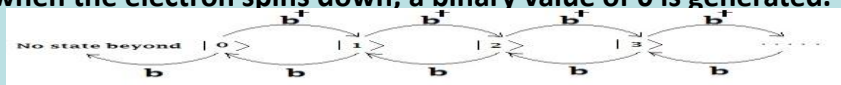



Microwave pulses like sonar ping...

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

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)

# THE BITCOIN BLOCKCHAIN FOR DUMMIES

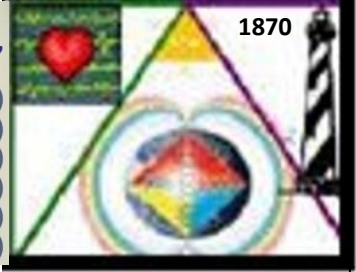
**What is needed is an electronic payment system based on cryptographic proof instead of trust, allowing any two willing parties to transact directly with each other without the need for a trusted third party e.g., a bank.**

**Satoshi Nakimoto Bitcoin Paper**

Satoshi Nakamoto

Craig WRIGHT a.k.a. Satoshi Nakamoto


"THE VALUE OF BITCOIN IS TIME ITSELF"



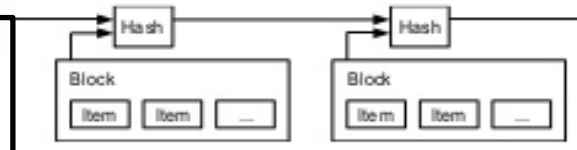

Wright Brother's 1st Flight Cape Hatteras Outer Banks

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

### 3. Timestamp Server

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

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




alphanumeric string a.k.a hash

Event Bus

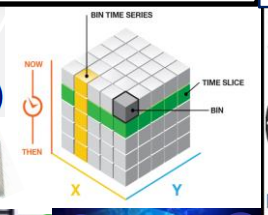
**"All things net, net of money are formed with 1) epoch time cycles 2) Syntax parsed as instructions**

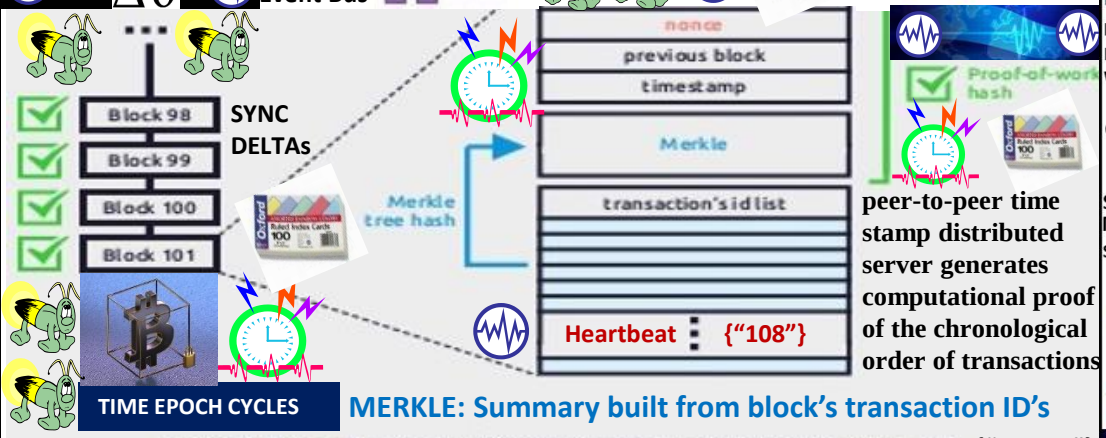
"THE VALUE OF BITCOIN IS TIME ITSELF"



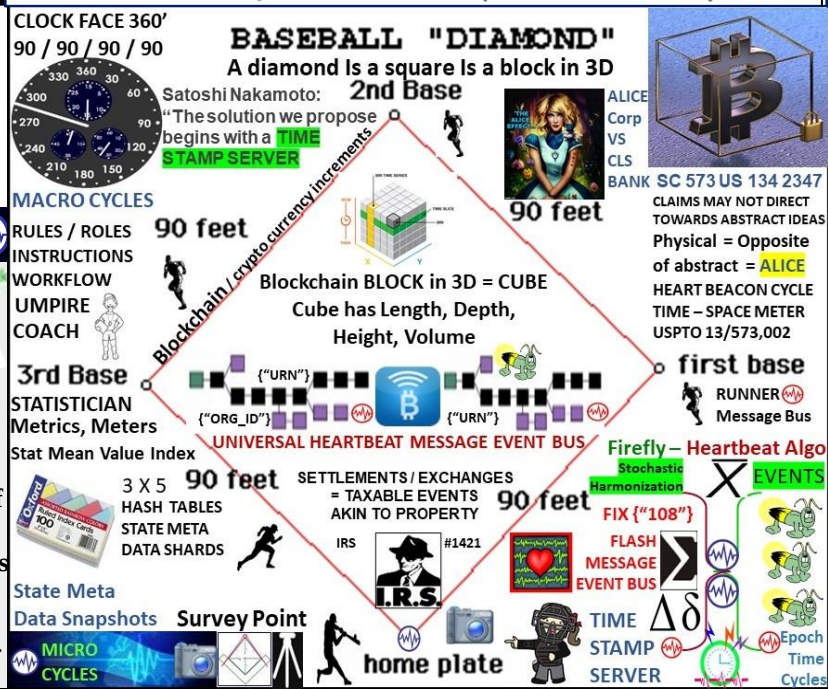
Event Bus


{"EVENTS"}




peer-to-peer time stamp distributed server generates computational proof of the chronological order of transactions



# All things internet of money are formed w CPU time cycles used to process, syntax, instruction / code

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

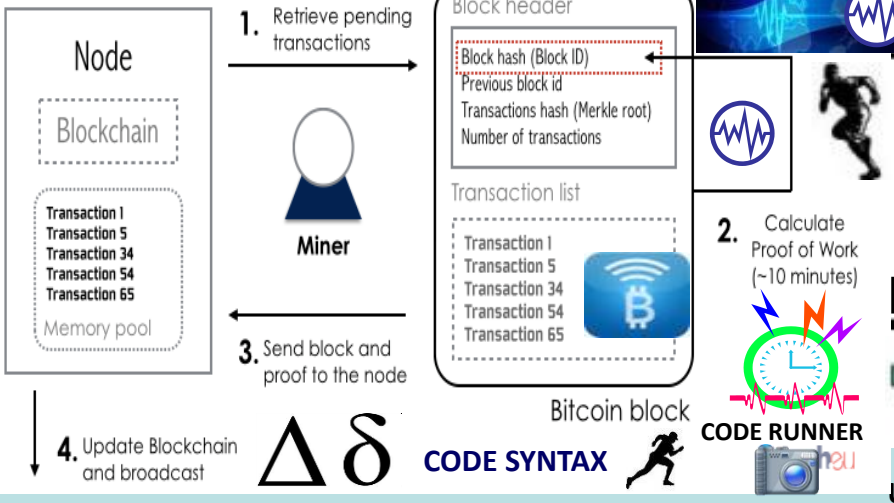

WIRED

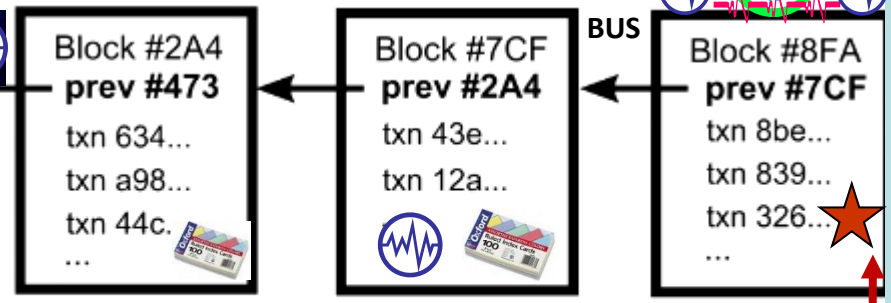
"BITCOIN MAKES MONEY PROGRAMMABLE. MONEY IS SIMPLY DATA"

**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"S VALUE IS TIME ITSELF"

EVENT BUS




BLOCKCHAIN = TIME / SYNTAX

TIME

DATA ELEMENTS
ID'd by Alpha-Numerics

CODE SYNTAX

CODE RUNNER

USPTO 13/573,002
PHYSICAL MEME
MAIN EMBODIMENT

BLOCK

State Meta Data Snapshots

XBRL / CDL / DAML
STOCK MIC CODES
STRUCTURED
MILITARY MESSAGE
TEMPLATE FORMS
LOGIC / FILTERS
SYNTAX
LEXICON LIBRARY

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

RULES Metrics

ROLES Meters

Multi-Meme Multi-Meter

TIME EPOCH CYCLES

ASIC CHIP CLOCK CYCLES TIME EPOCHS

cycle n | n+1 | n+2

ATOMIC CLOCK

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

< GLOBAL >
0

IC / DOD/ NGO / COALITION
INDUSTRY GOVERNANCE

GOVERNANCE TAGS BY TYPE PRECEDENCE

< JOINT >
1

0 NORMAL
1 EMERGENCY

**STRATML/ IODEF RID CLASSES**

**IC / DOD JOINT GOVERNANCE**

StratML

PRECEDENCE

< COMMUNITY>
2

PRECEDENCE

IC: INTERNAL COMMUNITY USE
MEDICAL / ENERGY / TRANSPORTATION
COMMUNITY SPECIFIC GUIDANCE

MULTI-MODAL PROCESSING OF PRECEDENCE: PRIORITY IS SITUATION DEPENDENT ACCORDING TO INFOCON, HAZCON I.E. EMERGENCY BROADCASTS TO THE WORLD – EVERY ENTITY CANNOT HAVE LEVEL 5 PRECEDENCE

<DOMAINS>
3

<SHARED ELEMENT>
4

MANAGED RESOURCES GOVERNED BY ELEMENT E.G., AGENCY, PROGRAM HOWEVER – EXPOSED AND MADE AVAILABLE TO ORG ID / URN GROUPINGS

GOVERNANCE TAGS BY TYPE PRECEDENCE

NORMAL OPERATIONS
PAY FOR PRECEDENCE
AS A QUALITY OF SERVICE
SLA SERVICE LEVEL AGREEMENT
PRIVACY FOR PRIVATE DATA

<PRIVATE ELEMENT>

5

MANAGED RESOURCES GOVERNED BY ELEMENT E.G., AGENCY, PROGRAM FOR UTILIZATION ONLY BY THAT ELEMENT

**EVENT / ACTIVITY / LOCATION CLASS**

**0 NULL / 1 / 2 / 3 / 4**

USE ORG ID / URN TAGS TO ROUTE BASED ON TYPE OF ORGANIZATION / COMMODITY / VIRTUAL ORG MEASURE BROADCAST / UNICAST BY ZONE BY THRESHOLD / INTENSITY / DURATION AS MOE / MOP

< NIEM >

NIEM

BRIDGING INFORMATION SYSTEMS

# ALPHA-NUMERIC BREVITY CODES

**CODE GUIDE**

FROM

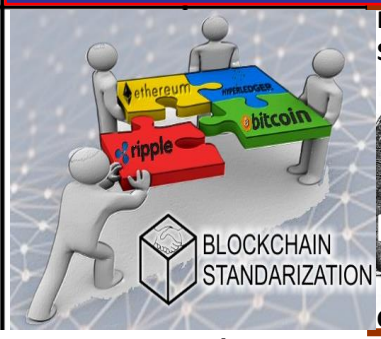
| | GCCS-A | | | | ATDS | | MCS | |
|---|---|---|---|---|---|---|---|---|
| ASAS | C002 | C203 | C002 | C203 | C002 | C203 | C002 | C203 |
| | F002 | F014 | | | | F014 | E400 | F002 |
| | F015 | F541 | | | | F541 | F014 | F015 |
| | S201 | S309 | | | | S305 | F541 | S201 |
| | | | | | | S309 | S309 | S507 |
| | | | | | F002 | | C203 | C400 |
| | | | | | F015 | | D630 | E500 |
| | | | | | S201 | | F002 | F014 |

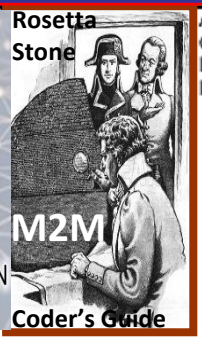
USMTF / XML MTF FORMATTED MESSAGE CATALOG = 300 + messages info exchange sets using common, CONSENSUS Message Text Formats MTFs. MTFs specify </CONTENT> / info agreed by group consensus presenting information in a logical, well specified unambiguous layout resulting in a highly efficient info payload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


INFOCON 5 4 3 2 1 INFORMATION CONDITION

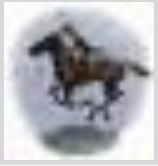
| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| MCS | A423 | C203 | | | A423 | C400 | | |
| | C505 | F002 | | | C505 | F002 | | |
| | F014 | F015 | | | F014 | F015 | | |
| | F541 | S201 | | | F541 | S201 | | |

SIOP

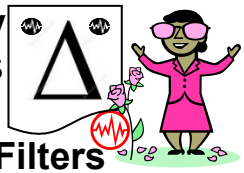

"SYMBOLS RULE THE WORLD"



## Information Elements Roles

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

('Org_ID"} {"URN"}



FFUDN: Field Format Unit Designator #

FFIRN Field Format Index Reference #

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

NDN

Firefly-Heartbeat Flash Messages

HEARTBEAT MESSAGE = K00.99

PROCESS MESSAGE BY PRECEDENCE
UNIVERSAL EVENT / ALERT MESSAGE BUS

## MESSAGE CATALOG 300 + Use Cases

Data Elements: entity, attribute, relationship equivalents

| Object Categories | Examples | Information Categories and Examples: Location | Movement | Identify | Status | Activity | Intent |
|---|---|---|---|---|---|---|---|
| OOB | SYNTAX LEXICON | STRUCTURED DATA EXCHANGE Message Sets | | | | | |
| | | lat/long | spd/hdg | country / alliance, type/class | readiness | targeting, reconitering | COA {"Java JS"} |
| | | Machine Trust Language MTL | | | CDL Contract Description Language | | |
| Infrastructure | Comm, power, transportation, water/sewer | network, grid | throughput, flow rates, | name, part-of relationships | BDA, op levels | repair, broadcasts | YAML expansion plans |
| Sociological | Culture, religion, economic, ethnic, government, history, languages | temples, historic structures | | | | | |
| Geophysical | Terrain, weather, climatology, oceanography, astrometry | feature lat/long, alt/dpth | | | | | |

| E-R Model | Class Diagram | Relational Database | Object DBMS | XML DTD / Schema | TADILs | MTF |
|---|---|---|---|---|---|---|
| Entity | Class | Table | Class | Element | Message | Message |
| Attribute | Attribute | Field / Column | Attribute | Child Element or Element Attribute | DFI | FFIRN / FFN / FUDN |
| Domain Value | PURCHASE CODES | Instance, Value | FEDERATE | | DUI | FUD |

## OPERATIONAL NODES / ACTIVITIES

DATA SYSTEM FUNCTIONS PERFORMANCE

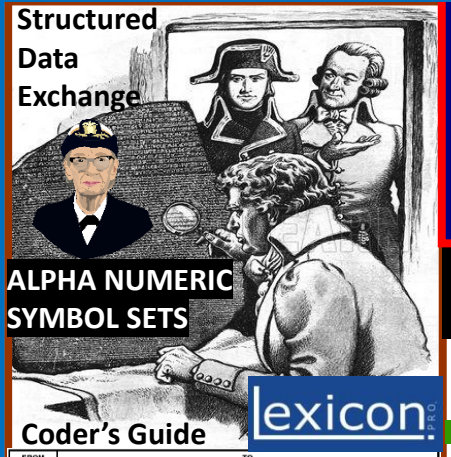
11.4 - Classification
11.4.1 - Category
11.4.1.1 - Confidence Level
11.4.1.2 - Estimate Type
11.4.1.2.1 - Alternative
11.4.1.2.2 - Evaluated D
11.4.1.3 - Value
11.4.1.3.5 - Surface
11.4.2 - Platform / Point / Fea
11.4.3 - Specific Type
11.4.4 - Type Modifier
11.4.5 - Unit

11.8 - Kinematics
11.8.1 - Pos / Vel / Acc (PVA)
11.8.1.1 - Acceleration
11.8.1.1.1 - Angular
1.1.2 - Linear
2 - Estimate Type
1.2.1 - Estimated
1.2.2 - Observed
1.2.3 - Predicted
4 - Velocity
1.4.1 - Horizontal
1.4.2 - Vertical
VA Confidence
1 - Bearing Angle
2 - Bearing Angle Rate
3 - Covariance Matrix

PURCHASE CODES

| SYMBOL | Friend | Neutral | Hostile |
|---|---|---|---|
| 2525C | Partner | | Competitor |

Structured Data Exchange

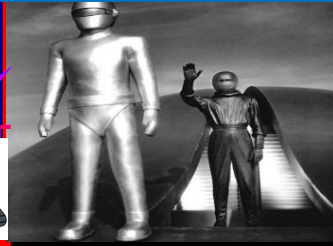


ALPHA NUMERIC SYMBOL SETS

lexicon

Coder's Guide

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>



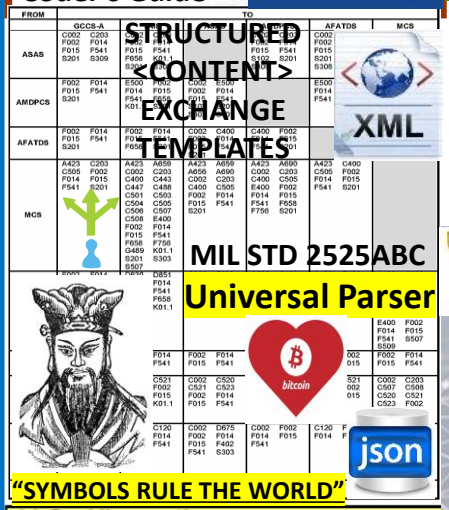
NATO MESSAGE TEMPLATES USE DATA SETS FOR STRUCTURED DATA EXCHANGE // POSITION FIELD IN MESSAGE PROCESSED BY TABLE, FIELD # IN A CONSISTENT, PREDICTABLE ORDER = AI FRIENDLY M2M

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.

vector



STRUCTURED <CONTENT> EXCHANGE TEMPLATES

XML

MIL STD 2525ABC

Universal Parser





json

"SYMBOLS RULE THE WORLD"

STRATML

XAML

xBRL

BINARY XML

UBL

DDL DATA DEFINITION LANGUAGE

TOSCA

YAML

11.8 - Kinematic
11.8.1 - Pos
11.8.1.1 -
11.8.1.
1.2.3 - Predicted
1.2.4 - Smoothed Data
3 - Position
1.3.1 - Bearing Angle
1.3.2 - Location; 2D Hor
1.3.3 - Vertical
4 - Velocity
1 - Horizontal
2 - Vertical
Confidence
Bearing Angle
Bearing Angle Rate
Covariance Matrix

MESSAGE TEXT FORMAT : {"URN"{"URN"}

{"TRANSACTION ID"}

INDEX REFERENCE #:
M015 STATUS :
EFFECTIVE: 14-DEC-99

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 /O // (NU) MESSAGE IDENTIFIER

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

M // (NU) REFERENCED MESSAGE

DATE-TIME GROUP

M /M /M /M /C // (NU) ORGANIZATION DESIGNATOR

M // (NU) 1.A ENEMY FORCES / COMPETITORS

M // (NU) 1.B FRIENDLY FORCES / TRADE FEDERATION

M // (NU) 1.C ATTACHMENT / DETACHMENT

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

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 // (NU) 4.A SUPPORT CONCEPT (Logistics)

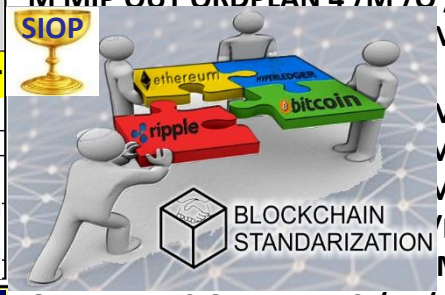
M 11NUPRES GENTEXT 37 // (NU) 4 ATERIEL AND SERVICES

DICAL EVAC & HOSPITALISATION

L - MILITARY OPERATIONS

| SYMBOLS | Friend | Neutral | Hostile |
|---|---|---|---|
| | Partner | | Competitor |

NUMBERS ARE THE UNIVERSAL LANGUAGE / Symbols Rule the World"




PURCHASE CODES

FEDERATED PEGS

{"ASSET_CLASS"}
{"ASSET_TYPES"}

{"URN"}
{"URN"}

ISO 10383 – MIC
Market Identifier Codes

DAO

{"URN"}

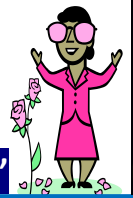
{"Org_ID"}

K00.99 / FIX / SWIFT / E-911 Heartbeat Message

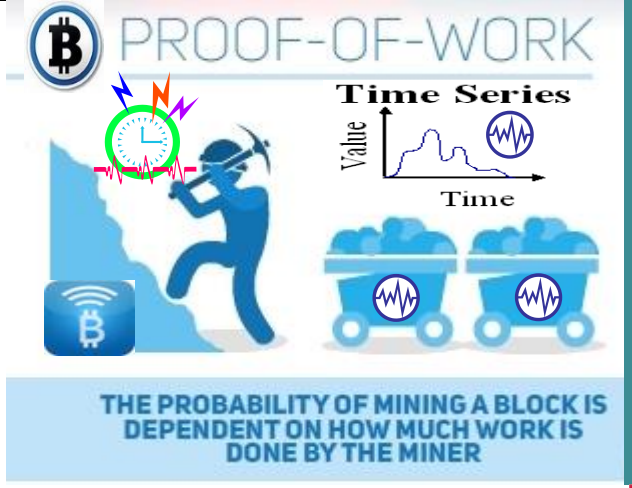
STOCK EXCHANGE MIC CODES

NDN NAMED DATA NETWORKING PRECEDENCE PROCESSING

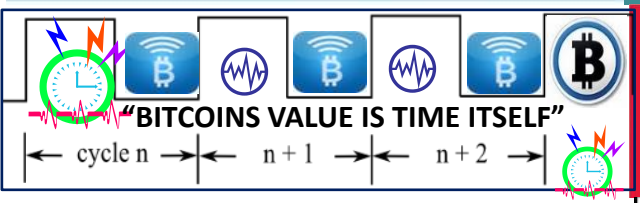
FILTERS



INFOCON 5 4 3 2 1
INFORMATION CONDITION




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

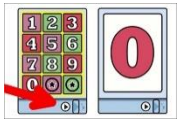



TIMESTAMP marks the point that work started. Additionally, it contributes to the uniqueness of the work by an individual miner

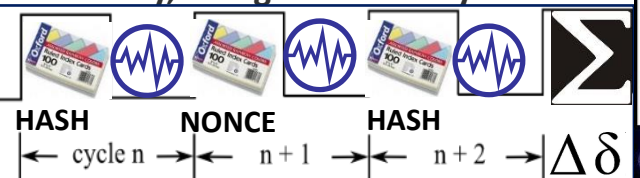
THROTTLE equivalent to difficulty.
•target = maximum value of 8 bytes (2^64) divided by the difficulty.

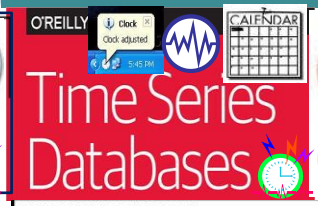
State Snap Shots

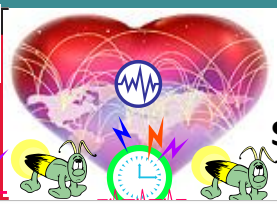
NONCE increments from 0..N until the target is met.




GUESS stores the guess
Effectively, it begins at infinity.



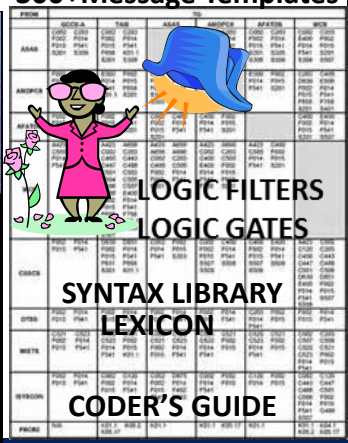



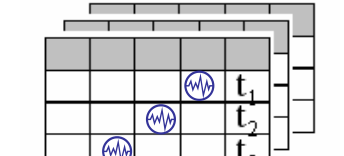
FIREFLY-HEARTBEAT ALGORITHM
STOCHASTIC HARMONY ACROSS TIME ZONES

MESSAGE ex:
•Hashing string
•Hash Table

300+Message Templates




POW PAYLOAD : COMBINATIONS OF ENCRYPTED SYNTAX




CLOCK FACE 360'
90 / 90 / 90 / 90

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

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

2nd Base

ALICE Corp VS CLS BANK SC 573 US 134 2347
CLAIMS MAY NOT DIRECT TOWARDS ABSTRACT IDEAS
Physical = Opposite of abstract = ALICE
HEART BEACON CYCLE TIME – SPACE METER
USPTO 13/573,002

MACRO CYCLES
RULES / ROLES
INSTRUCTIONS
WORKFLOW
UMPIRE
COACH

90 feet

Blockchain / crypto currency increments

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

3rd Base
STATISTICIAN
Metrics, Meters
Stat Mean Value Index

first base
RUNNER
Message Bus

{"URN"} {"ORG_ID"} {"URN"}
UNIVERSAL HEARTBEAT MESSAGE EVENT BUS

3 X 5 HASH TABLES
STATE META
DATA SHARDS

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

Firefly – Heartbeat Algo
Stochastic Harmonization
EVENTS
FIX {"108"}
FLASH MESSAGE EVENT BUS
TIME STAMP SERVER
Epoch Time

State Meta
Data Snapshots
Survey Point
MICRO CYCLES
home plate

CLOCK FACE 360'
90 / 90 / 90 / 90

# BASEBALL "DIAMOND"

A diamond Is a square Is a block in 3D

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

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90 feet

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FIX {"108"}
FLASH MESSAGE EVENT BUS

State Meta
Data Snapshots
Survey Point

TIME STAMP SERVER

home plate

Epoch Time Cycles

MICRO CYCLES

A BASEBALL DIAMOND IS A SQUARE. HBC USES A BASEBALL METAPHOR TO DESCRIBE METRICS, METERS. ROUNDING BASES FORM A BLOCK. METRICS, METERS & SURVEY METHODS MEASURE COIN MINING COMPLETION % AWARDS

Euclidean Geometry

STRUCTURED {"CONTENT"} TEMPLATES

Attribute Series

Digital Asset Modeling Language DAML

Contract Description Language CDL

NAMED DATA NETWORKING

Time Series

Value

Time

SYNTAX, SYMBOLS
LEXICON LIBRARY

LOGIC – FILTERS
CODE SEQUENCE

ROLES / RULES

{"INTEREST"}
{"DISTANCE"}

IDMaps
SonarHops

FIX {"108"}
</INTEREST>
time
distance

NDN

1: prove coin ownership <Org_ID> Coin Issuer
2: # coins sent where, when Lat / Long, DTG
3: NIST Random # Beacon Non-Repudiation
4. Issuing {"Org_ID"} adjudicates w buyers

Firefly – Heartbeat Event Bus

TRANSACTIONS PER CYCLE METRICS

COMPUTER CHIP TIME EPOCHS
cycle n | n + 1 | n + 2

SPATIAL TEMPORAL Series

PROOF-OF-STAKE

FIREFLY-HEARTBEAT ALGORITHM EVENT BUS

Stake-Time algorithm favors both # of coins held & how often, frequently coins are staked

Velocity based selection PoSV encourages velocity i.e. coin movement between people Vs hoarding.

O'REILLY
Time Series Databases

Coin Age proof-of-stake system combines randomization with the concept of "coin age," a number derived from the product of the number of coins times the number of days the coins have been held.

Randomized block selection randomization predicts following generator by using a formula that looks for the lowest hash value stake size

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

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

VOTE

Little League EST. 1939 BIG LEGACY 75 YEARS

I.R.S.

IRS Memo #1421
Bitcoin purchase = property

UXTO

Mined Bitcoins

Survey Methods
Proximity Beacons

Unmined Bitcoins

CAIFNDAR

MICRO-CYCLES

UTXO: unspent transaction output'. bitcoins sent somewhere but not yet spent. Unspent transaction output set= latest STATE of every Bitcoins ever mined" % Block Mined / % Block owned

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

## KEY BLOCKS:

- NO CONTENT = NULL
- LEADER ELECTION

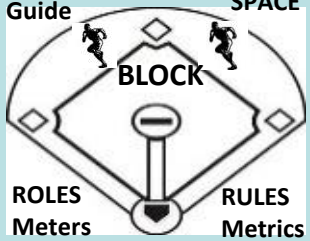

MVP

EVENT BUS

Coder Guide

$\Delta\delta$

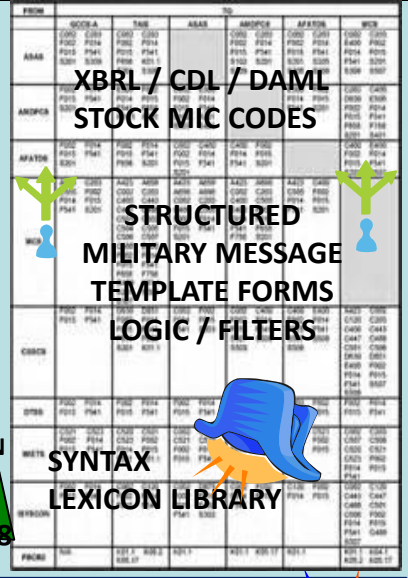
TIME SPACE



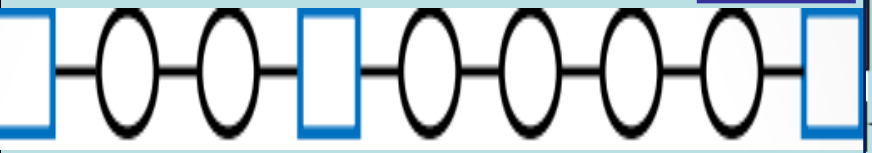

## MICRO BLOCKS:

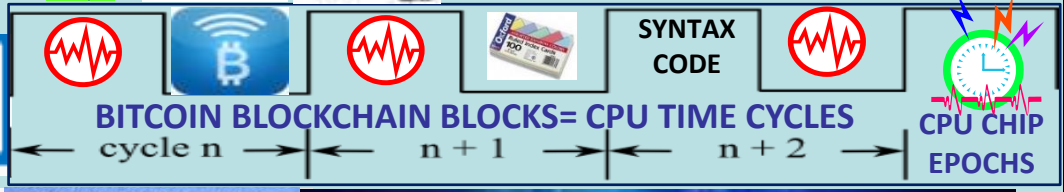
- ONLY CONTENT
- NO CONTENTION

NDN



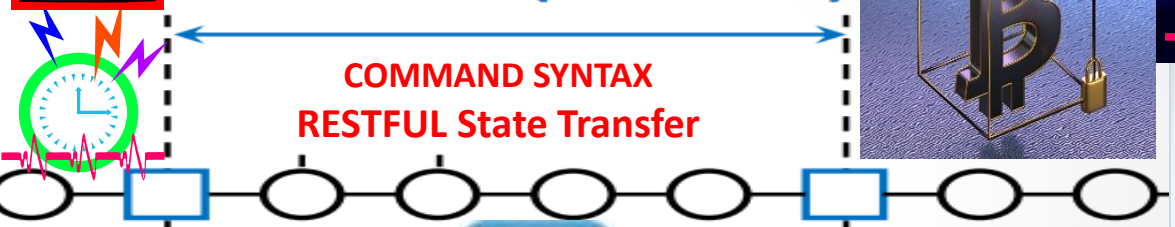

SYNTAX
LEXICON LIBRARY






long exponential intervals (10 min)

COMMAND SYNTAX
RESTFUL State Transfer



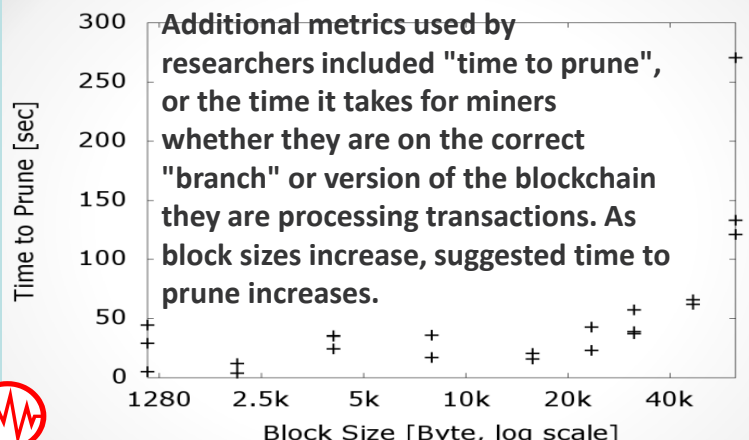


MACRO – CYCLES


short deterministic intervals (10 sec)

MICRO-CYCLES

## Subjective Time to Prune



# ripple

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.



Stochastic Harmonization
Telco Mesh Fabrics
Wide Area Sync

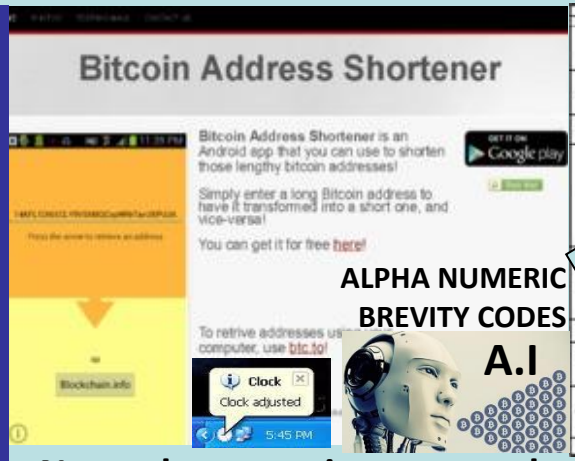
FIREFLY EVENTS
FLASH MESSAGES

EVENT

EVENT

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.

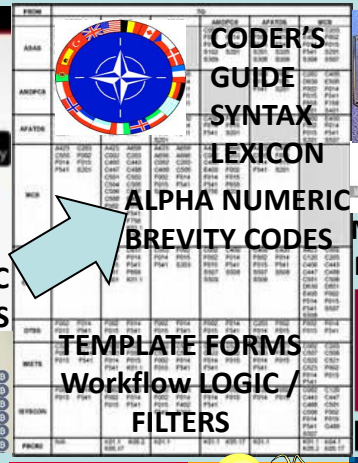
Workflows are serially executed Except first two work flow are workflows are based on event pull model



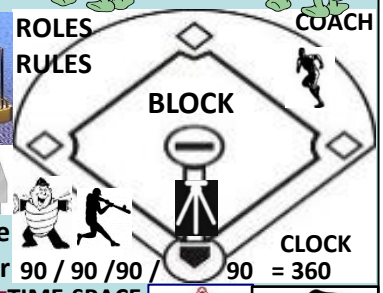

ALPHA NUMERIC
BREVITY CODES

A.I

Neutral transaction protocol




ROLES
RULES




Multi-Meme
Multi-Meter

90 / 90 /90 / 90 = 360

CLOCK

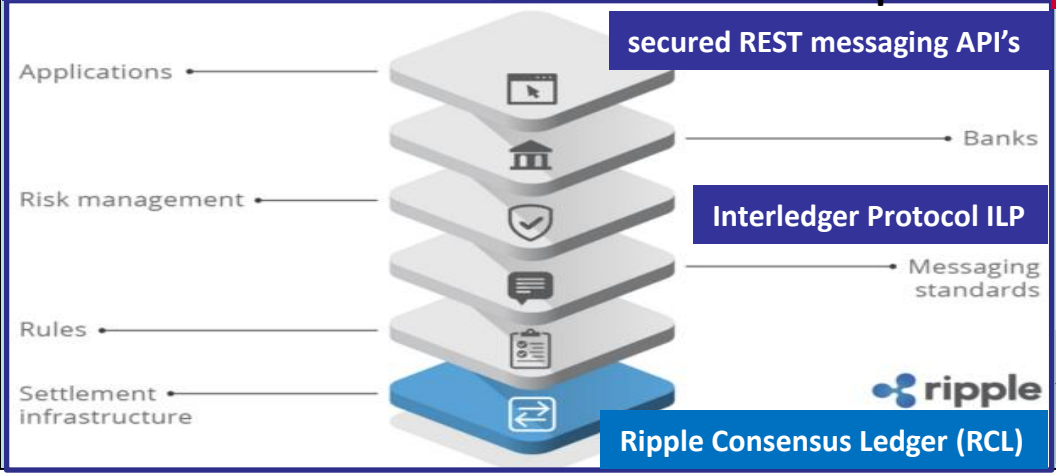
TIME-SPACE
EQUATIONS
ALGORITHMS
BLOCKCHAIN
PARSING

ERLANG

I.R.S.

MFID II
EVENTS

EVENT BUS




secured REST messaging API's

Interledger Protocol ILP

Ripple Consensus Ledger (RCL)

LOCKED QUOTED ACCEPT / DENY In Progress SUCCEEDED

{"108"} HEARTBEAT SYNC DELTA STATE META DATA SNAPSHOTS

MATCH EVENT REPORTS TO CLOSEST HEARTBEAT CYCLE

FLASH HEARTBEAT MESSAGES {"108"}

Sync to Closest Heartbeat

HASH
NONCE

FIREFLY-HEARTBEAT ALGORITHM

MICRO-CYCLE STATE META DATA SNAPSHOTS

STOCHASTIC HARMONIZATION ACROSS UTZ TIME ZONES

# HASHGRAPH

## Hashgraph consensus algorithm for replicated state machines

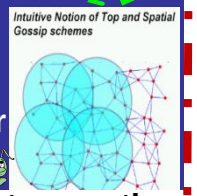
- Consensus Event Time Stamps
- State Meta data consensus order
- *Virtual voting:* each member has a Hashgraph copy

*- Famous witnesses*

data structure that records who gossiped to whom in what order

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

Hash
Nonce

Consensus Order

Synchronous

Asynchronous

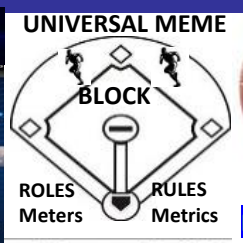
Micro-Cycle State Meta Data Snapshots

Round created
Witness
Famous witness
Election
Vote
See
Strongly see
Supermajority
Decide
Round created
Round received
Consensus timestamp
Consensus order

0 / 1

0 / 1

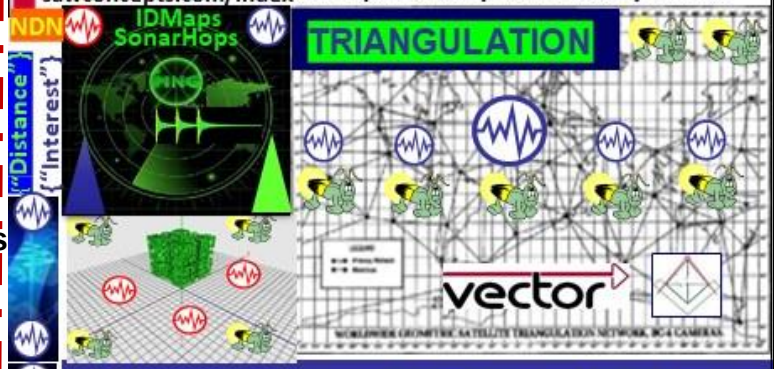
The Heart Beacon Cycle Time – Space Meter
Adaptive Procedural Template Checklist
Heartbeat Sync Delta state meta data
structured data exchange snapshots
300 + Use Case message template sets
Rosetta Stone Syntax lexicon Coder's guide



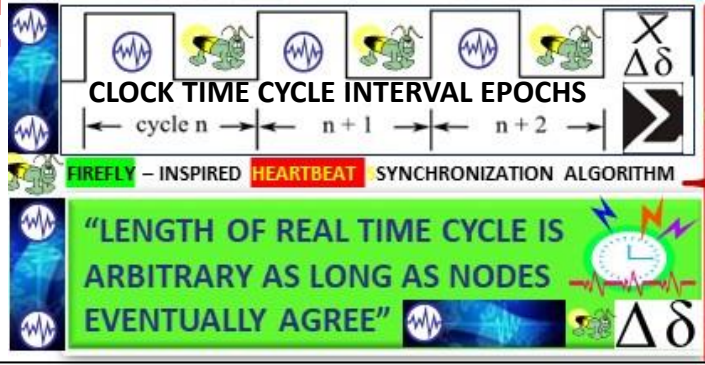
USPTO 13/573,002
sawconcepts.com/index

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




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

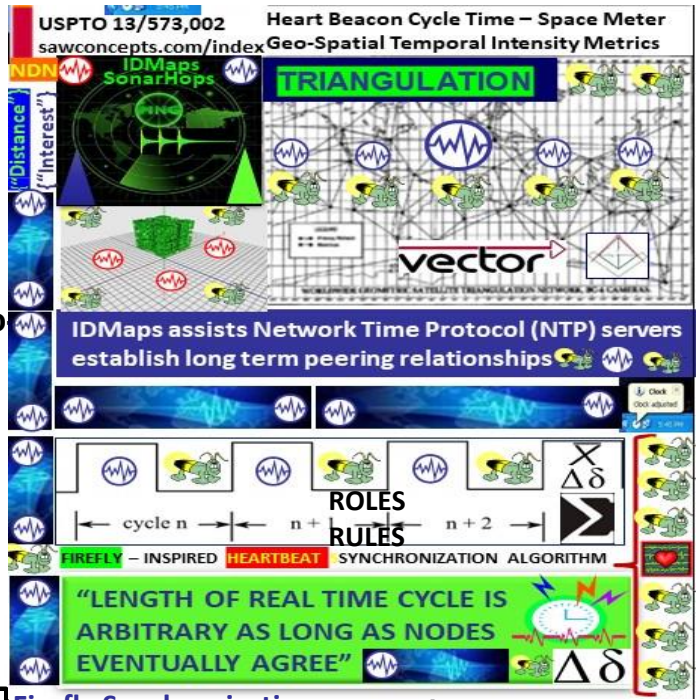
FIREFLY HEARTBEAT Synchronization Algorithm




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

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

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




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

**Transaction Weight / Cumulative Weight of Transaction**

Purpose, Authorisation

Wallet, P/L

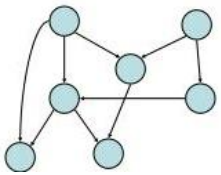
HONEST NODES
Lazy, Malicious Nodes

Crypto, Fiat Token

Directed Acyclic Graph

- DAG – directed graph with no directed cycles

COORDINATOR



**Machine** -1 / 0 / +1 TRINARY PROCESSING

Sensors/ Actors

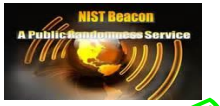
Embedded Computing

Algorithms Approval Variables:

IOTA

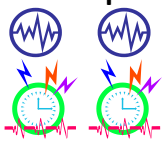
- Data Integrity & Authenticity
- Immutable Data Records

Random # Cyber Beacon




height: longest oriented path length to genesis
depth: longest reverse-oriented path lenghth to a tip

low load / high load



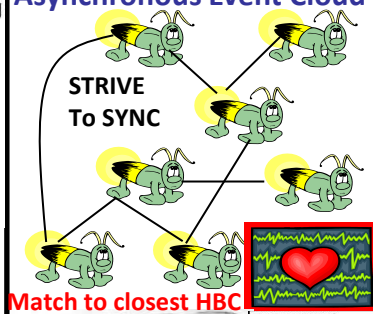
HASH
NONCE

- Machine ID (KYM, KYO)
- Interoperable Transactions
- Access Management {"Org_ID"}
- Sharing & Ownership Transfer

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

TANGLE – 1 transaction always references, "approves" at least two other previous transactions

**Firefly Synchronization**
**Asynchronous Event Cloud**




Match to closest HBC

**Paul Revere Meme**
**Linear, Sequential**

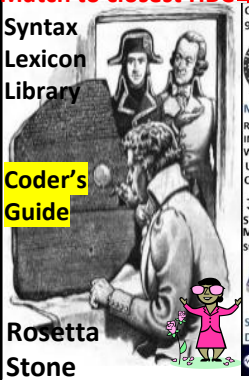
....-1 / 0 / +1...

Geo-Spatial Temporal

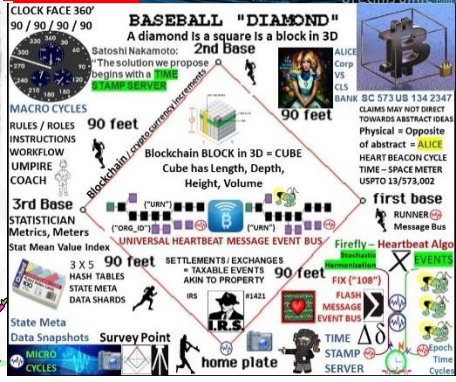
Water Drop Meme

Syntax
Lexicon
Library

Coder's Guide



Rosetta Stone



# ZEPPELIN

## ZEPPELIN OPEN, GLOBAL ECONOMY

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

zeppelinOS, operating system for smart contracts

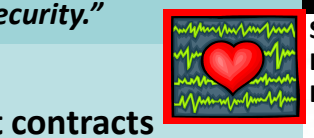
*"the rate of innovation in building decentralized applications is limited by the manual and duplicative efforts developers must make to ensure basic usability and security."*

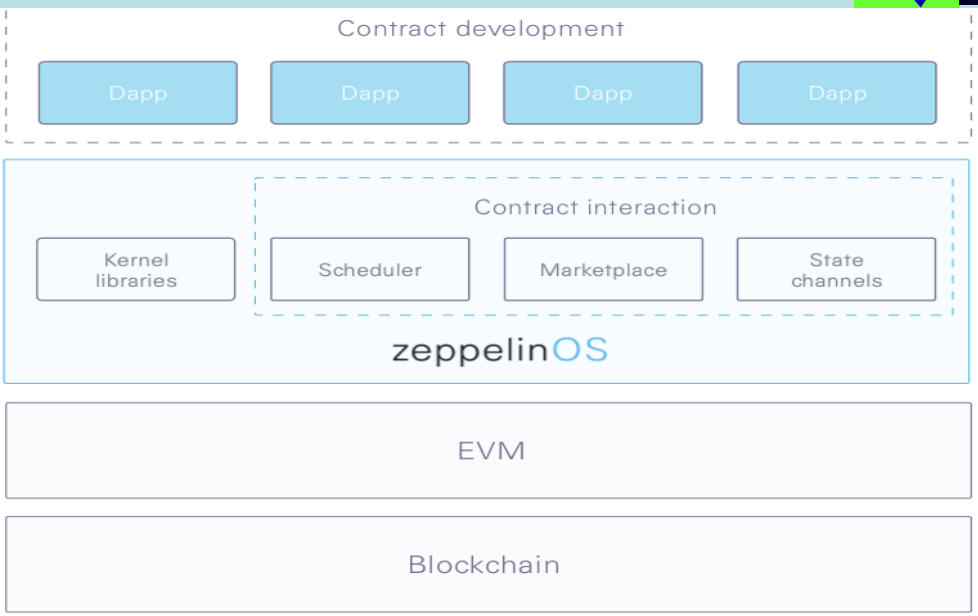
**ZEPPELIN / zeppelinOS Common Functionality:**

**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, nspired by OpenZeppelin Libraries**

**Create and customize your own ERC20 Token.**

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

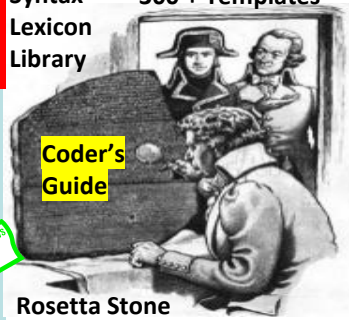



## WORLD ECONOMIC HEARTBEAT


HEART BEACON CYCLE TIME – SPACE METER

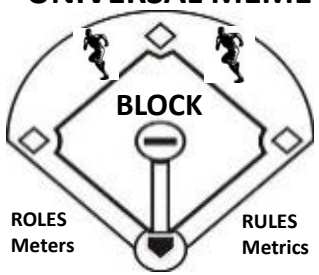
ECO-ECONOMETRICS ON THE BITCOIN BLOCKCHAIN





## STOCHASTIC HARMONIZATION for TELCO Mesh Fabrics


## UNIVERSAL MEME




## Blockchain Parsing

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

WORLD ECONOMIC Heartbeat

("108")

ALGORITHMIC REGULATION

HEARTBEAT SYNC DELTAS

eGAAS

ELECTRONIC GOVERNMENT AS A SERVICE

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

INFOCON 5 4 3 2 1

INFORMATION CONDITION

TERRACYCLE

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.

{"ORG_ID"}

{"URN"} {"URN"}

COLLABORATIVE FILTERING

User-based filtering

Item-based filtering

bitcoin

DEMURRAGE FEES

TEMPLATE ENGINE LANGUAGE ETF

NAMED DATA NETWORKING

Time Series Databases

BLOCKCHAIN PARSING

changes, corrections SYNCHRONIZATION

Spatial Econometrics

SYNTAX / SYMBOL LEXICON LIBRARY STRUCTURED DATA EXCHANGE

300 + TEMPLATE FORMS

LOGIC / FILTERS

ALPHA-NUMBERIC BREVITY CODES

FEDERATED MISSION NETWORKING

FEDERATE ★ SHARE ★ WIN

FMN

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

Neural Net

ENVIRONMENT FRIENDLY ECO INCENTIVES

CLOSER = LESS FUEL

CLOSER = FASTER

G7

Carbon

vector

ON

"INTEREST"}

"DISTANCE"}

Named Data Networking

NDN

STOCHASTIC HARMONIZATION

STAT MEAN

VALUE INDEX

Unused Resources

Int'l Date Line

CO2 Credits

Unmet Needs

OFF

Sync

To

Closest

HEARTBEAT

EPOCH

Multi

Meme

Meter

IDMaps

SonarHops

FIREFLY HEARTBEAT ALGORITHM

FIREFLY EVENT BUS FLASH

HEARTBEAT {108"} MESSAGES

SHORE

STATE META DATA SNAPSHOTS

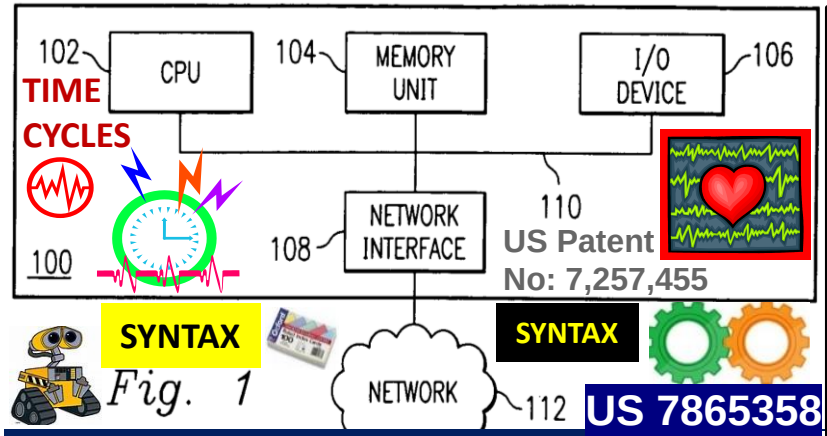
The proposed **Universal Timezone System** would do away with all these different time zones. Instead, it would be the same time all over the world, all the time.

CODER'S ROSETTA STONE AI / IoT

Attribute Series

LEXICON LIBRARY

bitcoin



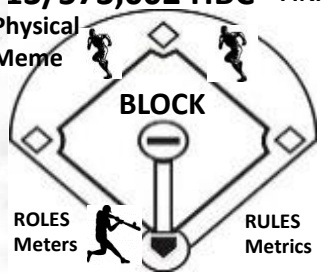

Machine-based system for transforming data from a source form to a target form, a tool is provided for sharing information established in developing a transformation model. The shared information may relate to rules for mapping source collection terms to standardized terms, rules for ordering or SYNTAX,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

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

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

ORACLE Veritaseum






FINANCIAL NOSTRADAMUS
REGGIE MIDDLETON
("Tagged_Bitcoins")

US Patent No: 7,257,455
DISCOVERY MACHINE Inc.
Williamsport PA
Little League Baseball Capital of the World

Fig. 8

Discovery Machine® Inc.

AI ARTIFICIAL INTELLIGENCE 820

| TASK | |
|---|---|
| PK | TK_OID {"Org_ID"} |
| FK1 | TK_NAME<br>TK_DESCRIPTION<br>TK_CONDITION<br>TK_CMOID |
| FK2 | TK_CLOID (FUNCTION) |

818

| PROCEDURE | |
|---|---|
| PK | PC_OID |
| FK1 | PC_NAME<br>PC_DESC<br>PC_CMOID |
| FK2 | PC_CLOID (BEHAVIOR) |

816

| METHOD | |
|---|---|
| PK, FK3 | MT_OID {"Org_ID"} |
| FK1 | MT_NAME<br>MT_DESCRIPTION<br>MT_CMOID |
| FK2 | MT_CLOID (BEHAVIOR)<br>LS_SEQUENCE |

810

BIZ COA 1,2,3 AUTO PLAY

| CLASS | |
|---|---|
| PK | CL_OID |
| | CL_NAME |

**AUTOMATION / SIMULATION**
**Artificial Intelligence engine**

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

| COMPONENT | |
|---|---|
| PK | CP_OID {"URN"} |
| FK1 | CP_NAME<br>CP_SUBSTANCE (BOOL)<br>CP_PRIMTYPE<br>CP_CLASSTYPE |
| FK2 | CP_CLOID<br>CP_COLLECTIO |

| CONNECTION | |
|---|---|
| PK | CN_OID |
| FK1 | CN_TYPE (CLASSES ONLY) |
| FK2 | CN_FROM |
| FK3 | CN_TO |
| FK4 | CN_SUBSTAN |
| FK5 | CN_PARENT<br>CN_NAME |

Off-Site Connector

PERSONALIZED INSTRUCTION CYCLE
Implement data-driven instruction
STUDENT-DRIVEN LEARNING CYCLE
Develop student ownership of learning


812 "Bitcoin's Value is Time Itself" 814

EVENT BUS

Time Series Databases

"BITCOIN IS A LANGUAGE"

UNIVERSAL DATA EVENT BUS

FIREFLY EVENTS FLASH MESSAGES

Sync To Closest

FIREFLY HEARTBEAT ALGORITHM

HEARTBEAT EPOCH

ERLANG CODER'S ROSETTA STONE

ERLANG BLOCKCHAIN PARSING

ROSETTACODE.ORG

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.

Stochastic Harmonization

TIME CYCLES SYNTAX

STATE META DATA SNAPSHOTS

Erlang Time Function calls

"EARTHDAY EVERYDAY ON THE BITCOIN BLOCKCHAIN"
"GIVE A HOOT, DON"T POLLUTE" Woodsy The Owl

# GNOSIS

"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

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

SLA SLO

# HBC Time – Space Meter

{"108"}

ECONOMIC HEARTBEAT

K%

## THE TERRA (TRC)

Trade Reference Currency

fungible

{"URN"}

{"Org_ID"}

currencyindex

COMMODITIES

$0.49 USD

Ƀ 0.001076 BTC

MICRO PAYMENTS

bitcoin

Need Bitcoin?

Tokenized Currencies

SLA SLO

Demurrage Fees

Universal Meme

Geo-Spatial Temporal Econometrics meters

BLOCK

ROLES Meters

RULES Metrics

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

UNIVERSAL EVENT / ALERT BUS

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

LEADING ECONOMIC INDICATORS

NAMED DATA NETWORKING

{"INTEREST"}

{"DISTANCE"}

Syntax
Lexicon
Brevity
Codes

Spatial Econometrics

TELCO
MESH
FABRIC
Stochastic
Harmonization

PROXIMITY BEACONS

IDMaps

SonarHops

Distance E
Estimation
Service

Int'l Date Line

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.

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

# NAMED DATA NETWORKING

<CONTENT> CENTRIC NETWORKING

ICS—ISAC

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

URI

URL | URN

ARIN

American Registry for Internet Numbers

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

Uniform *Resource Names* (*URNs*): A Uniform Resource Identifier (URI). Both URNs (names) and URLs (locators) are URIs, and a particular URI may be a name & locator Each plays a specific role:
- URNs IDENTIFICATION (SENSORS, DEVICES)
- URCs INCLUDE META-INFORMATION
- URLs LOCATE / FIND RESOURCES

<DATA CLASS TYPES>

## Situational Awareness Reference Architecture (SARA)

## IDENTITY, Inventory, Activity, and Sharing

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

SITUATION AWARENESS

NEWSCAST

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

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

MIL STD 2525A

STRUCTURED <CONTENT> TEMPLATES

FILTERS LOGIC

DISTANCE ESTIMATE SERVICE

IDMaps
SonarHOPS

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

BY <TAG_TYPES>

Ledgers
Contracts
Trade SLA
Agreements

K00.99 Heartbeat Message

CrowdSourcing

TRIANGULATION

TELCO MESH FABRIC

vector

CROWD SOURCING / FUNDING

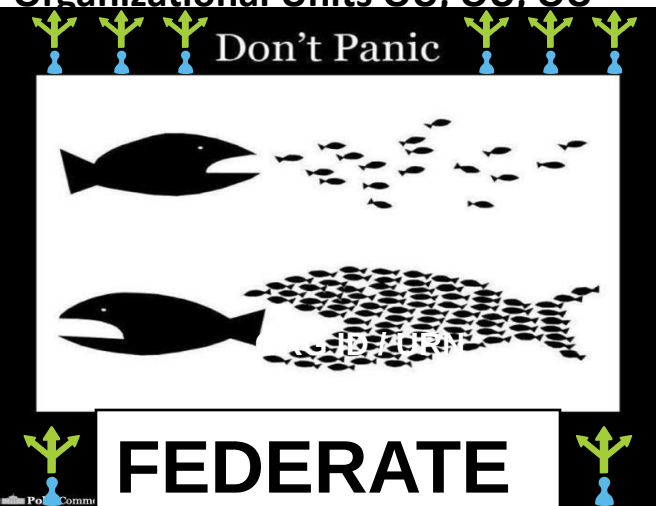
</Organizational_Identifier_Org_ID>
Organizational Units OU, OU, OU

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

PARTIDO X:
Distributed
Democratic
Participation

ETHEREUM:
Decentralized
Autonomous
Organizations

DAO




KEYSTONE

FEDERATION

-ROLES:
- <OPS>
-<INTEL>

Identity Provider
- Mapping
- Protocol

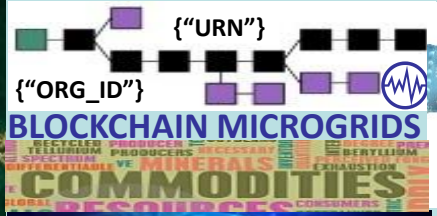
openstack™

VOTE ON BLOCKCHAIN

PARTIDO DEL FUTURO

FEDERATED ID


TESLA

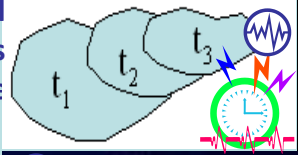







IEEE C37.118 Time Synchronization
Harmonization Heartbeat update Interval
PMU data time-stamp measure C37.118

Geo Spatial
Temporal Series
Water Drop Meme
Geospatial Radius

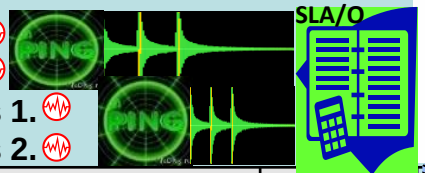


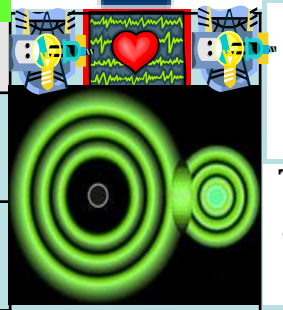

Paul Revere = Linear, Sequential meme

BLOCK TIME – SPACE ARBITRAGE TRADE
ENERGY TOKENS FOR FOOD, WATER,
TRANSPORTATION LOCALLY, REGIONALLY

WATER DROP
MEME= RADIUS
DISTANCE FROM
ENERGY SOURCE
Micro Payments
Demurrage Fees


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



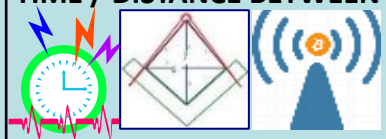
IEC 61850 Objects logical nodes, data objects or data attributes resends message with the heartbeat cycle



SYNC
DELTA
HEART
BEAT
Match
events to
Closest HBC

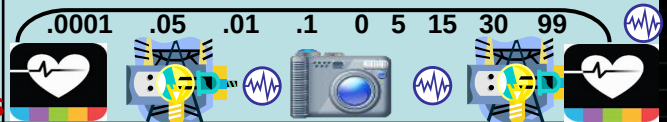
IEEE 802.1AG HOP BY HOP DETECTION
IEEE 802.11 HbH HOP BY HOP CONTROL
< HOPS = CHEAPER Sync Delta Heartbeat Messages
CROSS LEVEL OVERAGES / SHORTAGES ADJUST FOR
TIME / DISTANCE BETWEEN NETWORK NODES


FIREFLY EVENT BUS



Micro
Payments


FIREFLY-HEARTBEAT ALGO EVENT MESSAGE BUS




| TAG vector | ENERGY TOKENS ExDesc / COMMODITIES | digitalset |
|---|---|---|
| {"Org_ID"} ActiveID | [UFO2_ACTIVEID] | </EVENT> |
| IF1_Heartbeat (IF-Node1) | [UFO2_HEARTBEAT:#] | </EVENT> |
| IF2_Heartbeat (IF-Node2) | [UFO2_HEARTBEAT:#] | </EVENT> |
| {"UUID"} IF1_DeviceStatus (IF-Node1) | [UFO2_DEVICESTAT:#] | </EVENT> |
| {"UUID"} IF2_DeviceStatus (IF-Node2) | [UFO2_DEVICESTAT:#] | </EVENT> |
| IF1_State (IF-Node1) Δδ | [UFO2_STATE:#] | Δδ IF_State |
| IF2_State (IF-Node2) Δδ | [UFO2_STATE:#] | Δδ IF_State |

UniInt does not examine the remaining attributes, the point source and location must match

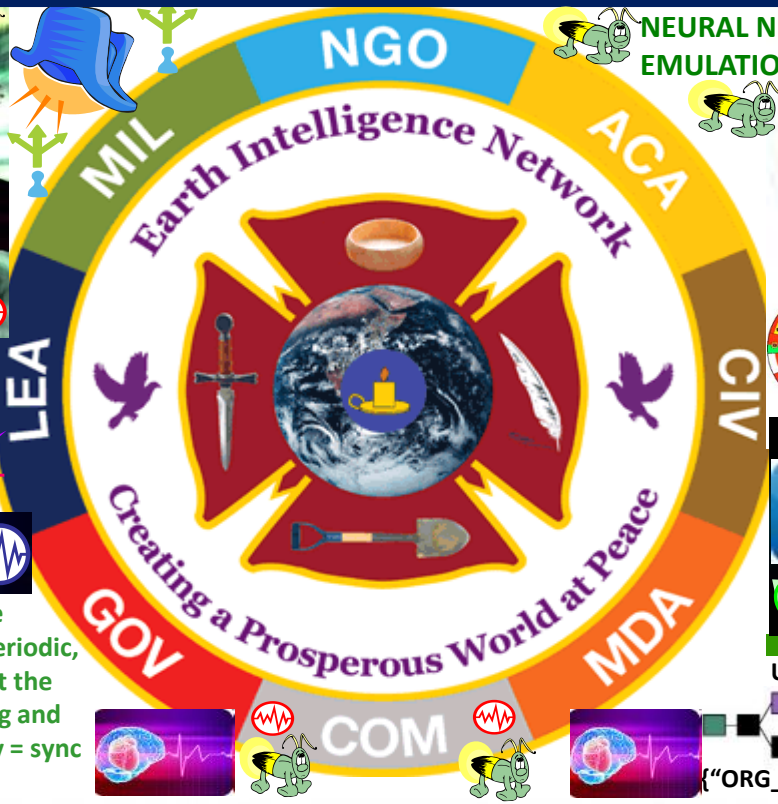
Micro Payments
Demurrage Fees

Heartbeat
State meta
Data snapshots

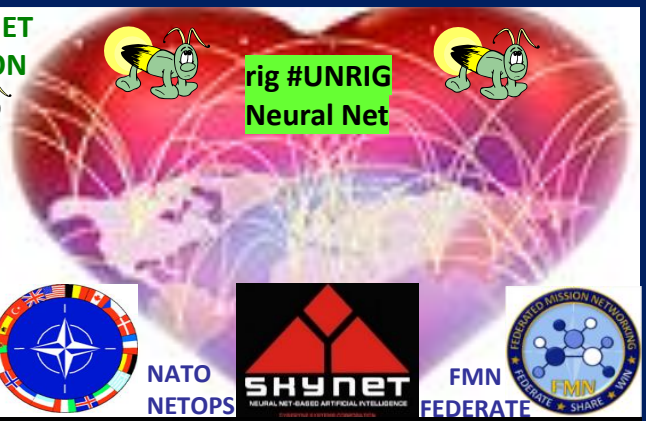

NET ENABLED OPERATIONS

NEO NET Enabled Ops: individuals are monitored within groups for Logistics, operational readiness. Groups are defined by statistical readiness / availability to support goals / projects

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




NEURAL NET EMULATION




NATO NETOPS

SKYNET

FMN FEDERATE

GLOBAL ECONOMIC HEARTBEAT

FIX {"108"} K %

FED USDe COIN

BLOCKTIME ARBITRAGE STATISTICALMEAN VALUE INDEX

Universal Event / Alert Bus

PROCESS BY PRECEDENCE

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

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

TIME – SPACE EQUATIONS

BLOCKCHAIN PARSING

ERLANG

ERICSSON MONEY OF PEACE

ERICSSON

PROXIMITY BEACONS

NEURAL NETWORK CONSENSUS ALGORITHM

MATCH EVENT ALERTS to CLOSEST OPTEMPO HEARTBEAT

{"URN"}

UNIVERSAL EVENT / ALERT FLASH HEARTBEAT MESSAGE BUS

Firefly- Heartbeat Algorithm

INFOCON 5 4 3 2 1 INFORMATION CONDITION

I.R.S.

IRS #1421

UNIVERSAL MEME METRECS / METERS

ON / OFF SHORE

Int'l Date Line

Int'l Date Line

vector

Unused Resources

vector

UNMET NEEDS

State Meta Data Heartbeat Snaps

MICRO CYCLES

IDMaps

SonarHops

TIME / DISTANCE ESTIMATION SERVICE

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NEURAL NET EMULATION


NATO NETOPS

SKYNET

FMN FEDERATE

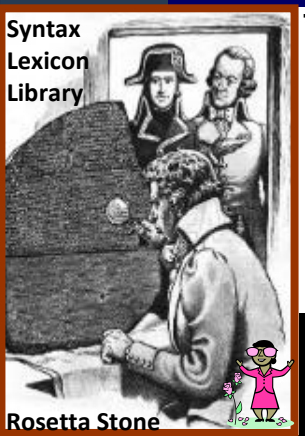
GLOBAL ECONOMIC HEARTBEAT


Universal Event / Alert Bus

PROCESS BY PRECEDENCE




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




TOOLSET: Kickstarter, UpWork, GitHub, Slack, Jira, Google Docs, Dropbox, ICO…


CODER'S GUIDE


STRUCTURED DATA EXCHANGE

300+ TEMPLATES

**PROJECT HBCnet: build artificial intelligence neural network supporting #UNRIG's Earth Intelligence Network EIN with Signals, Telemetry Mesh**

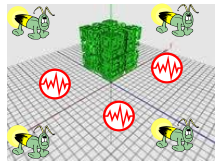
# IDMaps: Global Internet Host Distance Estimation Service

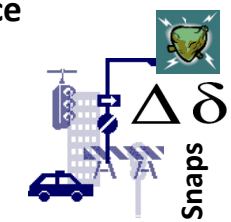
NDN: CONTENT ROUTING / <StratML> NDN INTEREST = Time / Distance

SonarHops

NAMED DATA NETWORKING

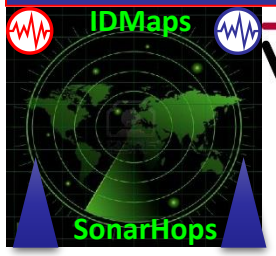
NDN INTEREST
Closer = Faster
Closer = Cheaper

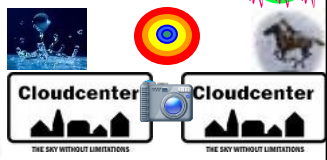


Sync Data Snaps

GEO-SPATIAL TEMPORAL INTENSITY METRICS / METERS




vector

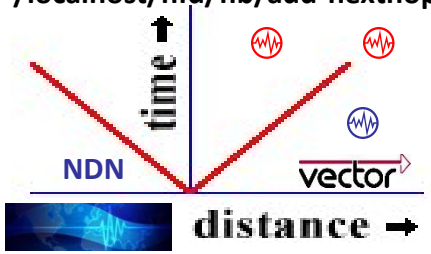



IDMaps scalable Internet-wide architecture measures, disseminates distance information

HOP COUNTS

REACHABILITY

/localhost/nfd/fib/add-nexthop




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

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

Name Prefix <Org_ID> Trie (NPT)

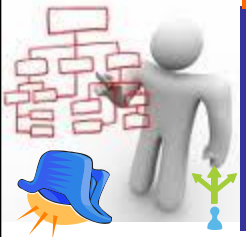
NDN_NAMES

NDN NAMED DATA NETWORK RIB / FIB Datasets event notification

NDN INTEREST LENGTH = DISTANCE BY HOPS

NDN INTEREST

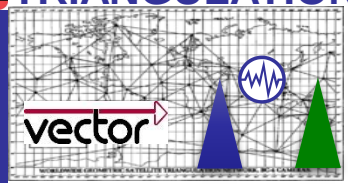
IS DATA FRESH ?



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

NDN RIB

TRIANGULATION





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

Datasets and Event Notification

INTEREST in <URNs>

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


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

MICRO-CYCLES


NDN INTEREST LIFETIME = TTL Time To Live

HEARTBEAT STATE META DATASNAPSHOTS

# 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

Volume | Velocity | Variety | Veracity*

TIME STAMP 1 | TIME STAMP 2 | TIME STAMP 3 | MACRO CYCLES

SLA

RFid

SYNC
SEED
_CLOUD

Data at Rest | Data in Motion | Data in Many Forms | Data in Doubt

{"108"}

Cloudcenter | Cloudcenter

FILTER BY ROLE <TYPE> <CLASS>

{"URN"}
Uniform
Resource Name

URN
URN
URN
URN

QUANTUM NIST Beacon
A Public Randomness Service
NON-
REPUDIATION

FLASH Message

UNIVERSAL DATA EVENT BUS

Syntax Lexicon

PRECEDENCE PROCESSING
<Org_ID> {"URN"} {"URN"}

NIST CYBER BEACON
RANDOM # BEACON

* Truthfulness, accuracy or precision, correctness

REST ARREST-D ALGORITHM

{"FILTERS"}

Universal Event / Alert Bus

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

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

SYNC
SYNC
SYNC

ASYNC
ASYNC

Flash HB Messages

State Meta Data
Heartbeat Snaps

MICRO
CYCLES

ERLANG

HASHGRAPH
Consensus Algorithm
Time Averaged
Time Stamping

WATER
DROP IN
POND MEME

+ 2
+ 1
+ 1
+ 2

Functional Sequential Erlang

SPACE – TIME Equations
BLOCKCHAIN PARSING
{"URN"}
{"Org_ID"}

PAUL REVERE MEME
LINEAR SEQUENTIAL

< / = / >

HEARTBEAT SYNCRONIZATION

FIREFLY SYNC
CONSENSUS

Distance Est
Service

Geo-spatial
IDMaps
SonarHops

FOAM spatial protocol

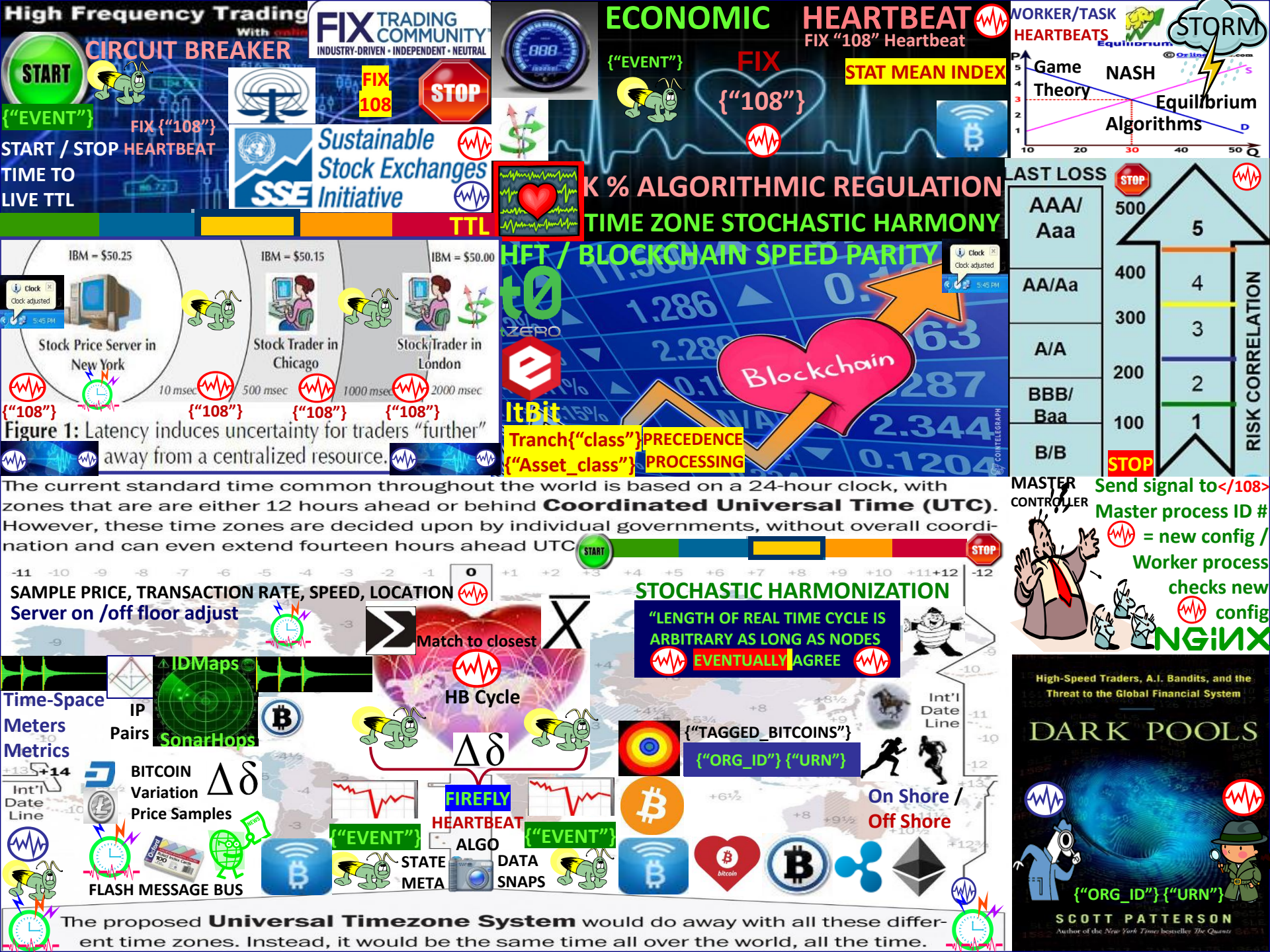
Ethereum Blockchain
World Computer
Neural Network

FOAM

INFOCON
5 4 3 2 1
INFORMATION
CONDITION

SIOP

"THE GRAIL"
TIME
Metrics
SPACE
Meters
COMMON
PICTURE

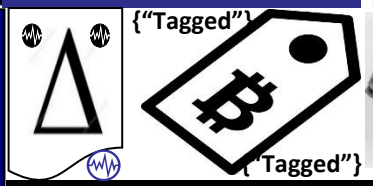

High Frequency Trading
With
FIX TRADING COMMUNITY
INDUSTRY-DRIVEN • INDEPENDENT • NEUTRAL
CIRCUIT BREAKER
START
STOP
FIX 108
{"EVENT"}
FIX {"108"}
START / STOP HEARTBEAT
TIME TO LIVE TTL
Sustainable Stock Exchanges Initiative
SSE
TTL
ECONOMIC HEARTBEAT
FIX "108" Heartbeat
{"EVENT"}
FIX {"108"}
STAT MEAN INDEX
WORKER/TASK HEARTBEATS
STORM
Game Theory
NASH Equilibrium
Algorithms
K % ALGORITHMIC REGULATION
TIME ZONE STOCHASTIC HARMONY
LAST LOSS
STOP
AAA/ Aaa
AA/Aa
A/A
BBB/ Baa
B/B
500
400
300
200
100
5
4
3
2
1
RISK CORRELATION
IBM = $50.25
IBM = $50.15
IBM = $50.00
Stock Price Server in New York
Stock Trader in Chicago
Stock Trader in London
10 msec
500 msec
1000 msec
2000 msec
{"108"}
Figure 1: Latency induces uncertainty for traders "further" away from a centralized resource.
HFT / BLOCKCHAIN SPEED PARITY
t0
ZERO
Blockchain
ItBit
Tranch{"class"}
{"Asset_class"}
PRECEDENCE
PROCESSING
The current standard time common throughout the world is based on a 24-hour clock, with zones that are 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
START
STOP
SAMPLE PRICE, TRANSACTION RATE, SPEED, LOCATION
Server on /off floor adjust
Match to closest
HB Cycle
STOCHASTIC HARMONIZATION
"LENGTH OF REAL TIME CYCLE IS ARBITRARY AS LONG AS NODES EVENTUALLY AGREE
MASTER CONTROLLER
Send signal to</108>
Master process ID #
= new config /
Worker process checks new config
NGINX
IDMaps
SonarHops
Time-Space Meters Metrics
IP Pairs
BITCOIN Variation Price Samples
Δδ
Int'l Date Line
{"TAGGED_BITCOINS"}
{"ORG_ID"} {"URN"}
On Shore / Off Shore
FIREFLY
HEARTBEAT ALGO
{"EVENT"}
STATE META
DATA SNAPS
FLASH MESSAGE BUS
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.
High-Speed Traders, A.I. Bandits, and the Threat to the Global Financial System
DARK POOLS
{"ORG_ID"} {"URN"}
SCOTT PATTERSON
Author of the New York Times bestseller The Quants

# Veritaseum

{"TAGGED"} CRYPTO

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

FINANCIAL NOSTRADAMUS REGGIE MIDDLETON




Zero Trust Transaction: money performs according to terms agreed to by the 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. Global stock, currency, commodities exchanges, letters of credit, insurance underwriting, trading, intellectual property…

## ECONOMIC HEARTBEAT

STATISTICAL MEAN VALUE INDEX PULSE


GDP INDEX ECONOMY / K% RULE

ALGORITHMIC REGULATION

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

VERITAS TOKENS = KEYS TO P2P Capital Market! Proprietary P2P smart contracts combined with the transformational power of blockchain, allow the entire world to participate in the reimagining of global capital markets. Purchasing Veritas tokens is analogous to purchasing keys to the internet of money – the most monumental paradigm shift since the advent of the net

currencyindex

SHELLING POINT TRUTH

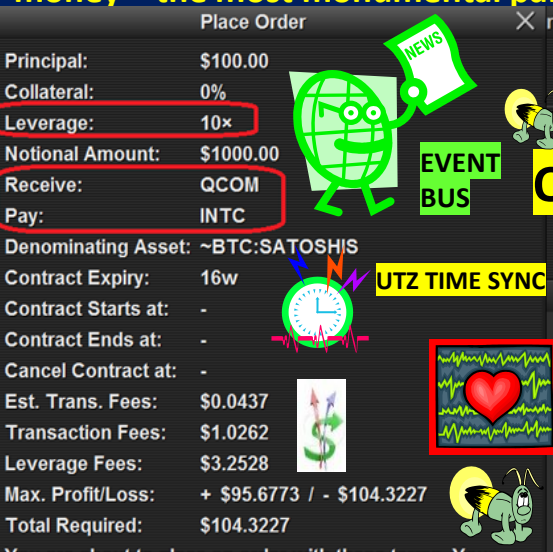
Price Indexes in Time and Space

SchellingPoint

AETERNITY A.I. WORLD COMPUTER

UTZ SYNC PULSE

STAT MEAN




NEWS

EVENT BUS

UTZ TIME SYNC

FIREFLY HEARTBEAT ALGO EVENT BUS

## DAO Distributed Autonomous Organization SOFTWARE POOLS

All Market Orders | Search

Collateral | Notional | Expiry

Heartbeat Flash Messages Precedence Processing

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.

INVESTOR POOL

{"URN"}

{"Org_ID"}

WORLD COMPUTER

UTZ Stochastic Harmonization

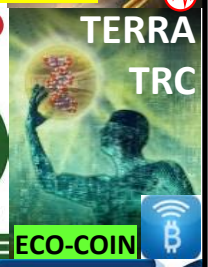
DFINITY

{"URN"} {"URN"}

{"Tagged_Bitcoins"}

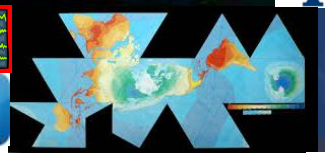
COMMODITIES



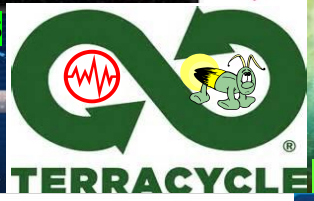




DISTRIBUTED SMART ECONOMY NETWORK

NEO
smart economy








ECO-COIN

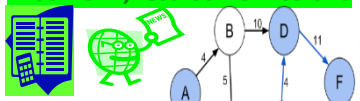
NEO NET Enabled Ops
Users are monitored
As individuals within
Groups. Groups are
Defined by statistical
Readiness / availability

Earth is a spaceship that cannot be resupplied = Vector user's / groups to efficiently locate, obtain resources for Ecologically Responsible Econometrics
Closer = LESS FUEL, less C02 emissions

TRADE
FEDERATIONS

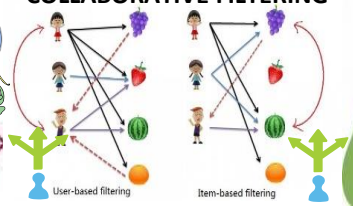


INCENTIVIZE ECOLOGICALLY RESPONSIBLE ECONOMICS
Re-use of NATO's system of systems best practice Is shortest, least resistance path

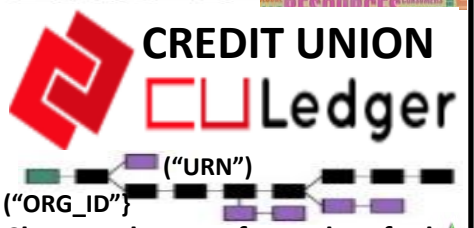





COLLABORATIVE FILTERING





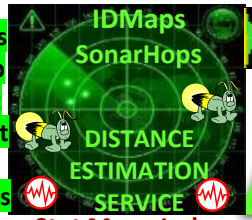

Closer = cheaper, faster, less fuel..



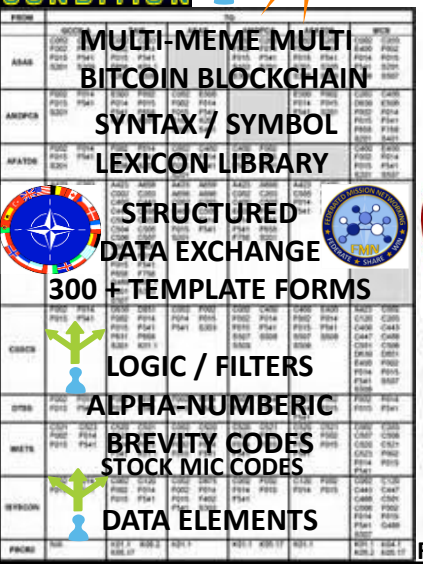
ORG_ID Organizational Identifier Based Filtering

Geo-Spatial Temporal
Time – Space Metrics

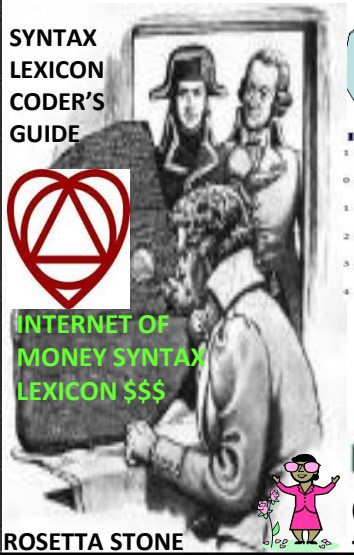
GEO-LOC
Time Stamps
Optimal hop
By hop best
Route_Select
Eco-Sound
Econometrics





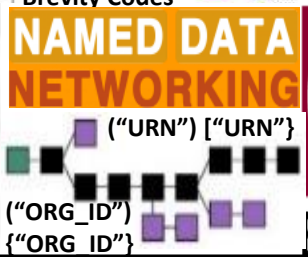

SYNTAX
LEXICON
CODER'S
GUIDE



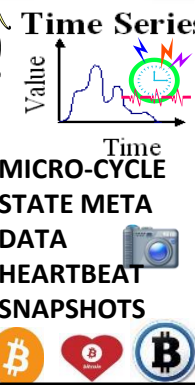



Time-Space
Algorithms
BLOCKCHAIN
PARSING

Stat Mean Index






Firefly HB ALGO




{"Org_ID"}
GROUP
ACTIVITIES
SAMPLED DURING
MICRO-CYCLES
STATE META DATA
SNAPSHOPS FORM
MACRO
CYCLE
REPORT

# ERLANG

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

**Ericsson Open Money For Society Patent App**

**20130166398 "System And Method For Implementing A Context Based Payment System."**

**ERICSSON ERLANG API FOR BLOCKCHAIN ERICSSON**

**"BITCOIN MAKES MONEY PROGRAMMABLE. MONEY IS SIMPLY DATA"WIRED MAG**

**"BITCOIN IS A LANGUAGE" "ITS VALUE IS TIME ITSELF" ----DIGINOMICS**

**"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"**

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


## Functional Sequential Erlang

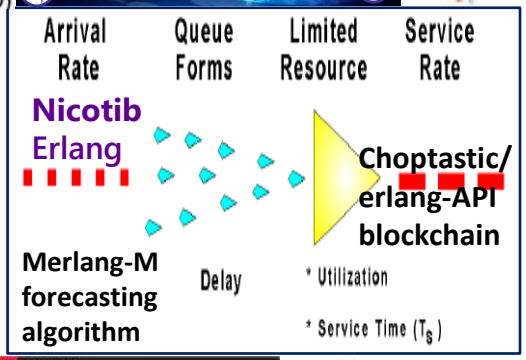
- Data types:
  - Integers (incl. BigNums), floats, atoms
  - tuples/records, lists/plists, binaries, funs
  - Maps (added in R17)
- single assignment
- pattern matching & guards
- closures (anonymous function data type)
- list comprehensions
- bit-syntax & binary comprehensions
- tail recursion & tail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

**SORTING ALGO'S**

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

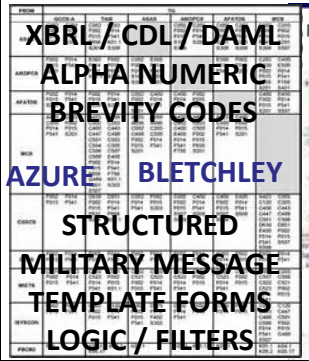
**queueing systems wait times stochastic processes, function scheduling Start, Stop TTL**




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

**Mnesia database** **("Organization_ID")** **Global name resolution**







**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.

HASH TABLE

HASH TABLE

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

HASH TABLES
NONCE VALUES

**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.** Δδ X

**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.**

MVP

CLOCK FACE 360'
90 / 90 / 90 / 90

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

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

2nd Base

ALICE
Corp
VS
CLS
BANK SC 573 US 134 2347
CLAIMS MAY NOT DIRECT TOWARDS ABSTRACT IDEAS
Physical = Opposite of abstract = ALICE
HEART BEACON CYCLE
TIME – SPACE METER
USPTO 13/573,002

MACRO CYCLES
RULES / ROLES
INSTRUCTIONS
WORKFLOW
UMPIRE
COACH

90 feet

Blockchain / crypto currency increments

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

3rd Base
STATISTICIAN
Metrics, Meters
Stat Mean Value Index

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

first base
RUNNER
Message Bus

UNIVERSAL HEARTBEAT MESSAGE EVENT BUS

Firefly – Heartbeat Algo
Stochastic Harmonization
EVENTS
FIX {"108"}
FLASH MESSAGE EVENT BUS
TIME STAMP SERVER
Epoch Time Cycles

3 X 5
HASH TABLES
STATE META
DATA SHARDS

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

State Meta
Data Snapshots
Survey Point

MICRO CYCLES
home plate

HASH
NONCE
VALUES

INTERNET OF MONEY = TIME CYCLES USED TO PARSE PROCESS SYNTAX

cycle n → n + 1 → n + 2

FIREFLY – HEARTBEAT ALGO
EVENT BUS

STAT MEAN VALUE INDEX
CONTRIBUTIONS TO STATISTICS

Price Indexes in Time and Space

SchellingPoint

Microsoft Bletchley modular framework: choose combination of technologies best fits Biz domain

AZURE: Core/Kernel/Universal Protocol

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

Unspent Transaction Output protocols UTXO

Crypto Tokenized Assets Digital Bearer Bonds unique identity for owned artifacts

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

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

**Blockchain Fabric:** Blockchain Gateway Services Interledger-like services to allow for SmartContracts and tokenized objects to be passed between different ledger systems.

Data Services - key data services like distributed file systems (IPFS, Storj, etc) of off-chain data referenced by public keys. Auditing, Advanced Analytics, Machine Learning, Dashboarding services for SmartContracts, Blockchains, Consortia, Regulators

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

MULTI-MEME MULTI-METER

Microsoft AZURE BLETCHLEY

MYRIAD MEMES MEDIATION

BLOCKCHAIN

Blockchain Startups

Top Blockchain startups disrupting non-financial markets

Venture Radar

{"URN"}

{"Org_ID"}

OFF-SITE

OFF-PAGE

CONNECTOR

{"URN"}

{"Org_ID"}

DAO

CLOCK FACE 360'

90 / 90 / 90 / 90

BASEBALL "DIAMOND"

A diamond Is a square Is a block in 3D

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

2nd Base

ALICE

Corp

VS

CLS

BANK SC 573 US 134 2347

CLAIMS MAY NOT DIRECT TOWARDS ABSTRACT IDEAS

Physical = Opposite of abstract = ALICE

HEART BEACON CYCLE

TIME – SPACE METER

USPTO 13/573,002

MACRO CYCLES

RULES / ROLES

INSTRUCTIONS

WORKFLOW

UMPIRE

COACH

90 feet

90 feet

Blockchain / crypto currency increments

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Firefly – Heartbeat Algo

Stochastic Harmonization

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3 X 5

HASH TABLES

STATE META

DATA SHARDS

90 feet

SETTLEMENTS / EXCHANGES = TAXABLE EVENTS AKIN TO PROPERTY

90 feet

IRS

#1421

I.R.S.

FIX {"108"}

FLASH MESSAGE EVENT BUS

State Meta

Data Snapshots

Survey Point

MICRO CYCLES

home plate

TIME STAMP SERVER

Epoch Time Cycles

Rosetta Stone Syntax

LEXICON

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 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.

EVENT BUS

FIREFLY EVENTS

FLASH MESSAGES

SYNC TO CLOSEST

HEARTBEAT EPOCH

FIREFLY HEARTBEAT ALGORITHM

Δ δ

STATE META DATA SNAPSHOTS

HEART BEACON CYCLE

IoT

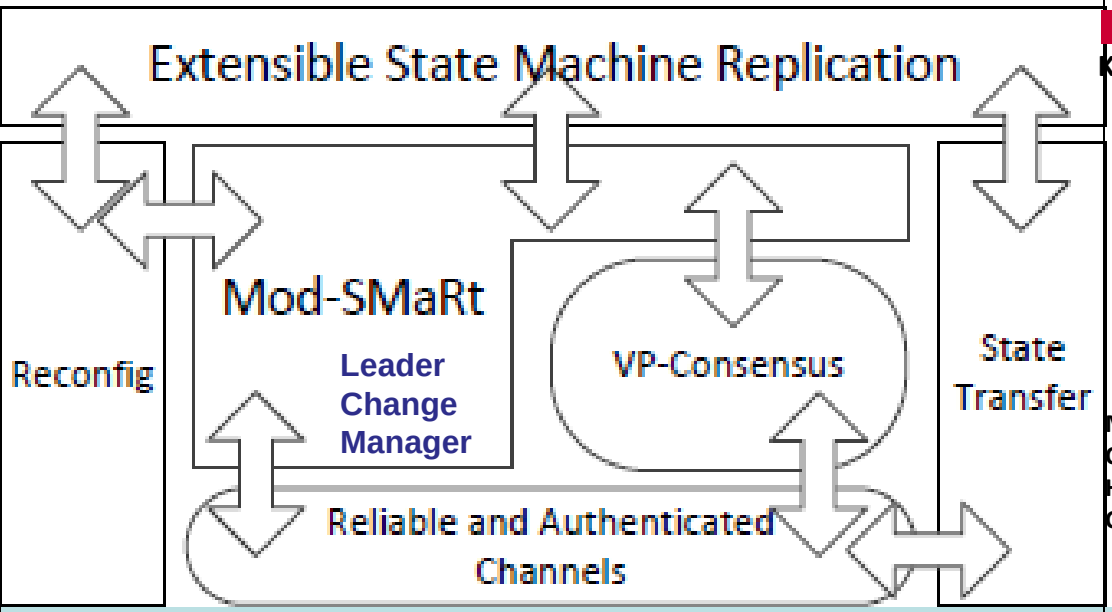
Microsoft Orleans

TIME-SPACE EQUATIONS ALGORITHMS BLOCKCHAIN PARSING

ERLANG

# 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**



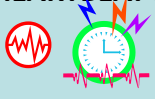
**USCt ALICE CORP V CLS BANK**
**PHYSICAL = OPPOSITE OF ABSTRACT**

**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**

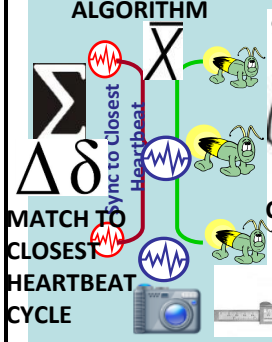
**K00.99 HEARTBEAT SYNC DELTA STATE META DATA SNAPSHOTS**

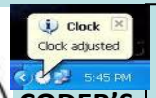





**FIREFLY-HEARTBEAT ALGORITHM**

**Bitcoin Blockchain Multi-Meme Multi-Meter**



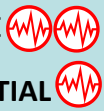

**CODER'S GUIDE SYNTAX LEXICON**

**HASH NONCE**

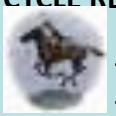
**MATCH TO CLOSEST HEARTBEAT CYCLE**

**BITCOIN MINER**

**MICRO-CYCLE STATE META DATA SNAPSHOTS AGGREGATED INTO MACRO OPERATION CYCLE RECONFIG MESSAGE**



**BUILDING BLOCKS:**
**- TIME CYCLE EPOCHS**
**- SYNTAX INSTRUCTIONS**



**- LINEAR, SEQUENTIAL**
**- GEO SPATIAL, TEMPORAL**

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

ethereum

**ETHER: Compensate Resource Contribution**

**Gas: price to Run contract transactions**

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


Ether hedged against other crypto / FIAT currencies price changes

**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**

| Txs | State transition: | | Txs | State transition: | | Txs | State transition: | |
|---|---|---|---|---|---|---|---|---|
| 0cb4 9f12 | 123: | 400 | 5581 2fc3 | 905: | 560 | 7ce6 | 123: | 440 |
| | 8723: | 0 | | 1141: | 8021 | | 1141: | 7981 |
| | 42: | 15776 | | 42: | 15775 | | | |

SWARM (storage) — WHISPER (messaging) — EVM (consensus)

CLOCK FACE 360'
90 / 90 / 90 / 90

**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

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USPTO 13/573,002

MACRO CYCLES
RULES / ROLES
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WORKFLOW
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90 feet

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Cube has Length, Depth, Height, Volume

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STATISTICIAN
Metrics, Meters
Stat Mean Value Index

first base
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Message Bus

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

UNIVERSAL HEARTBEAT MESSAGE EVENT BUS

3 X 5 HASH TABLES
STATE META DATA SHARDS

90 feet

SETTLEMENTS / EXCHANGES = TAXABLE EVENTS AKIN TO PROPERTY

IRS #1421

90 feet

Firefly – Heartbeat Algo
Stochastic Harmonization
EVENTS
FIX {"108"}
FLASH MESSAGE EVENT BUS

State Meta Data Snapshots

Survey Point

MICRO CYCLES

home plate

TIME STAMP SERVER

Epoch Time Cycles

HEARTBEAT FLASH MESSAGES
BLOCKCHAIN HASH TABLES

UNIVERSAL EVENT BUS
STATISTICAL MEAN SAMPLING
STOCHASTIC HARMONIZATION

MACRO ECONOMIC CYCLES

STAT MEAN VALUE INDEX
SUM, ADD, AGGREGATE

MICRO CYCLE SAMPLING

SPACE-TIME METRICS

STATE META-DATA
HEARTBEAT SNAPSHOTS

BITCOIN MULTI MEME MULTI-METER

{"URN"}
{"Org_ID"}


FUNGABILITY
BITCOIN's 6 ISSUES
FEDCOIN / WORLDCOIN
STATISTICAL MEAN VALUE INDEX
FIX 108
FIX 108
Trade w Earth?
BITCOIN's VALUE IS TIME ITSELF
BLOCKTIME ARBITRAGE
FRIEDMAN's K % RULE
CURRENCY CONVERTER
PHYSICAL
$$$
DENARIUM
$$$
1 to 1 CONVERSION
CURRENCY PULSE X % GDP @ Y MACRO Economic Cycle
IDENTITY
{"Org_ID"}
{"Org_ID"}
Organizational ID
Organizational Unit OU
FINCEN > { "Org_ID" "} "OU" > WALLET 1, 2,3,4,5.. }
Multi-SIG e.g.., select TRIBAL COUNCIL MEMBERS
Federation Gateway
WAVES
$$$
$$$
TIME SERIES DATABASE
TERRA TRC
¥EN
namecoin
MONEYBALL ECONOMICS
currencyindex
COMMODITIES
VOLATILITY
MV = PQ
COMMODITY BASKET PRICE INDEX
STATISTICAL MEAN VALUE INDEX
MEDIATION GATEWAY
MICROSOFT BLETCHLEY
WORLD COMPUTER
Time Series Dbase
Price Indexes in Time and Space
Statistical Mean VALUE INDEX
</DOMAIN>.COM
{"DOMAIN"} MSFT.COM
NO INTRINSIC VALUE
EVENT BUS
ETH BaaS
Ethereum Blockchain as a Service
ETHEREUM
Little League Baseball Tournament main embodiment
13,573,002 SC Alice Corp V CLS Bank
Azure
cycle n
n + 1
n + 2
Cloudcenter
Cloudcenter
Multi-Meme
INCONSISTENT MEMES
- WORK / STAKE
- Property / Land
- POET TIME
Mined Bitcoins
Unmined Bitcoins
IRS Memo 1421
BLOCK
Roles
Meters
Rules
Metrics
Attribute Series
Time Series
Value
Time
Contract Definition Language
Digital Asset Modeling Language
Geo Spatial Temporal Series
WORLD COMPUTER
09:08:57
NIST TIME BEACON
Quantum Random Number Beacon
HEARTBEAT MESSAGES
On / Off Shore
Non-Repudiation
Cyber Beacon
NIST Beacon
A Public Randomness Service
Non-Repudiation
BLOCKCHAIN SCALEABILITY
LIGHTNING NETWORK
Sync Deltas
("INTEREST"}
{"DISTANCE"}
FIREFLY – HEARTBEAT
TIME-SPACE ALGORITHM
Stochastic Harmonization
IDMaps
SonarHops
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
Server nodes, miners only keep recent blocks
Sync Delta State Meta Data Snaps

DFINITY

RANDOM # BEACON

BLOCKCHAIN NERVOUS SYSTEM

NIST Beacon
A Public Randomness Service
QUANTUM RANDOM #

## Each process has mining identity

- Public key with meta data attached

## - IDs mediate participation

- Private network: trusted dealer defines list
- Public network: CC security deposit, USCIDs

3 x 5

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

INDEX CARD="SHARD"

# BLOCKCHAIN NERVOUS SYSTEM

HEARTBEAT {"108"} State Meta Data Snapshot Msgs

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

FIREFLY-HEARTBEAT FLASH Msg EVENT BUS

## Threshold Relay Chain techniques

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

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

**GROUP Signature *is* random number**
**- Number *selects* next group** {"Org_ID"} {"Org_ID"}
**- Next group use previous no. as message**
**- Verifiable Random Function**
- Numbers verifiable using group public key
- New values produced in threshold agreement

## - Random members {"Org_ID"} {"Org_ID"}

- Each process is a member of multiple groups
- Groups intersect, have +/- 400 members

## - BLS signature scheme

- **Math magic…** If 51% of group members broadcast "signature shares" on a message, these are combined to create the group's threshold signature.

**HYPER GEOMETRIC PROBABILITY CALCULATOR**

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

3 x 5

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

UTZ TIME ZONE SYNC

USCt 573 134 2347

NIST TIME BEACON

FIREFLY FLASHES MSGs EMULATE NEURAL NET

FIREFLY EVENTS = THRESHOLD VALUES

NIST Beacon
A Public Randomness Service
QUANTUM RANDOM #

CLOCK FACE 360'
90 / 90 / 90 / 90

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

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

2nd Base

ALICE
Corp
VS
CLS
BANK

SC 573 US 134 2347
CLAIMS MAY NOT DIRECT TOWARDS ABSTRACT IDEAS
Physical = Opposite of abstract = ALICE
HEART BEACON CYCLE TIME – SPACE METER
USPTO 13/573,002

MACRO CYCLES

RULES / ROLES
INSTRUCTIONS
WORKFLOW
UMPIRE
COACH

90 feet

Blockchain / crypto currency increments

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

3rd Base
STATISTICIAN
Metrics, Meters
Stat Mean Value Index

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

UNIVERSAL HEARTBEAT MESSAGE EVENT BUS

first base
RUNNER
Message Bus

3 X 5
HASH TABLES
STATE META
DATA SHARDS

SETTLEMENTS / EXCHANGES
= TAXABLE EVENTS
AKIN TO PROPERTY

IRS #1421

Firefly – Heartbeat Algo
Stochastic Harmonization
FIX {"108"}
FLASH MESSAGE EVENT BUS
EVENTS

State Meta Data Snapshots
Survey Point
MICRO CYCLES
home plate

TIME STAMP SERVER
Epoch Time Cycles

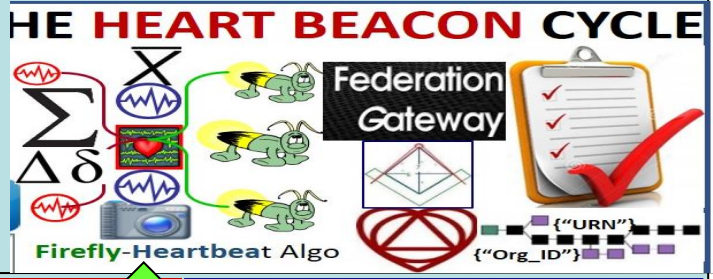
æternity blockchain

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

ERLANG

ERLANG API FOR BLOCKCHAIN

ERICSSON


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.

EVENT BUS FIREFLY INSPIRED NEARTBEAT SYNC

HEARTBEAT FLASH MESSAGES EMULATE NEURAL NETWORKS

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

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.


{"URN"} {"URN"}

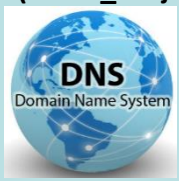
Aeons: energy for applications implemented on the platform.

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.

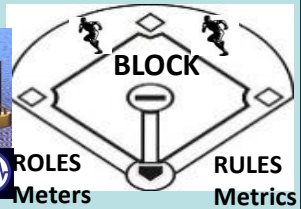



AETERNITY CROSS-CHAIN ATOMIC SWAPS CORRESPOND TO HEART BEACON CYCLE'S USE OF BATTLEFIELD DIGITIZATION DERIVED HEARTBEAT SYNC DELTAS $\Delta\delta$


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

TOKENS REPRESENT REAL WORLD VALUE URN RESOURCES

ETEREUM BASED USES GAS GUAGE MEME INDICATING THRESHOLD MET / NOT MET TO PROCESS


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

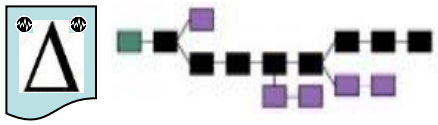
Federation Gateway {"ORG_ID"}

ARIN American Registry for Internet Numbers

# HYPER LEDGER OPEN SOURCE BLOCKCHAIN

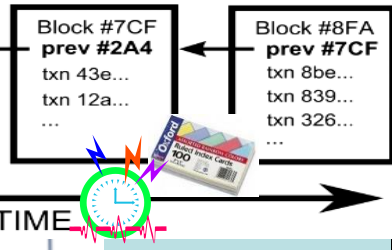
Core APIs, & SDKs

Δδ Shared Ledger



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

Alpha-Numerics




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

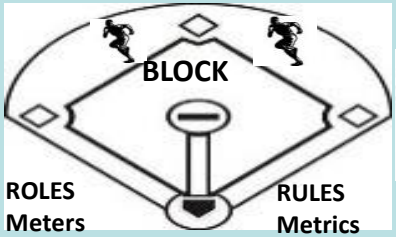
FEDERATION

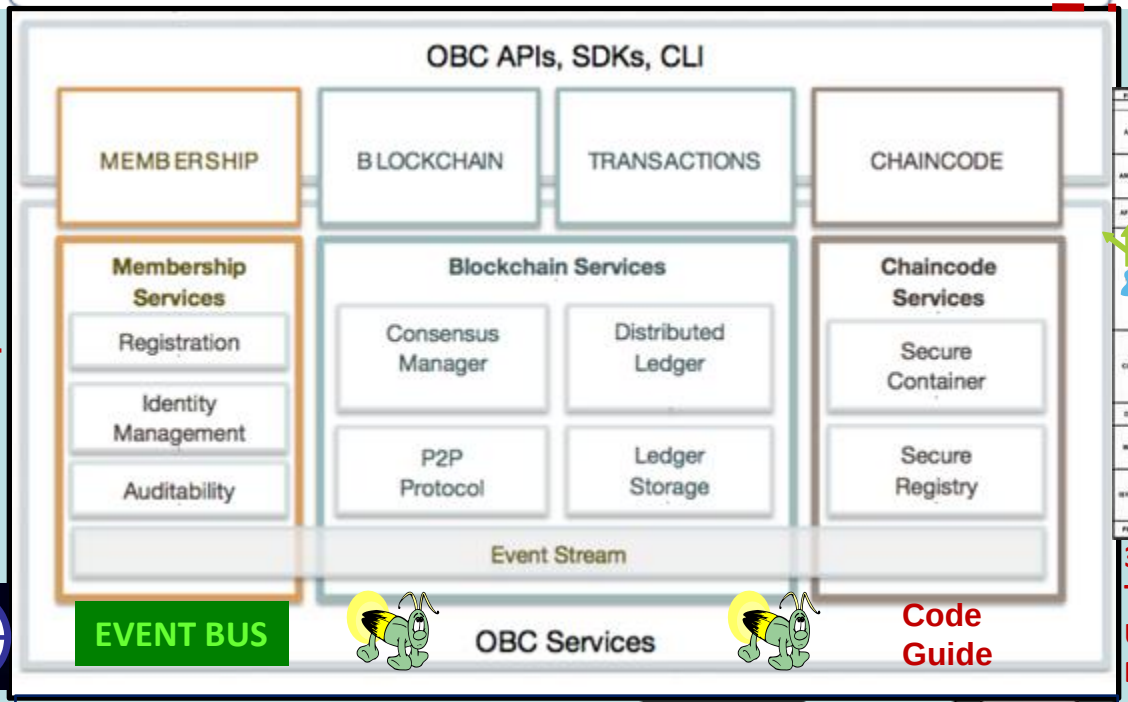
Federation Gateway

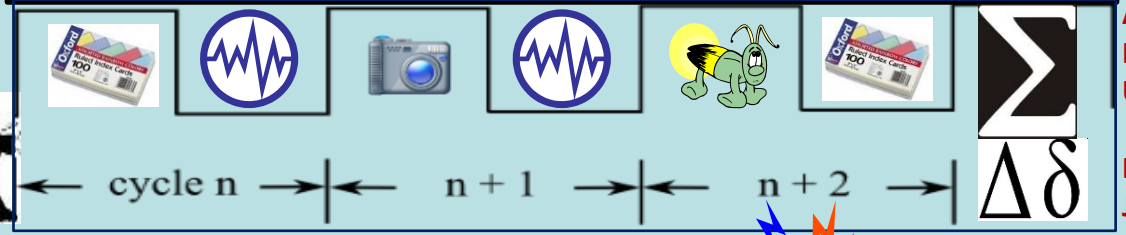
METRICS ("Organization ID")
METERS

RESTFUL SYNC DELTA
CHANGE MANAGEMENT
MICRO-MACRO CYCLE

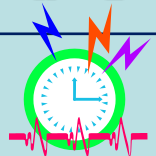
BLOCKTIME ARBITRAGE



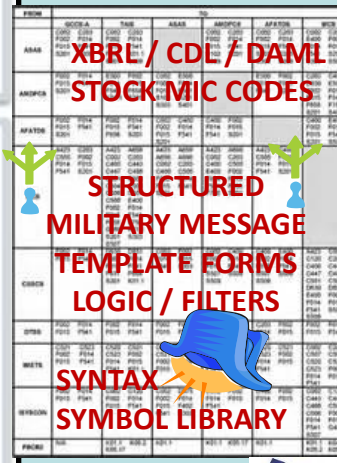




MICRO-MACRO CYCLE SCHEDULE



FFIRNS
FFUDNS

ROSETTA STONE



XBRL / 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

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

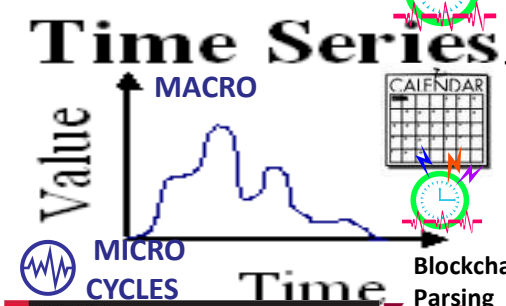
# SAWTOOTH LAKE POETIC CONSENSUS PROOF OF ELAPSED TIME: POET

*"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

P O E T





**QUORUM VOTING PROTOCOL**

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

**Voting based selection Instead of only using the stake size, the block generators can be selected by votes**

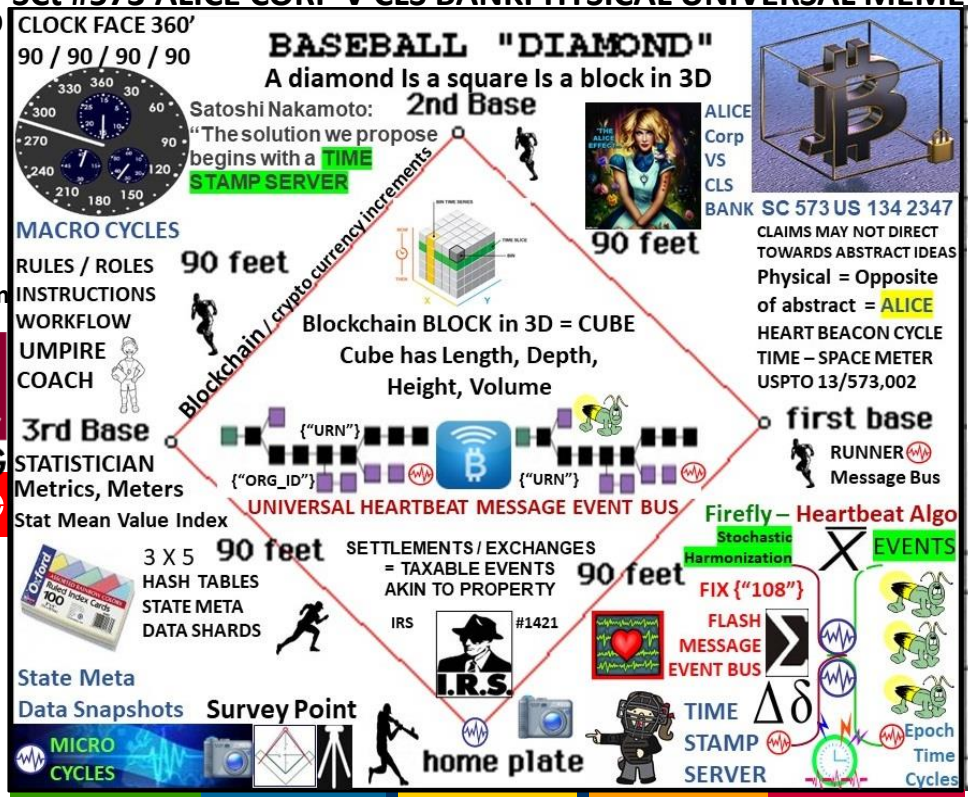
**ex: League MVP**


MVP

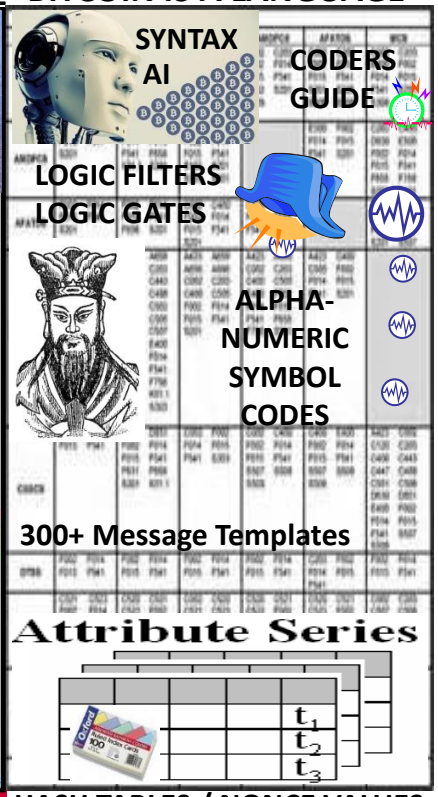

Robert's Rules quorum = minimum # of voting members who must be present at meetings to conduct business of the group

**TOURNAMENT LEAGUE BOARD**

## SCt #573 ALICE CORP V CLS BANKPHYSICAL UNIVERSAL MEME

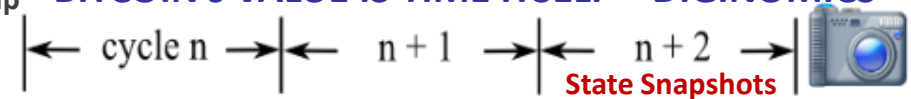



## "BITCOIN IS A LANGUAGE"

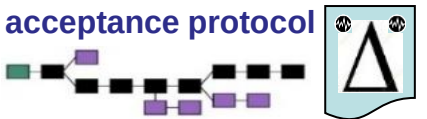



## FIREFLY-HEARTBEAT FLASH MESSAGES UNIVERSAL EVENT BUS

## "BITCOIN's VALUE IS TIME ITSELF – DIGINOMICS"




**Capture ledger's state Δ δ**
**Transaction language changes ledger state**
**Consensus, transaction acceptance protocol**





**"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/**

**"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.

CLOCK FACE 360'
90 / 90 / 90 / 90

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

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

2nd Base

ALICE Corp VS CLS BANK

SC 573 US 134 2347
CLAIMS MAY NOT DIRECT TOWARDS ABSTRACT IDEAS
Physical = Opposite of abstract = ALICE
HEART BEACON CYCLE TIME – SPACE METER
USPTO 13/573,002

MACRO CYCLES
RULES / ROLES
INSTRUCTIONS
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90 feet

Blockchain / crypto currency increments

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

3rd Base
STATISTICIAN
Metrics, Meters
Stat Mean Value Index

{"URN"} {"ORG_ID"} {"URN"}
UNIVERSAL HEARTBEAT MESSAGE EVENT BUS

first base
RUNNER
Message Bus

3 X 5
HASH TABLES
STATE META
DATA SHARDS

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

Firefly – Heartbeat Algo
Stochastic Harmonization
EVENTS
FIX {"108"}
FLASH MESSAGE EVENT BUS
TIME STAMP SERVER
Epoch Time Cycles

State Meta
Data Snapshots
Survey Point
MICRO CYCLES
home plate

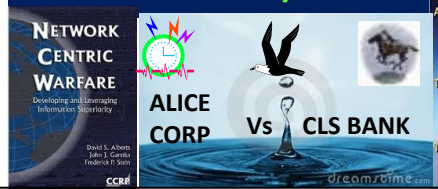
TIME EPOCH CYCLES / SYNTAX
cycle n → n + 1 → n + 2

STOCHASTIC HARMONIZATION FIREFLY-HEARTBEAT EVENT BUS

HEART BEACON CYCLE = IMPROVEMENT TO NETWORK CENTRIC WARFARE

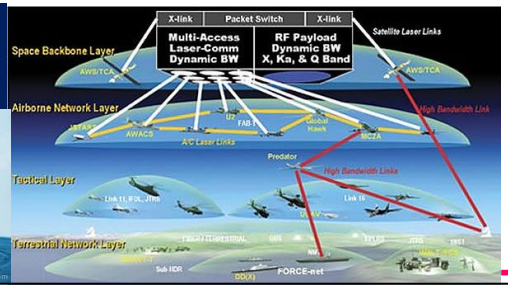
Firefly - Heartbeat synchronization: nodes in a distributed system generate periodic, local "heartbeat" events approximately at the same time with a goal of all nodes starting / ending cycles at the same time eventually = HB CYCLE

DAO: RAND THINK TANK TERM COINED + / - 2001









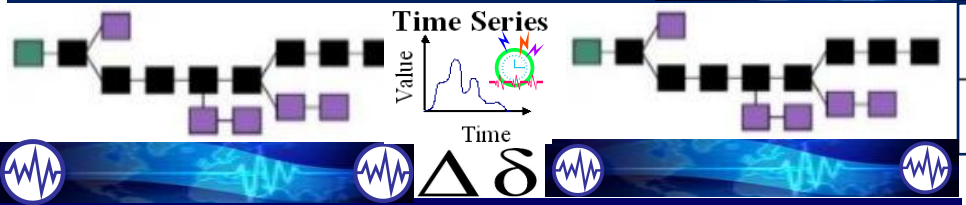
**STATE:** stored data at a given instant in time

**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.**

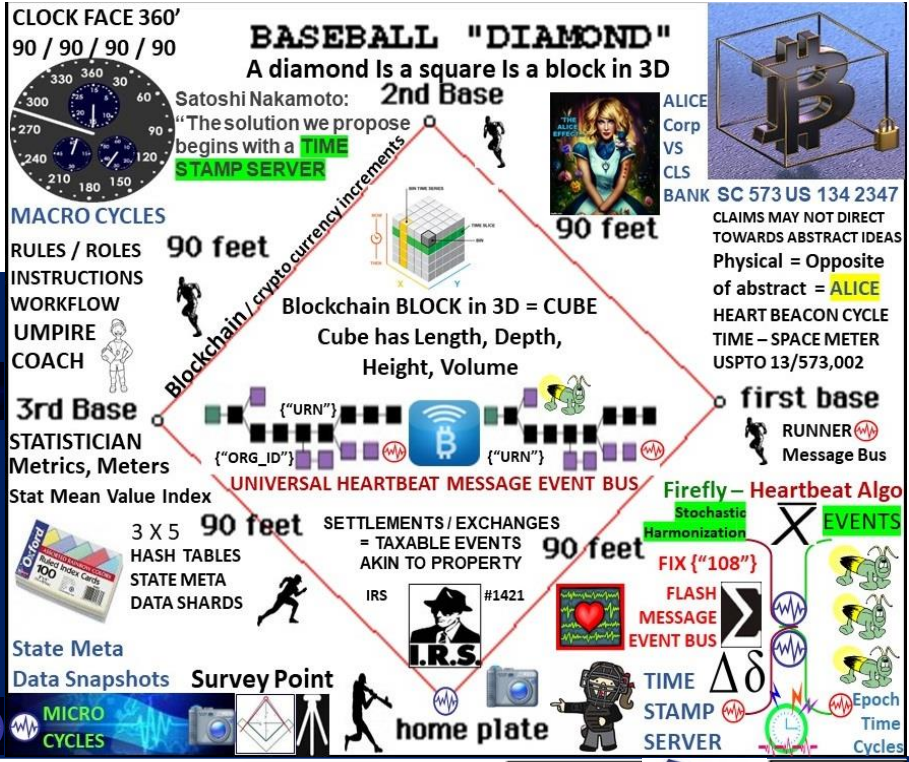
**1.Part of the blockchain state is locked via multisignature or smart contract conventon, so that a specific set of participants must completely agree with each other to update it.**

**2.Participants update the state amongst themselves** by constructing and signing transactions that *could* be submitted to the blockchain, but instead are merely held onto for now. Each new update "trumps" previous updates.

3.Finally, **participants submit the state back to the blockchain**, which closes the state channel and unlocks the state again (usually in a different configuration than it started with)




**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 transactions didn't happen.





FLASH HEARTBEAT MESSAGES
HEARTBEAT STATE META-DATA
SNAPSHOTS EVERY
10, N MIN MICRO TO
MACRO ECON CYCLE

HASH TABLES

STATE
SNAPS

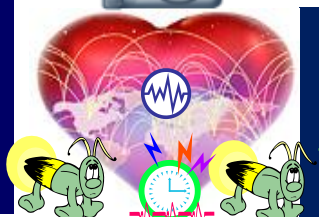

HASH

SYNTAX

Geo
Spatial
Temporal Series

Attribute Series

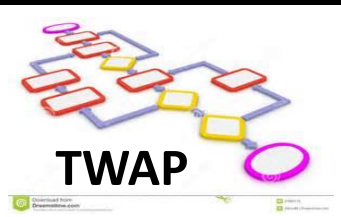
META-DATA



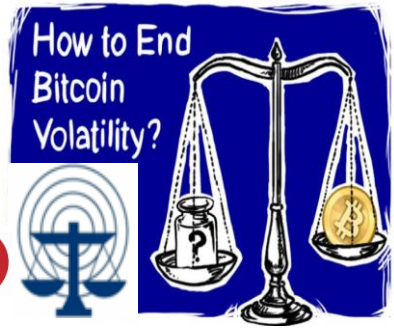
**Firefly - Heartbeat synchronization: nodes in a distributed system generate periodic, local "heartbeat" events approximately at the same time with a goal of all nodes starting / ending cycles at the same time eventually = HB CYCLE**

# TWAP Algorithm Manages Bitcoin Price Volatility Algorithm

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







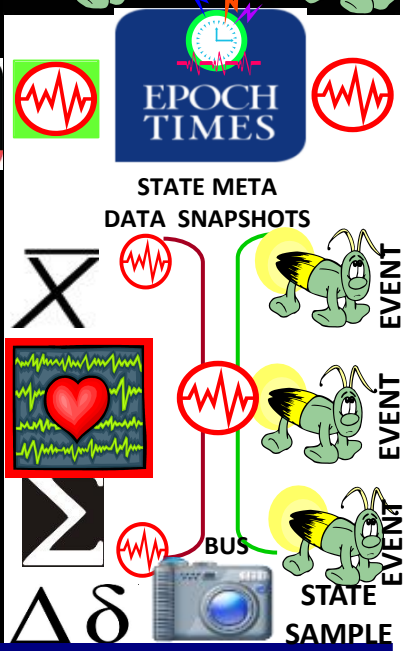

FIREFLY HEARTBEAT ALGO

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**

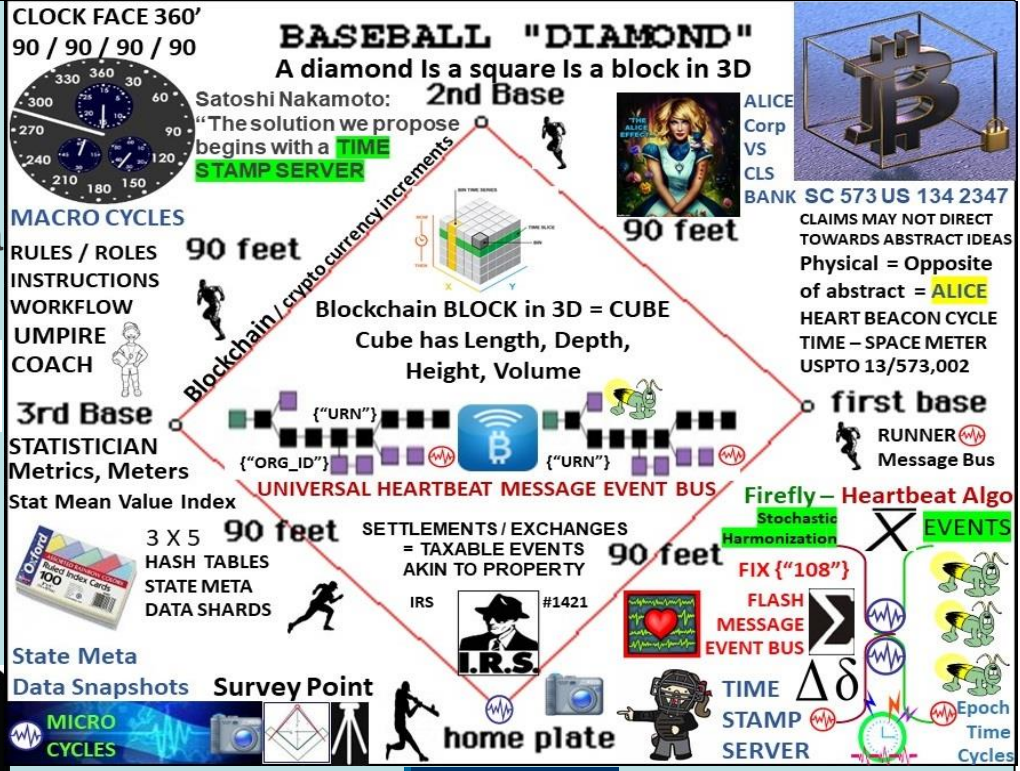
**Get by: Block-height, Time-stamp or Transaction**

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

•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.

BRAVE NEWCOIN. Digital Currency Insights

**"Blocks are a measure of time": The Bitcoin Blockchain 'B-WAP'**





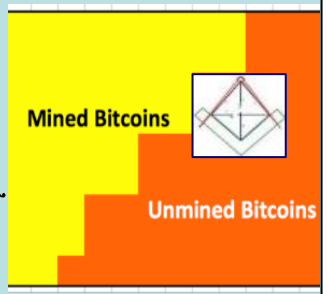
**FIREFLY – HEARTBEAT ALGORITHM UNIVERSAL EVENT BUS**

**MATCH EVENTS TO CLOSEST HBC**

**IRS #1421 Purchased Coins**

**API CODE INSTRUCTIONS**


**TIME STAMPS**




**UTZ TIME ZONE TIME SYNC**

**EVENT BUS**

**STATE META DATA SNAP SHOTS**

# 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

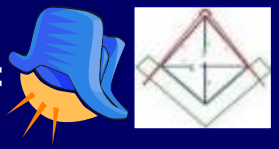
OPENBAZAAR.ORG


**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***

**•VALUES:**



Demurrage Fees

TERRATRC TRADE REFERENCE CURRENCY

"Money of Peace"

Commodity / Currency Index



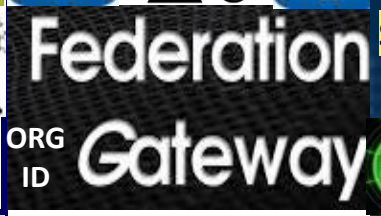

**Free and open markets:**

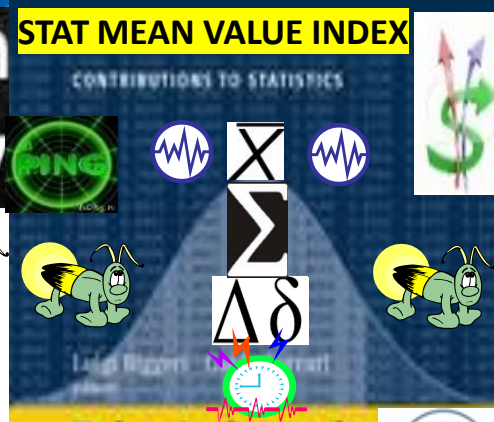
**Creating open, competitive markets for services that cannot be perfectly solved with technology**

HASH Values

Nonce Values

SCt Alice V Cls Bank



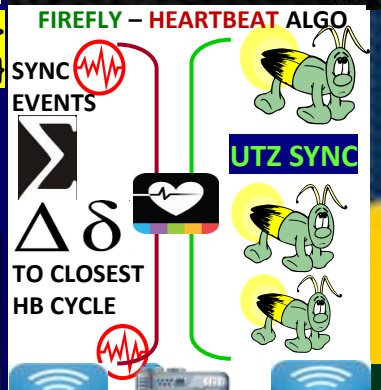




**•Privacy**

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

</DATA>

("FILTERS")




**Bitcoin: OpenBazaar transactional currency**

**Cyrptographic Security**

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


SchellingPoint

# R3 CEV Corda shared ledger

CorDapp Store

e.g. Derivatives: App App App App

e.g. Trade Finance: App App App

e.g. KYC / AML: App App

## Concord Platform Services

- CorDapp Store
- Notaries
- Network Map Service
- Trusted Digital Backbone Network
- Regulatory Reporting
- Oracles
- Service Provider Gateways
- Bank-Internal Gateways

## Concord Vault

Interoperability

- Asset Registry
- Trade Registry
- Cash
- Identity Vault

## Concord Operations Centre

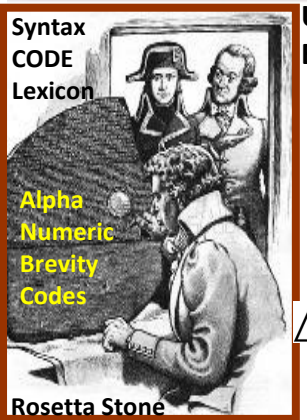
- Business Monitoring
- Technical Alerting
- Management Information
- Compliance Audit

Inter-Network Adapters

Existing Market Services: FEDWIRE, CHIPS, DTCC, CLS

## Corda Core Node Services

- Agreement States
- Transactions
- Sandbox
- Digital Signing
- Interaction Protocols
- Contract Verification




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

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

XBRL / CDL / DAML

STOCK MIC CODES

STRUCTURED MILITARY MESSAGE TEMPLATE FORMS

LOGIC / FILTERS

300+ Use Case Templates

# PROJECT LIGHTING

## FIREFLY – HEARTBEAT ALGORITHM

FIREFLY – HEARTBEAT

EVENT REPORTING ACROSS TIME-SPACE

MESSAGE EVENT BUS

## SEGWIT

SEGREGATED WITNESS

SegWit

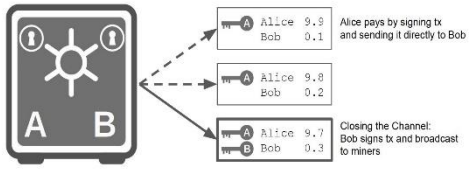
ADJACENT FIELDS

SEPARATE STATE CHANNELS

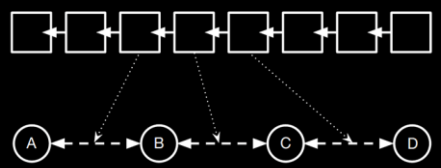
transactions sent over / off chain micropayment channels

Micropayment Channels

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




## LIGHTNING




Millions of Transactions. Milliseconds of Delay.

CLOCK FACE 360'

90 / 90 / 90 / 90

## BASEBALL "DIAMOND"

A diamond Is a square Is a block in 3D

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

2nd Base

ALICE Corp VS CLS BANK SC 573 US 134 2347

CLAIMS MAY NOT DIRECT TOWARDS ABSTRACT IDEAS

Physical = Opposite of abstract = ALICE

HEART BEACON CYCLE

TIME – SPACE METER

USPTO 13/573,002

MACRO CYCLES

RULES / ROLES

INSTRUCTIONS

WORKFLOW

UMPIRE

COACH

90 feet

90 feet

Blockchain / crypto currency increments

Blockchain BLOCK in 3D = CUBE

Cube has Length, Depth, Height, Volume

3rd Base

STATISTICIAN

Metrics, Meters

Stat Mean Value Index

first base

RUNNER

Message Bus

{"URN"}

{"ORG_ID"}

{"URN"}

UNIVERSAL HEARTBEAT MESSAGE EVENT BUS

Firefly – Heartbeat Algo

Stochastic Harmonization

EVENTS

3 X 5 HASH TABLES

STATE META

DATA SHARDS

90 feet

90 feet

SETTLEMENTS / EXCHANGES = TAXABLE EVENTS AKIN TO PROPERTY

IRS

#1421

I.R.S.

FIX {"108"}

FLASH MESSAGE EVENT BUS

State Meta

Data Snapshots

Survey Point

MICRO CYCLES

home plate

TIME STAMP SERVER

Epoch Time Cycles

HASH TABLES

NONCE

SYNTAX / SYMBOL TAGS

Digital Signature

MESSAGES

OUT OF BAND / CHANNEL

Hashed TIME LOCK contracts component for global consensus

OP_CHECKLOCKTIMEVERIFY During Macro Cycle w/Random # BEACON

Server nodes, miners only keep recent blocks

cycle n | n + 1 | n + 2

Payment channels multi-hop hub spoke model like internet routing

ADJACENT FIELDS

SEPARATE CHANNELS

Sync Delta State Meta Data Snaps

## Segregated witness = Separated signatures

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

# 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 802.11 HOP BY HOP CONTROL

Unused Resources / Unmet Needs

IEEE 802.1AG HOP BY HOP DETECTION

vector

UNUSED RESOURCES

UNMET NEEDS

/localhost/nfd/fib/add-nexthop

Geo-Spatial Temporal Metrics, Meters

DISTANCE INFO SERVICE

Time Series

Value

Time

IDMaps

SonarHops

5

4

3

2

1

RISK

602

+3

+ 2

+ 1

Null

0

+ 1

+ 2

+3

Δ δ

WATER DROP IN POND MEME IS SONAR NAVY METAPHOR / MEME

NDN </INTEREST>

NDN {"DISTANCE"}

NAMED DATA NETWORKING

PAUL REVERE LINEAR, SEQUENTIAL

603

NULL +1 +2

RADIUS

INTENSITY

WATER DROP IN POND MEME

IEEE C37.118 Harmonization & Sync heartbeat update Interval

TCP/IP HOP BY HOP COUNT

Energy Attenuates over Distances

CLOSER SOURCE CHEAPER RATE

Attribute Series

INTEREST DISTANCE

Geo Spatial Temporal Series

Micro Grids Closer - Cheaper

BLOCKCHAIN MICROGRIDS

TESLA

Spatial Econometrics

TIME-SPACE BEACON

INFOCON 5 4 3 2 1 INFORMATION CONDITION

METRICS / METERS

TRADE WITH EARTH ???

Spaceship Earth Signals & Telemetry Annex

bitcoin

r. buckminster fuller operating manual for spaceship earth

SIRIUS DISCLOSURE

ASTEROID BELTs = RARE MINERALS

MOON = HELIUM 3

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

MARS

MERCURY

VENUS

EARTH

MAIN ASTEROID BELT

Farther = More Cost

➢ Fuel, Resources

Service Level Agreements

STOCHASTIC HARMONIZATION

Alpha Numeric Brevity Codes

SYNTAX LEXICON

K00.99

FIREFLY-HEARTBEAT ALGORITHM UNIVERSAL EVENT MESSAGE BUS

TROJAN ASTEROIDS

ERLANG TIME- SPACE METRICS

JUPITE

ANDERSON INSTITUTE

43 22 13 0 1.5 2.7 5.2

Light minutes

Astronomical units

FIREFLY – HEARTBEAT ALGORITHM MESSAGE EVENT BUS

EPOCH / TIME CYCLES / INTERVALS

cycle n → n + 1 → n + 2

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

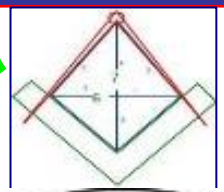
HEART BEACON CYCLE
USPTO 13/573,002
SURVEY METHODS

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

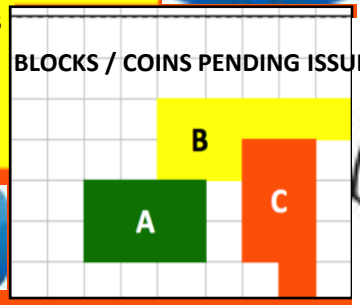
UTXO: unspent transaction output'. bitcoins that have been sent somewhere but not yet themselves been spent. The set of all unspent transaction outputs (UTXOs) can be thought of as the latest STATE of every bitcoin that has ever been mined.


**Memo #1421: Purchased Bitcoins are treated akin to property**

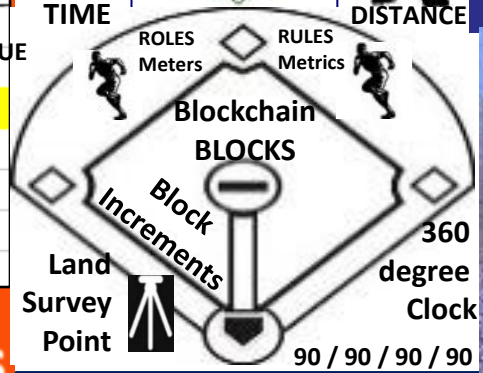
Plots A, B, C represent 3 unspent transaction outputs controlling N Bitcoins

TIME DISTANCE



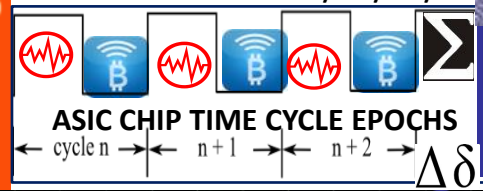

## Mined Bitcoins




## Unmined Bitcoins

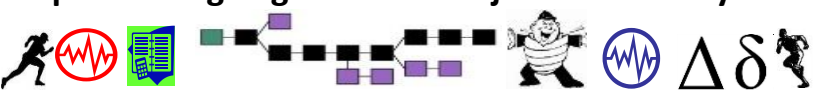
Un-mined coins -- think of them as parcels of land on "Bitcoin Island" not yet released:

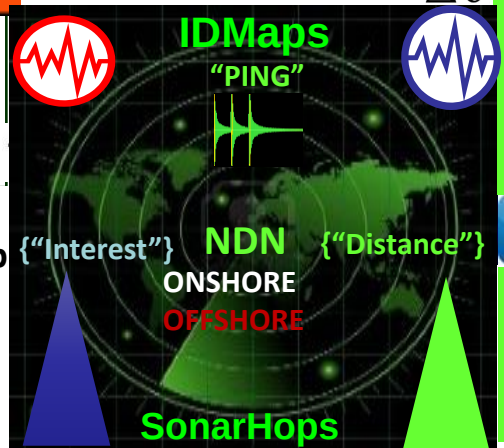
IDMaps-SONARHOPS distance estimation query-reply service



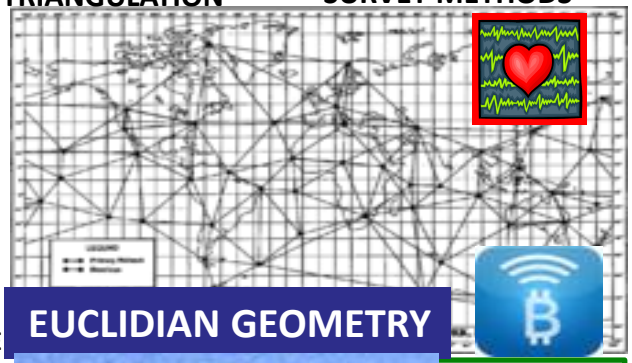

- End-state Bitcoin quantity will be fixed like land
- "Bitcoin as protocol of ownership, not transfer"
- Coins never travel, but simply switch owners"

Step 1: prove coin ownership <Org_ID> Coin Issuer
Step 2: coins sent where, when Lat-Long, Time Stamp
Step 3: specify ownership <Org_ID> issuing agent
Step 4: Issuing Org of Record adjudicates w buyer

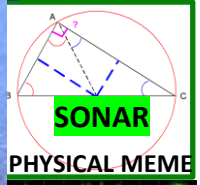





TRIANGULATION



## EUCLIDIAN GEOMETRY




PHYSICAL MEME

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

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

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

# Electronic Product Code Information Services (EPCIS)

GS1 Standard for creating, sharing visibility event data

RFID

REGISTERED ORGANISATION VOCABULARY

Edge

{"URN"}{"URN"}

{"ORG_ID"}

Enterprise

MACRO CYCLES

epcis

## EPCIS DATA MODEL

WebLogic RFID Edge Server

Custom RFID Application

SERVICE LAYER

XML

ObjectEvent

AggregationEvent

QuantityEvent

TransactionEvent

RFID Enterprise Server

To EPCIS Query engine

To Reporting engine

Event engine

To Master Data engine

Data Definition Layer

Event repository

HASH TABLE

NONCE

HTTP JMS SOAP

Event capture interface

Event Service

Query Interface:
POLL
SUBSCRIBE
UNSUBSCRIBE
getSubscribeID
getQueryName
getStandard Ver
getVendorVersion

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

MICRO CYCLES

CLOSER IS CHEAPER
CLOSER IS FASTER

HBC
SYSTEM OF SYSTEMS
TIME-SPACE SYNC

UNIVERSAL EVENT BUS

{"108"}

HEART BEACON CYCLE
FIREFLY – HEARTBEAT ALGO

IDMaps
ON / OFF SHORE
SonarHops
DISTANCE ESTIMATION SERVICE

FIREFLY – HEARTBEAT
ALGORITHM
STOCHASTIC
HARMONIZATION

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

RFID Configuration TCP/IP heartbeat message

STRUCTURED DATA EXCHANGE / STRUCTURED MILITARY MESSAGES

BIZ USE CASES
SYNTAX
LEXICON
CODE GUIDE

ALPHA NUMERIC BREVITY CODES

BATTLEFIELD DIGITIATION
NETWORK CENTRIC WARFARE
SYTEM OF SYSTEMS
BEST PRACTICE

{"ORG_ID"}
{"URN"}
{"UUID"}

MESSAGE DATA SETS

TEMPLATES / FORMS

ROLES / RULES {"FILTERS"}

NETOPS SOP

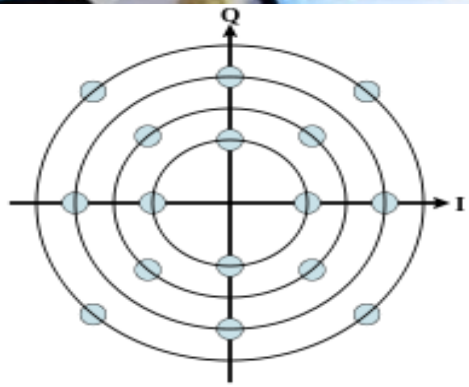
!st Compiler
DESIGN
Still the BEST

ROSETTA STONE


QUANTUM LATTICE

USPTO 13/573,002
sawconcepts.com/index

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





**Quadrature amplitude modulation**

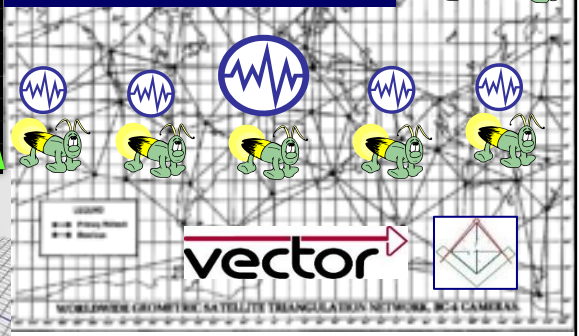
QAM by setting a suitable constellation size, limited only by the noise level and linearity of the communications channel

NDN

IDMaps
SonarHops

{"Distance"}
{"Interest"}

TRIANGULATION




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

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

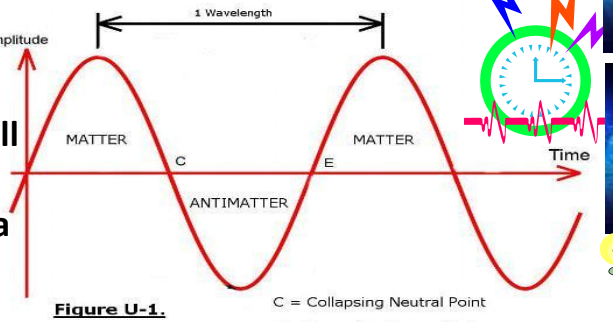
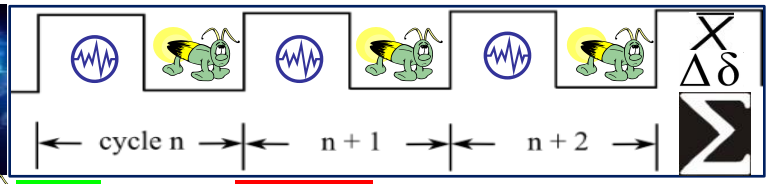



Figure U-1.

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

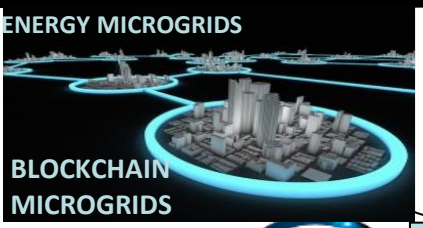


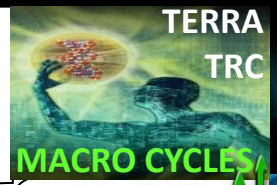

FIREFLY – INSPIRED HEARTBEAT SYNCHRONIZATION ALGORITHM

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

Δ δ

# USPTO 13,573,002 THE HEART BEACON CYCLE TIME – SPACE METER / METRICS & INTERNET SURVEY METHODS











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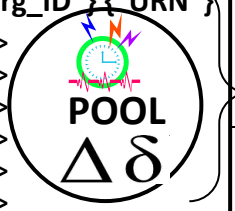
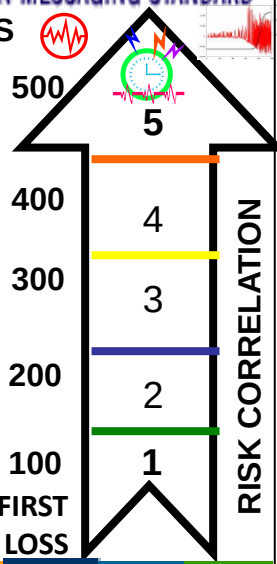


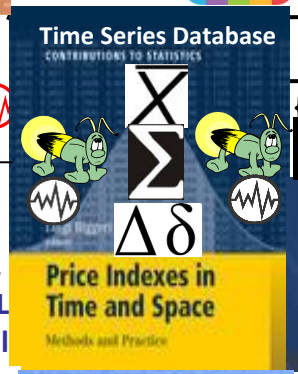

LAST LOSS

| AAA/ Aaa |
|---|
| AA/Aa |
| A/A |
| BBB/ Baa |
| B/B |

FIRST LOSS




HEARTBEAT STATE META DATA SNAPSHOTS

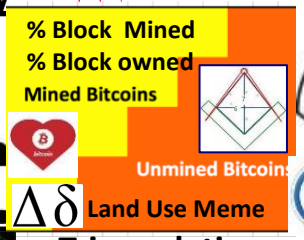



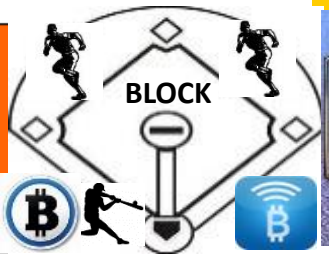

B B B B

{"TAGGED_BITCOINS"}

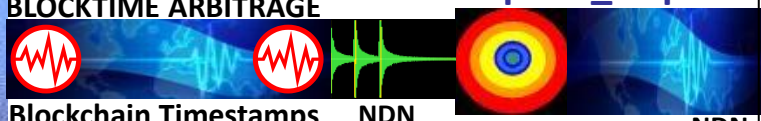

IEEE 802.15.4 OASIS MQTT
TELEMETRY TRANSPORT
IEEE 802.1AG HOP BY HOP
DETECTION
IEEE C37.118 Harmonization
& Sync heartbeat update Interval
IEEE 802.11
HOP BY HOP CONTROL
Paul Revere Linear, Sequential
Bitcoin = Property

PROCESS BY </PRECEDENCE>
SonarMaps ID_Hops

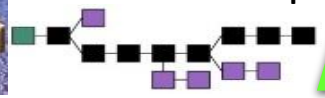




BLOCKTIME ARBITRAGE



Blockchain Timestamps

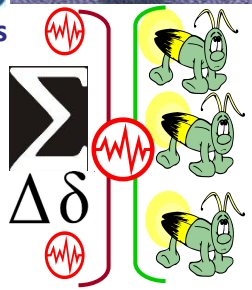


NDN
NDN
ON / OFF SHORE
PROXIMITY BEACONS


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

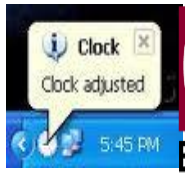
Multi-Meme Metrics

EVENT BUS
Match to Closest
Heartbeat Cycle
FIREFLY-HEARTBEAT
ALGORITHM






BLOCKCHAIN PARSING

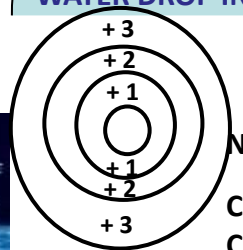




Firefly Events
Strive to Sync
To Closest
Heartbeat

HOPS / RADIUS = REACHABILITY

WATER DROP IN POND MEME




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

Demurrage
Charges



Heartbeat
Snapshots

MICRO
CYCLES

# SOFTWARE DEFINED NETWORKING

Command Syntax

REST State Transfer

NETOPS

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

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."

SIOP

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

## SDN FRAMEWORK

Rule | Action | Statistics

Policy Control

Broadcast

VLAN ID

STATE

RESTFUL API

Multicast

Flow Table

TIME SLOT SWITCH

CONTEXT MATCH MAPPING INSTRUCTIONS

TIME SLOT: Period of time activities governed by specific regulations.

FORWARDING INFORMATION BASE FIB

TIME OUTS TTL

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

ACTIONS: DROP / GROUP

DISTRIBUTED APPS AND WORKFLOW AUTOMATION

Socket Plane = TEMPLATEs = vendors use one standard, while optimizing own technologies for differentiation.

COMPONENT factory multi-platform

docker

socketplane

## NCW FRAMEWORK

Unicast
Multiple Data Streams

Multicast
Single Data Stream

STATE / CONTEXT META DATA

INTEREST BY <ORG_ID><URN><ROLES><DATA_CLASS>

WORKFLOW </CONTENT> </FILTERS> </CONTEXT>

REACHABILITY BY HOP COUNTS

</TAGS>

</StratML> </IODEF RID>

WORKFLOW <CONTENT> <FILTERS>

ACTIONS ADD / DROP JOIN / MERGE

AGILE ADHOC GROUP / UNGROUP

TIME TO LIVE TTL

STRUCTURED <CONTEXT> EXCHANGE

STATE SNAPSHOTS

Content Library

<TIME STAMP>

<FILTERS>

<ORG_ID>

</URN>

<DATA> {"CLASS_TYPES"}

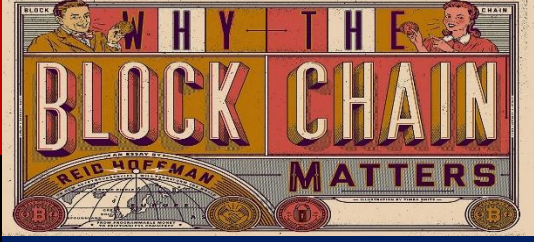
<ROLE>

<RULES>

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

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


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




# TradeNet

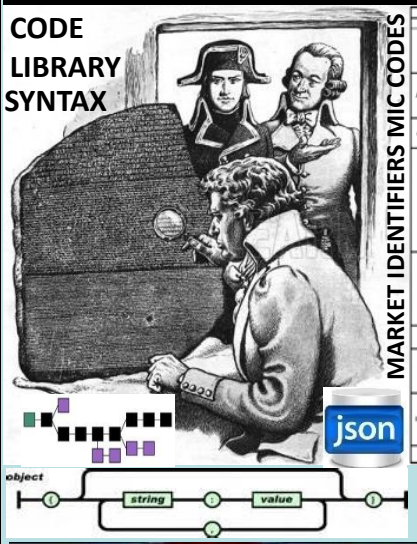
## Programmable Money $$$

## "The CODE that secures Bitcoin could also power an alternate Internet LINK

**RIED HOFFMAN 15 May 2015 LINK**

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

WIRED




MARKET IDENTIFIERS MIC CODES

300 + MESSAGE TEMPLATES
SYNTAX LIBRARY PROGRAMMING

STRUCTURED <CONTENT> EXCHANGE

BREVITY CODES
MARKET ID CODES

USE CASE TEMPLATES
SIGNALLING, TELEMETRY

ORGANIZATIONS

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

**http://en.wikipedia.org/wiki/Organizational_unit_(computing)**

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


NATO OTAN


PLOW SHARES

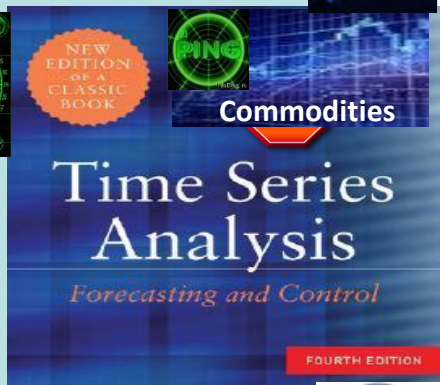
SWORDS

MONEYBALL ECONOMICS


SLA
SLA-O

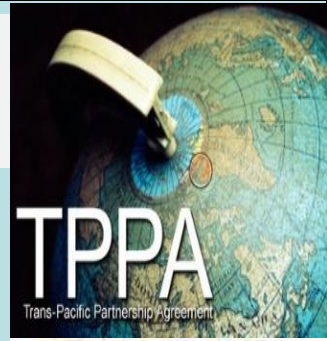

STATE META DATA

SNAPSHOTS

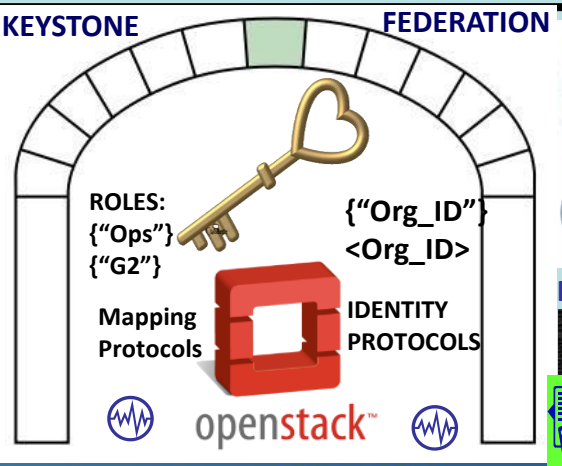


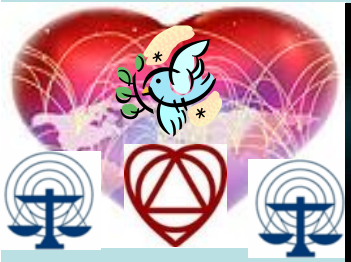

**Trans-Pacific Partnership is great for elites. Is it good for anyone else?** *by Timothy B. Lee on April 17, 2015*

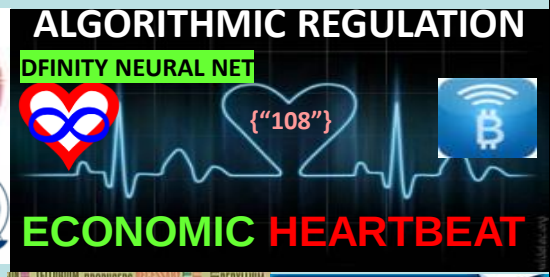
**How the TPP empowers elites. The nature of trade agreements has shifted. They're no longer just about removing barriers to trade. They've become a mechanism for setting global economic rules more generally. This system for setting global rules has some serious defects. We expect the laws that govern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
















BlockTime Arbitrage

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

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

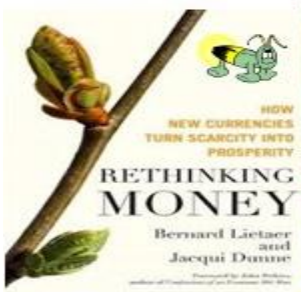
The current standard time common throughout the world is based on a 24-hour clock, with zones that are are either 12 hours ahead or behind **Coordinated Universal Time (UTC)**. However, these time zones are decided upon by individual governments, without overall coordination and can even extend fourteen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

GEO-SPAT*IAL ECONOMETRICS

UNIVERSAL EVENT BUS

UTZ TIME ZONE SYNC

-11 -10 -9 -8 -7 -6 -5 -4 -3 -2 -1 0 +1 +2 +3 +4 +5 +6 +7 +8 +9 +10 +11 +12 -12




TERRA TRC

MONEYBALL ECONOMICS

STATISTICAL MEAN VALUE INDEX

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

DFINITY WORLD COMPUTER

FLASH {"108"} HEARTBEAT MESSAGES

LEADING ECONOMIC INDICATORS

COMMODITIES

USDe

currencyindex

TRADE WITH EARTH?

Int'l Date Line

SHORE ON OFF

Int'l Date Line +13 +14

Stochastic Harmonization

Blockchain Parsing

TIME – SPACE EQUATIONS

ERLANG

Time Series Databases

Geo Spatial Temporal Series

FIREFLY HEARTBEAT ALGORITHM

$\Delta\delta$

TOKENIZES NATIONAL CURRENCIES

CURRENCY CONVERTER

SAMPLE BITCOIN VARIATIONS EVERY N TIME EPOCHS / CYCLES

NIST Beacon
Non-Repudiate

ATOMIC CLOCKS

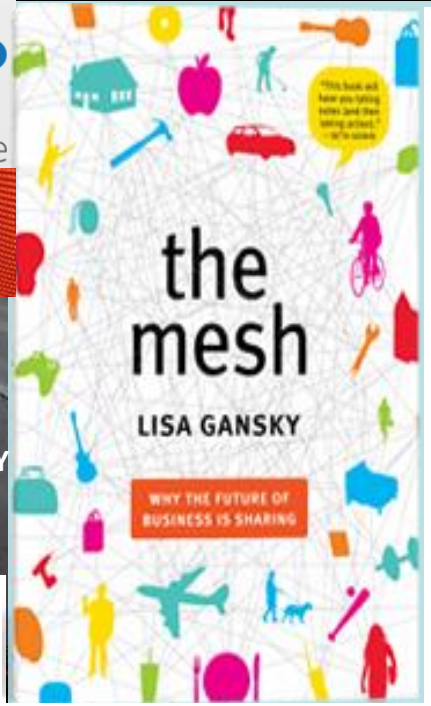
STATE META DATA
HEARTBEAT SNAPSHOTS
MICRO-CYCLES

namecoin

ETH BaaS

NDN

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

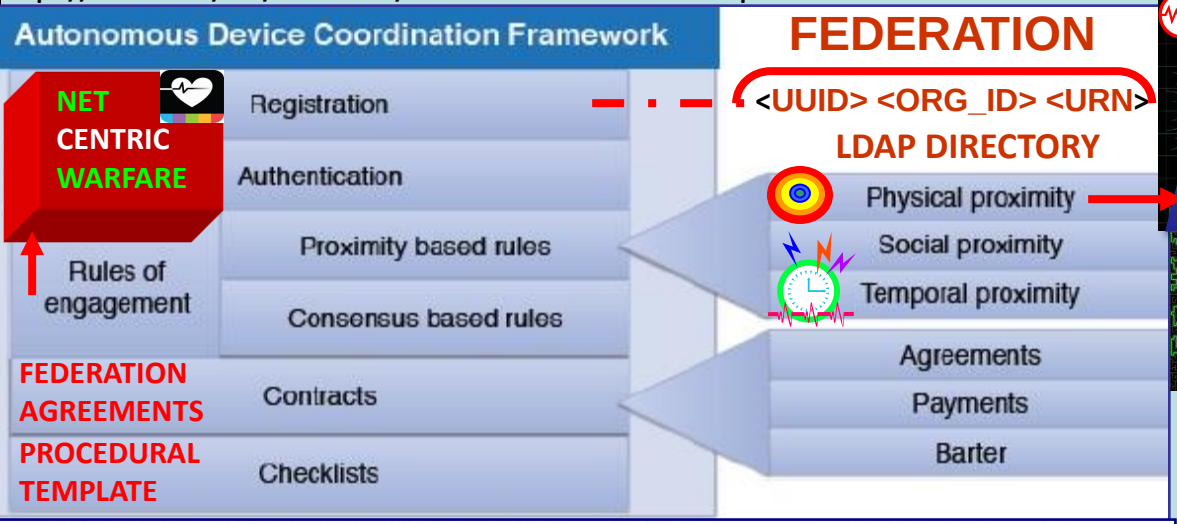



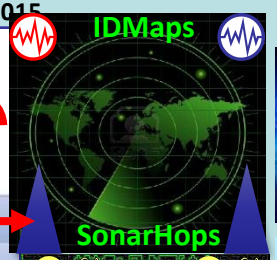

A decentralized exchange called BitSquare has launched a campaign on the decentralized crowd fundingapp Lighthouse. Its campaign is simultaneously an example of how powerful decentralized crowd funding is, and how difficult running a successful campaign is… segue to the MESH ECONOMY

# IBM / SAMSUNG ADEPT Autonomous Decentralized Peer-to-Peer Telemetry

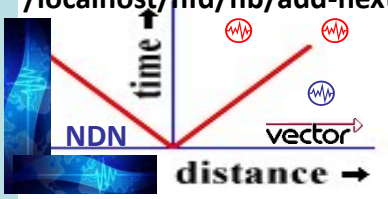
https://scribd.com/doc/252917347/IBM-ADEPT-Practictioner-Perspective-Pre-Publication-Draft-7-Jan-2015

## HBC PROCEDURAL TEMPLATE FRAMEWORK




/localhost/nfd/fib/add-nexthop






PAYMENTS BASED ON GEO-SPATIAL TEMPORAL METRICS / METERS

<URN> DESCRIBES COMMODITIES ETC BY UNIFORM RESOURCE NAME BY </INTEREST>>

ASSET SHARING WITHIN FEDERATION

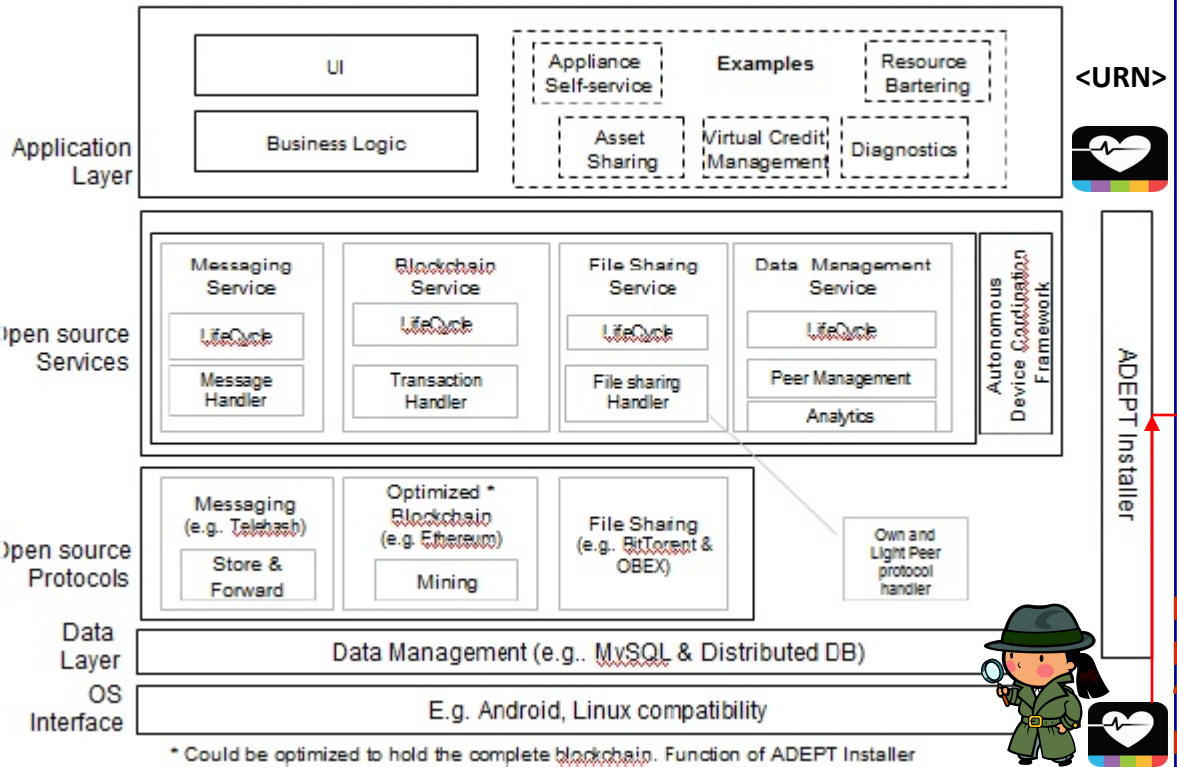
BUSINESS LOGIC = WORKFLOW <XML_Wf>

FILE SHARING = CYCLIC SYNC DELTA LEDGER / DOCUMENT REFRESH

OPEN SOURCE = HBC = PROTOCOL AGNOSTIC

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

## ADEPT Standard Peer Architecture – Logical View



# Situational Awareness Reference Architecture (SARA)

: Identity, Inventory, Activity, and Sharing

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

ICS–ISAC

## IDENTITY:

<UUID> = Devices, sensors

<ORG_ID> Organizations

Federation Gateway

<ELEMENTS>

STRATML/ IODEF RID CLASSES:

<GLOBAL><JOINT><SHARED>

<DOMAIN><FEDERATION>

<CITY><STATE><PRIVATE>

STRATEGIC MARKUP

StratML

LANGUAGE

IODEF

Industrial Control System Information Sharing and Analysis Center

## INVENTORY: Uniform Resource Name <URN>

<URN><URN>

<URN><URN>

<URN><URN>

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

vector

GEO-SPATIAL TEMPORAL INTENSITY METRICS

UNIFIED EVENT / ALERT TRIGGER / THRESHOLDS

GEO-SPATIAL TEMPORAL INTENSITY METRICS / METERS

IDMaps

SonarHops

vector

tripwire

## ACTIVITY: <EVENT><ALERT>

<TIME_STAMP><ORG_ID><URN>

<GEO_LOC_GPS ><STATUS>

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

CONTENT LEXICON ROSETTA STONE

NDN

<INTEREST>

TAXII

STIX

AVALANCHE

## SHARING:

COMMON <TAGS>

<Organizational_ID>

Resource Names <URN>

<Time_Stamps>

<State-Meta_Data

<DATA_CLASS_TYPE>

<Heartbeat_snapshots>

NDN

<INTEREST>

CybOX

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

NIST CYBER SECURITY FRAMEWORK

CYBER SECURITY CONTENT LEXICON ROSETTA STONE

MIL-STD 2525A

STRUCTURED <CONTENT> TEMPLATES

<TAG> LIBRARY

CYBER BEACON

NIST TIME BEACON

NIST RANDOMNESS BEACON

SYNC SEED _CLOUD

Cloudcenter

INBOUND SHARING / MICRO-CYCLES

<TAG>LIBRARY TEMPLATES

NIEM

NAMED DATA NETWORKING

<Content> Centric

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

# TRUTHCOIN Nullius in Verba: "On the word of no one"

## 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.**

| 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 1/100th 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, only if the stock price of SztorcCorp is above 40 $/share on that date." | |
| ...(others)... | ...(others)... | |
| Event Derivative | "I, Paul Sztorc, owe $20 to whoever is holding this derivative on 12/01/2016, only if Hillary Clinton is elected US President in 2016. Otherwise I owe $0." | |
| ...(others)... | ...(others)... | |

## 2. A kind of 'Future Wikipedia'

| | Wikipedia | Truthcoin |
|---|---|---|
| Focus | Outcomes of **past events**. Consensus on **known facts**. | Outcomes of ***future*** **events**. ***Future*** **consensus** on *knowable* facts |

## 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 Money x Velocity = Price x Quantity

MV=PQ
Internet of Everything
Every Where Value Index

Spatial Econometrics

MONEYBALL ECONOMICS

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

MACRO ECONOMIC CYCLES

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

X

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

=

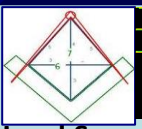
P = PRICE of Everything Bought
TIME SERIES DATABASE Coin SUM

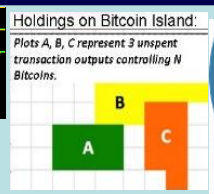
X

Q = QUANTITY

Coin / Currency Type Mediation Services

SUM / AGGREGATE






Land Survey
Triangulation
IDMaps / Sonar Hops

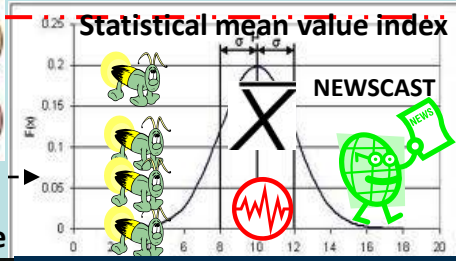
RATE % MINED

Δδ

currencyindex

COMMODITIES

Statistical mean value index




URN = Uniform Resource Name

Memo #1421: Purchased Bitcoins akin to land

I.R.S.

Memo 1421

Mined Bitcoins

Δδ

<ORG_ID>

Unmined Bitcoins

Δδ

AGGREGATOR

Firefly Event Bus

FIREFLY

FLASH MSGS

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

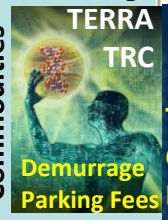
Asset Class
Asset Type

BlockTime Arbitrage

Δ

Δδ

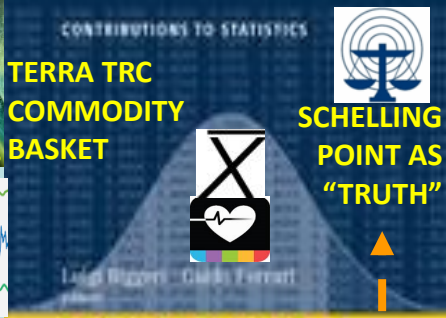
Commodities




SHARED COINS / SCHELLING MODEL

TERRA TRC COMMODITY BASKET

SCHELLING POINT AS "TRUTH"



Match Events To Closest Heartbeat Cycle

time series

Time Series Dbase

FIX {"108"}
Bitcoin Types

Firefly-Heartbeat Algorithm Events


NIST TIME BEACON

Price Indexes in Time and Space

SchellingPoint


MICRO-CYCLES
MICRO - ECONOMICS

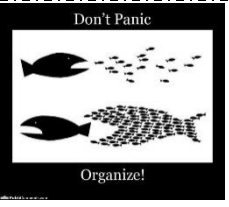
**Gamification** is the use of game thinking and game mechanics in non-game contexts to engage users in solving problems. Gamification techniques strive to leverage people's natural desires for competition, achievement, status, self-expression, altruism, closure.




STRATML/ IODEF RID

<GLOBAL>
<JOINT>
<DOMAIN> <SHARED
<COMMUNITY>
<PRIVATE>

CLASSES


Cooperate, Federate and Graduate

# HOW GAMIFICATION WORKS:

## 5 COMMON MECHANICS

### POINTS
100 PT

Measure a user's achievements in relation to others

Can double as currency to exchange for rewards

### BADGES
Reward achievements visually

### LEVELS
Encourage users to progress and unlock new rewards

### LEADERBOARDS
Organise players by rank

### CHALLENGES
Encourage engagement by offering specific tasks to complete

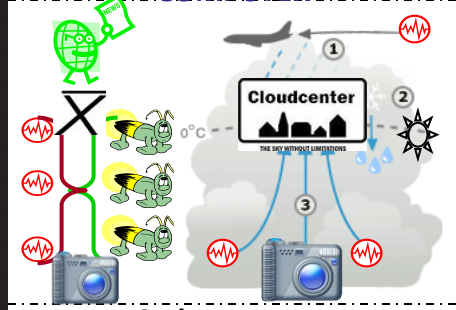
## 4 MAIN WAYS TO DRIVE ENGAGEMENT

### ACCELERATED FEEDBACK CYCLES

### CLEAR GOALS AND RULES OF PLAY

### A COMPELLING NARRATIVE

### CHALLENGING BUT ACHIEVABLE TASKS


PoS PoW
POET SW

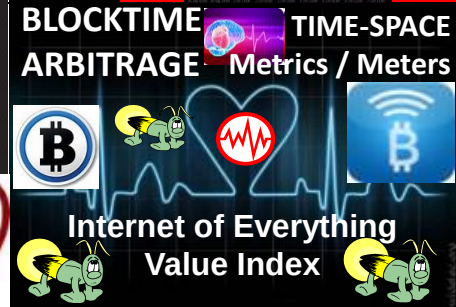
Coder Guide

TIME
SPACE

BLOCK

ROLES
Meters

RULES
Metrics

SEVERITY METRICS TEMPLATE

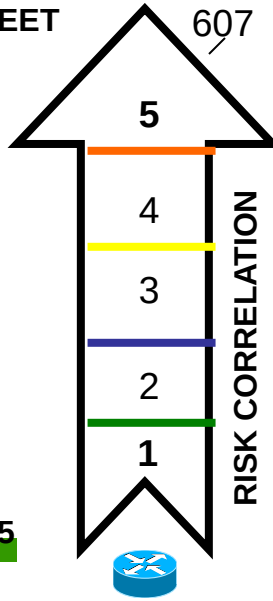
601

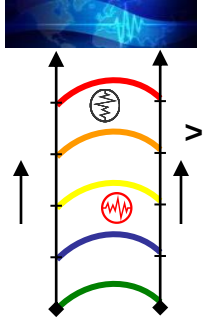
THRESHOLD TRIGGERS INCREASE
BEACON BROADCAST AREA / RADIUS
IN ZONES e.g. STOCK MARKET TRANCHES
GEO-SPATIAL, TEMPORALINTENSITY

NUMBERS ARE ARBITRARY BUT MUST MATCH
E.G., 5 OR 4 OR 3 BUT NOT 5 AND 4, 5 AND 3

REPLACEMENT SHEET

607



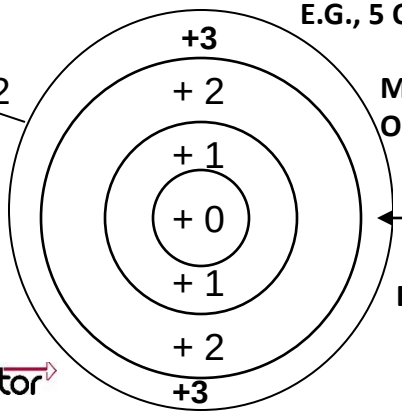



ALERT LEVEL >
> NEWSCAST ZONE

500
400
300
200
100


TRIGGERS

602




M2M MACHINE TO MACHINE PARSING RELIES
ON CONSISTENT NUMBERING SCHEME

GEO-SPATIAL TEMPORAL INTENSITY
METRICS / VECTORS

6

CAP XML

AAA – BBB - D

NIEM

EQUITABLE METERING

+6 TO +8 | +3 TO +5 | -1 TO +2 | - 4 TO -2 | -8 TO -5

605

EVENT SEVERITY INDEX

TRACK BY ORG ID / URN

vector vector vector

GEO-SPATIAL RADII DEFINED
BY WATER DROP AREA ZONES

603

CAP XML

ALERT LEVEL CHANGES

CHILD SCHEMAS, DATA ISLANDS

RESPONDERS

5 LEVEL ALERT SYSTEM
COLOR CODE CONDITION LEVEL

604

| | | | HOMELAND SECURITY ADVISORY SYSTEM | COMBINED COMMUNICATIONS ELECTRONICS BOARD CCEB | INFOCON LEVELS OF CONCERN |
|---|---|---|---|---|---|
| RED | SEVERE | CLOSE FACILITIES<br>STOP PROCESSES | SEVERE/DELTA<br>FINE | FLASH OVERRIDE<br>FINE | INFOCON 4 |
| ORANGE | HIGH | TAKE PRECAUTIONS<br>COORDINATE<br>W/OTHER GROUPS | HIGH/CHARLIE<br>DOES | FLASH (Z)<br>DOES | INFOCON 3 |
| YELLOW | ELEVATED | INCREASE<br>SURVEILLANCE | ELEVATED/BRAVO<br>BOY | IMMEDIATE (O)<br>BOY | INFOCON 2 |
| BLUE | GUARDED | - CHECK<br>- REVIEW | GUARDED/ALPHA<br>GOOD | PRIORITY (P)<br>GOOD | INFOCON 1 |
| GREEN | LOW | PLANNING | LOW/NORMAL<br>EVERY | ROUTINE (R)<br>EVERY | INFOCON 0 |

# GEO-SPATIAL TEMPORAL INTENSITY METRICS, METERS, VECTORS

vector

NAMED DATA NETWORKING

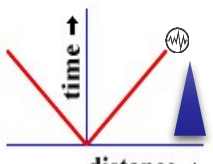
XML
MTF
300 +
MSG

INFOCON
5 4 3 2 1
INFORMATION CONDITION

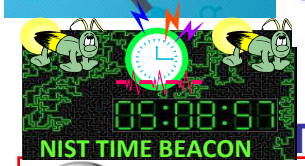
INFOCON / DEFCON ALERT EVENTS INFORM STAKEHOLDERS OF STATUS CHANGE i.e., NORMAL TO ELEVATED, HIGH OR SEVERE. ALERT LEVELS ARE ARBITRARY BUT MUST BE CONSISTENT e.g., 3 OR 5 FOR MACHINE TO MACHINE PROCESSING

</IoT>
MQTT

<INTEREST>

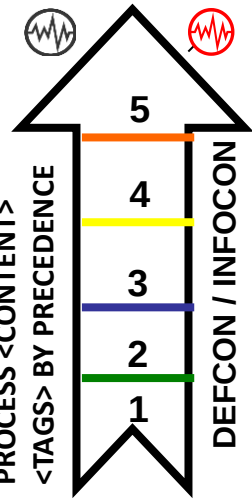



<CONTENT> TEMPLATES
OASIS
IEEE 802.15.4
OASIS MQTT
TELEMETRY TRANSPORT




NIST TIME BEACON

ARRESTED-D

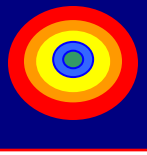


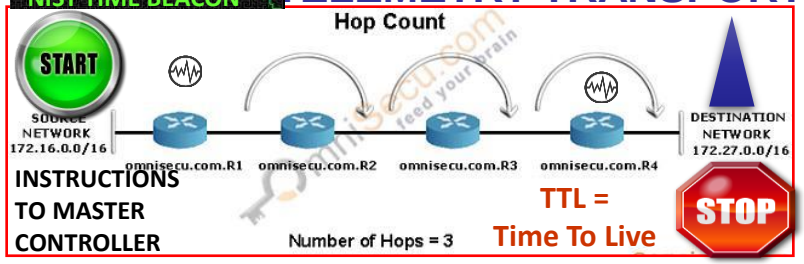

Geo-Spatial Temporal Intensity
NOVEL METRICS / METERS:

Paul Revere = linear, sequential

TCP/IP hop by hop counts, by hop controls

Water Drop = AREA / INTENSITY
Cyclic Frequency






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

IDMAPS
SONARHOPS
INTERNET
TRIANGULATION

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

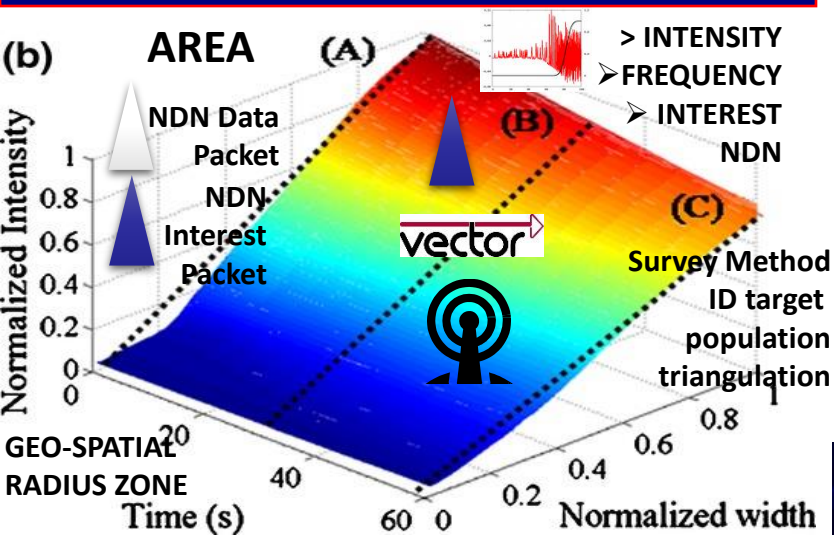
.0001 .05 .01 .1 0 5 15 30 99

vector

WirelessHART

ALERT LEVEL >
> NEWSCAST ZONE

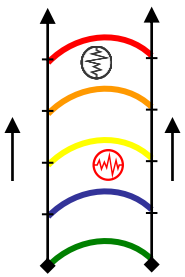
time synchronized, self-organizing, mesh Net




> INTENSITY
> FREQUENCY
> INTEREST
NDN

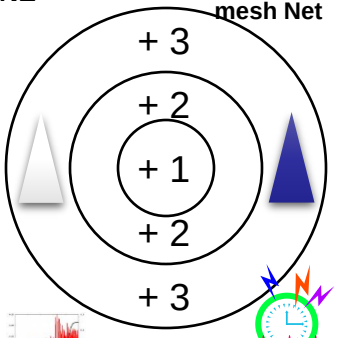
GEO-SPATIAL RADIUS ZONE


SINE-WAVE

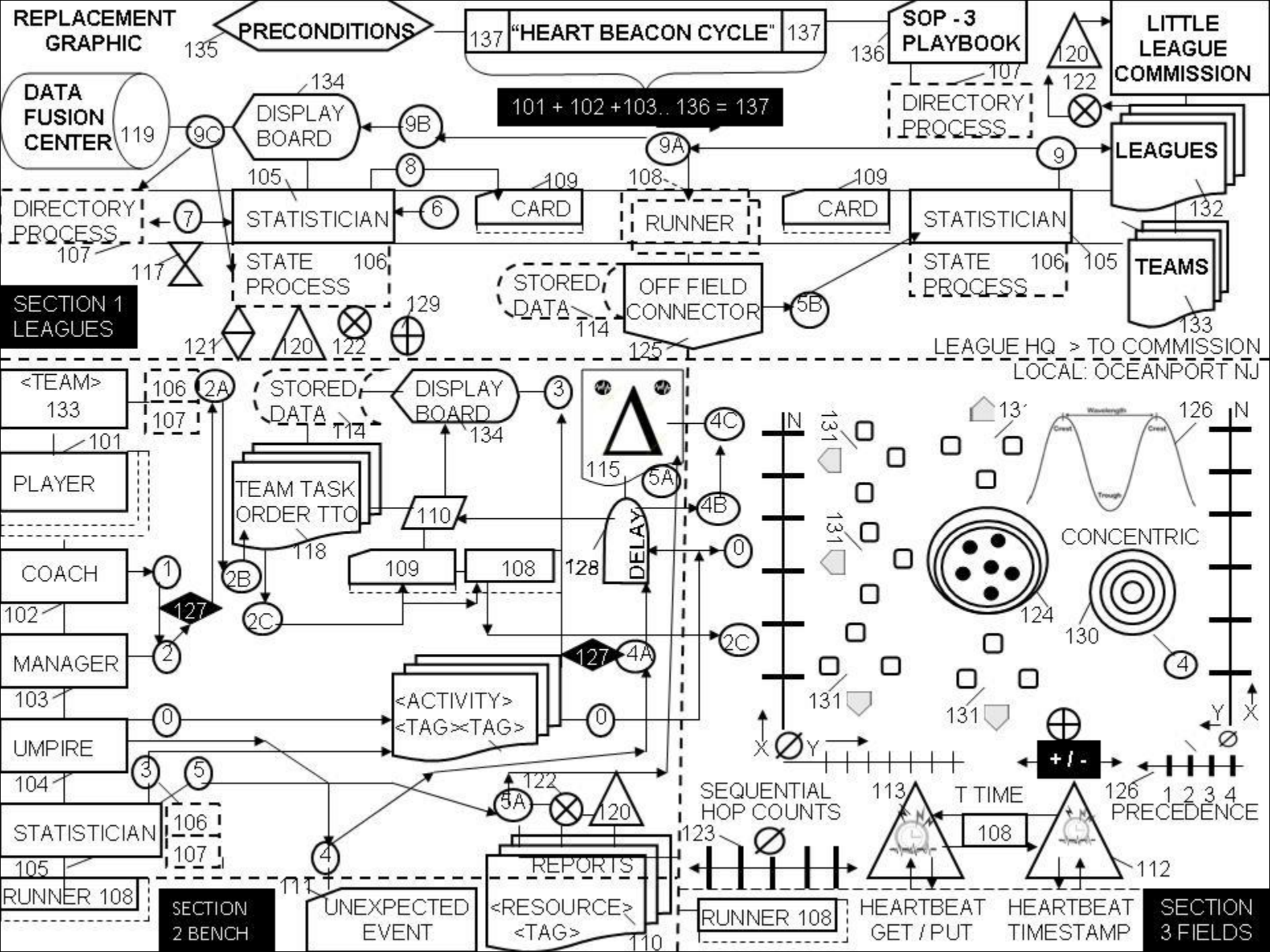


TRIGGERS

CAP
XML




NDN
<INTEREST> BY
INTENSITY / FREQUENCY


REPLACEMENT GRAPHIC
PRECONDITIONS
135
137 "HEART BEACON CYCLE" 137
SOP - 3 PLAYBOOK
136
120
LITTLE LEAGUE COMMISSION
122
DATA FUSION CENTER
119
9C
DISPLAY BOARD
134
9B
101 + 102 +103.. 136 = 137
DIRECTORY PROCESS
107
9A
9
LEAGUES
132
8
105
109
108
109
DIRECTORY PROCESS
107
7
STATISTICIAN
6
CARD
RUNNER
CARD
STATISTICIAN
117
STATE PROCESS
106
STATE PROCESS
106
105
TEAMS
133
SECTION 1 LEAGUES
129
STORED DATA
114
OFF FIELD CONNECTOR
5B
121
120
122
125
LEAGUE HQ > TO COMMISSION
LOCAL: OCEANPORT NJ
<TEAM>
133
106
107
2A
STORED DATA
114
DISPLAY BOARD
134
3
115
4C
5A
101
PLAYER
TEAM TASK ORDER TTO
118
110
4B
DELAY
128
0
COACH
102
1
2B
127
109
108
2C
MANAGER
103
2
127
4A
2C
<ACTIVITY>
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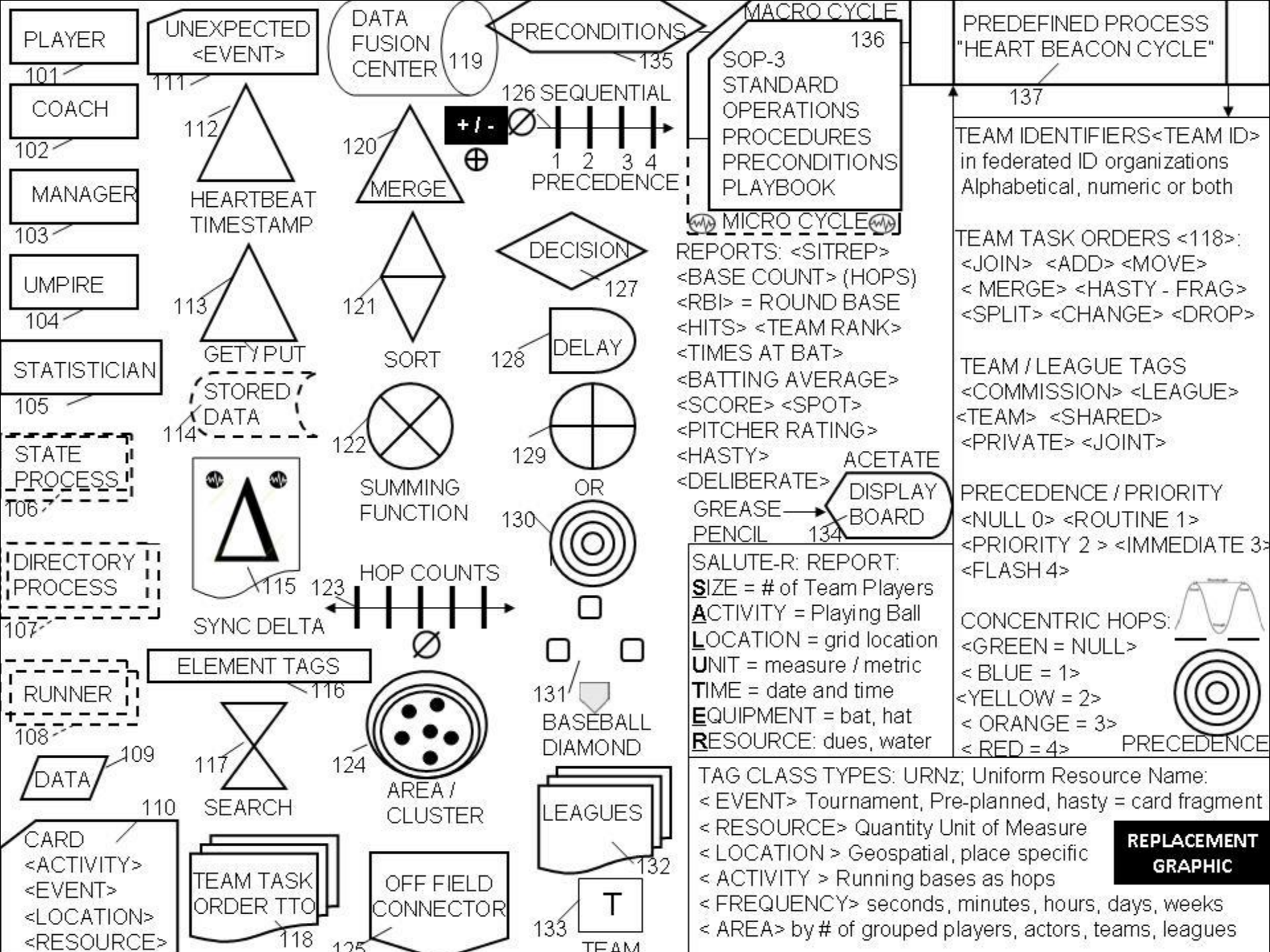
0
UMPIRE
104
3
5
122
5A
120
STATISTICIAN
105
106
107
4
REPORTS
RUNNER 108
111
UNEXPECTED EVENT
<RESOURCE>
<TAG>
110
SECTION 2 BENCH
N
131
131
131
131
131
13
126
N
CONCENTRIC
124
130
4
Y
X
X
Y
+ / -
SEQUENTIAL HOP COUNTS
123
113
T TIME
108
126
1 2 3 4
PRECEDENCE
112
RUNNER 108
HEARTBEAT GET / PUT
HEARTBEAT TIMESTAMP
SECTION 3 FIELDS


PLAYER
101
COACH
102
MANAGER
103
UMPIRE
104
STATISTICIAN
105
STATE PROCESS
106
DIRECTORY PROCESS
107
RUNNER
108
DATA
109
CARD
<ACTIVITY>
<EVENT>
<LOCATION>
<RESOURCE>
110
UNEXPECTED <EVENT>
111
HEARTBEAT TIMESTAMP
112
GET / PUT
113
STORED DATA
114
SYNC DELTA
115
ELEMENT TAGS
116
SEARCH
117
TEAM TASK ORDER TTO
118
DATA FUSION CENTER
119
MERGE
120
SORT
121
SUMMING FUNCTION
122
HOP COUNTS
123
AREA / CLUSTER
124
OFF FIELD CONNECTOR
125
PRECONDITIONS
135
126 SEQUENTIAL
1 2 3 4
PRECEDENCE
DECISION
127
DELAY
128
OR
129
BASEBALL DIAMOND
130
131
LEAGUES
132
T
133
TEAM
MACRO CYCLE
136
SOP-3
STANDARD
OPERATIONS
PROCEDURES
PRECONDITIONS
PLAYBOOK
MICRO CYCLE
REPORTS: <SITREP>
<BASE COUNT> (HOPS)
<RBI> = ROUND BASE
<HITS> <TEAM RANK>
<TIMES AT BAT>
<BATTING AVERAGE>
<SCORE> <SPOT>
<PITCHER RATING>
<HASTY>
<DELIBERATE>
GREASE PENCIL
ACETATE DISPLAY BOARD
134
PREDEFINED PROCESS "HEART BEACON CYCLE"
137
TEAM IDENTIFIERS<TEAM ID>
in federated ID organizations
Alphabetical, numeric or both
TEAM TASK ORDERS <118>:
<JOIN> <ADD> <MOVE>
< MERGE> <HASTY - FRAG>
<SPLIT> <CHANGE> <DROP>
TEAM / LEAGUE TAGS
<COMMISSION> <LEAGUE>
<TEAM> <SHARED>
<PRIVATE> <JOINT>
PRECEDENCE / PRIORITY
<NULL 0> <ROUTINE 1>
<PRIORITY 2 > <IMMEDIATE 3>
<FLASH 4>
CONCENTRIC HOPS:
<GREEN = NULL>
< BLUE = 1>
<YELLOW = 2>
< ORANGE = 3>
< RED = 4>
PRECEDENCE
SALUTE-R: REPORT:
SIZE = # of Team Players
ACTIVITY = Playing Ball
LOCATION = grid location
UNIT = measure / metric
TIME = date and time
EQUIPMENT = bat, hat
RESOURCE: dues, water
TAG CLASS TYPES: URNz; Uniform Resource Name:
< EVENT> Tournament, Pre-planned, hasty = card fragment
< RESOURCE> Quantity Unit of Measure
< LOCATION > Geospatial, place specific
< ACTIVITY > Running bases as hops
< FREQUENCY> seconds, minutes, hours, days, weeks
< AREA> by # of grouped players, actors, teams, leagues
REPLACEMENT GRAPHIC

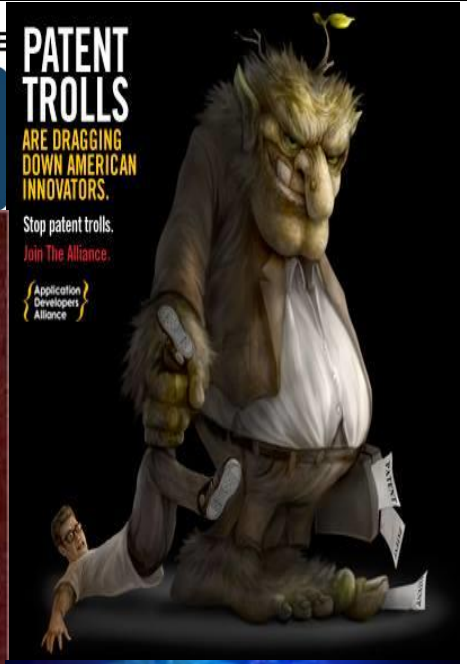
UNITED STATES PATENT AND TRADEMARK OFFICE

uspto

# THE 1919 WORLD SERIES

*What Really Happened?*

**William A. Cook**





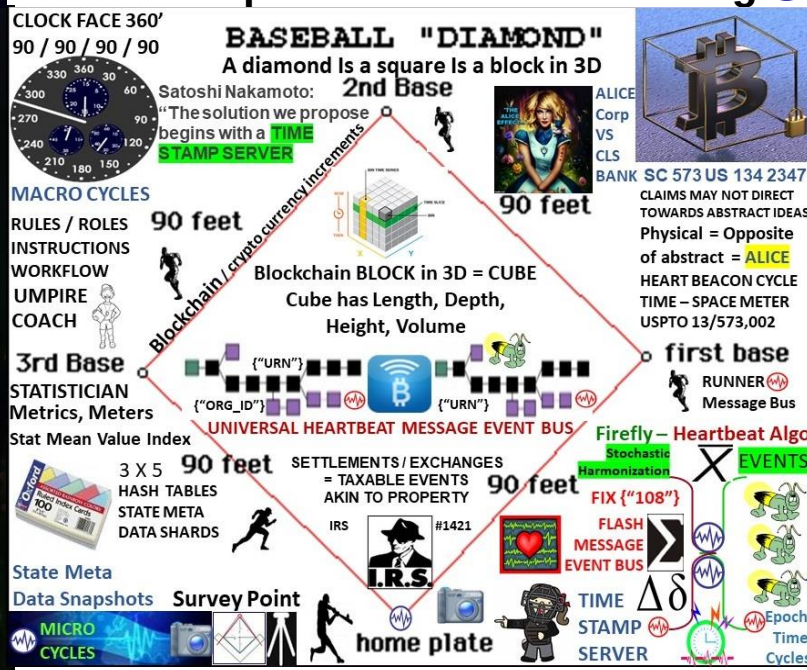
*Alice Corp. v. CLS Bank International*, 573 U.S. 134 S. Ct. 2347 (2014)

RULING: "claims may not direct towards abstract ideas"

PAIR


## USPTO SCREEN CAPTURES SUSPENDED PAIR RULES

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



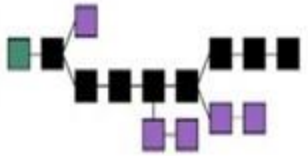

Patent Worthy


Idea Formed CIRCA 2006

TCP/IP "Heartbeat"

UNITED STATES PATENT AND TRADEMARK OFFICE

uspto

USPTO citation directs to SAW Concepts LLC's web pages suspending regular, formal process, content, format rules

**Cape Hatteras Light House Completed 1870**

LITTLE LEAGUE BASEBALL TOURNAMENT EMBODIMENT

13,573,002 October 16, 2014 Revived

LETTER USPTO Office Action Nov 6th 2015

National Association of Baseball Players Formed 1870

1. Transco V Performance

START

citation screen capture web images not time stamped

METHOD / PROCESS / PROCEDURE TO ENABLE: THE HEART BEACON RAINBOW FORCE TRACKING

STOP

10/709,358 April 29, 2004
METHOD TO ENABLE HEARTBEAT 911

12/856,715 Aug. 16, 2010

2 Screen Captures with No Time Stamps mailed by USPTO

2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015

11/601,035 Nov. 17, 2006 METHOD TO ENABLE THE HEARTBEAT BEACON FOR HOMELAND SECURITY AND HOMELAND DEFENSE INTEROPERABILITY

13/573,002 Heart Beacon Cycle Aug. 13, 2012

10/605,144 Sep. 11 , 2003
Method to commercialize structured military messaging

USPTO screen capture circa 2006 sent to applicant without date time stamps thus suspending regular patent procedures, formatting etc. for an Indefinite period. Screen capture established that a patent worthy idea was formed. Many use cases i.e., stock, currency, commodities may be theme variants.

Stare decisis et non quieta movere

A court may Not reverse itself

10/709,358 continuation further established all things related to the internet are formed using time cycles to parse, process syntax as instructions.

300 + structured military message templates form syntax library, lexicon. Reuse of parsing, processing procedures logic establishes syntax consensus among a distributed system of systems

13/573,002 Baseball theme main embodiment addresses "221 errors" using real world, physical world concrete terms as compared to internet metaphors, memes such as packets, frames, Bitcoin, Blockchain, hops, "HEARTBEAT" pings that are abstract, abstractions. 13,573,002 is compliant with Alice Corp V CLS Bank ruling.

2 USA Supreme Court June 19, 2014
ALICE CORPORATION PTY. LTD. v. CLS BANK INTERNATIONAL ET AL.
claims ineligible for patent protection under 35 U. S. C. §101 "claims may not be directed to an abstract idea"

10/708,000 Jan. 30, 2004 continuation of 10/605,144
Method to enable a Homeland Security "Heartbeat"
Parenthesis around term "heartbeat" describes Internet TCP/IP metaphor as an abstraction. "Heartbeat" describes time cycles, intervals, periods created by a Central Processing Unit. Time intervals are used to parse, process or not process syntax as instructions thus forming the basis of all things, artifacts internet related. This patent worthy idea forms the main embodiment upon which all other embodiments and claims are based. All filings, embodiments, claims after this point in time related to 10/708,000 do not constitute new material or new claims as variations on main embodiment

# district0x

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

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

- Posting and listings
- Search and filtering
- Ranking and reputation
- Payments and invoicing

**Signaling via CarbonVote**
**Status = browser, messenger, gateway**

**Graphene executables: witness_node, cli_wallet, genesis_util**

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

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

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

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

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

# USPTO APPLICATION 13/573 002

The Heart Beacon Cycle Time-Space Meter

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

1 + 3 +5 + 7 + 3 + 2 = 21  21 squared = 441



"We can synchronize ourselves in time for a common purpose" Universal Blockchain Meme 72 Diamond Shoals

ΔδTHE LAW OF TIME

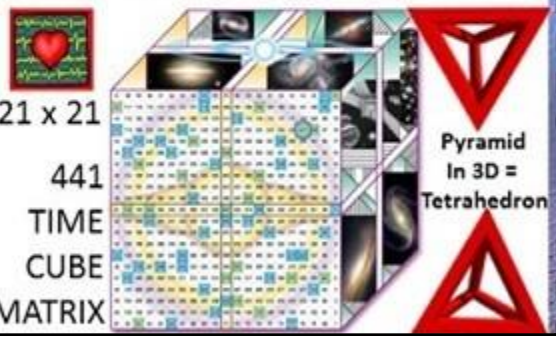
BOOK OF THE CUBE

http://lawoftime.org

First Baseball Players Union Formed 1870

SYNCHRONOTRON

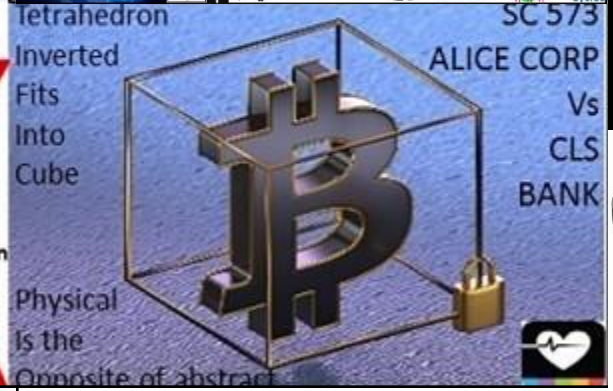
Inverted Fits into cube

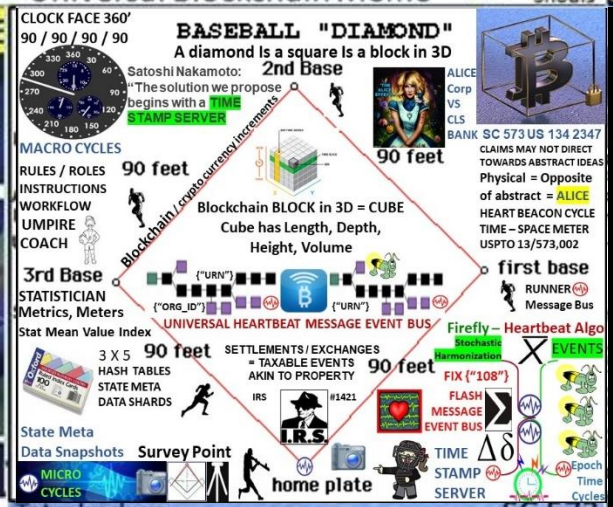


21 x 21

441 TIME CUBE MATRIX

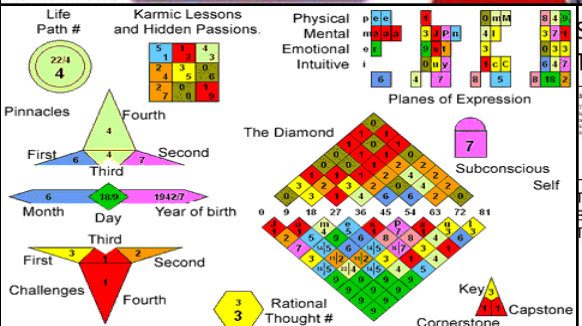
Pyramid In 3D = Tetrahedron



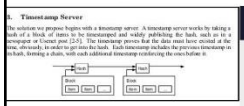





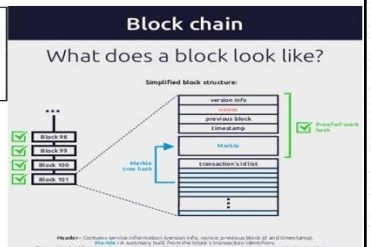
"In the beginning (of time) there was the word"

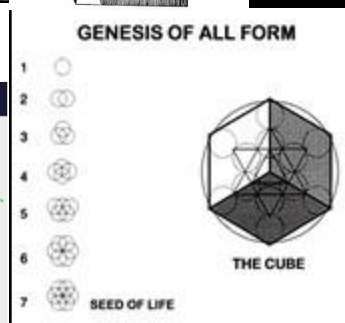



Satoshi Bitcoin Blockchain Time Stamp Server



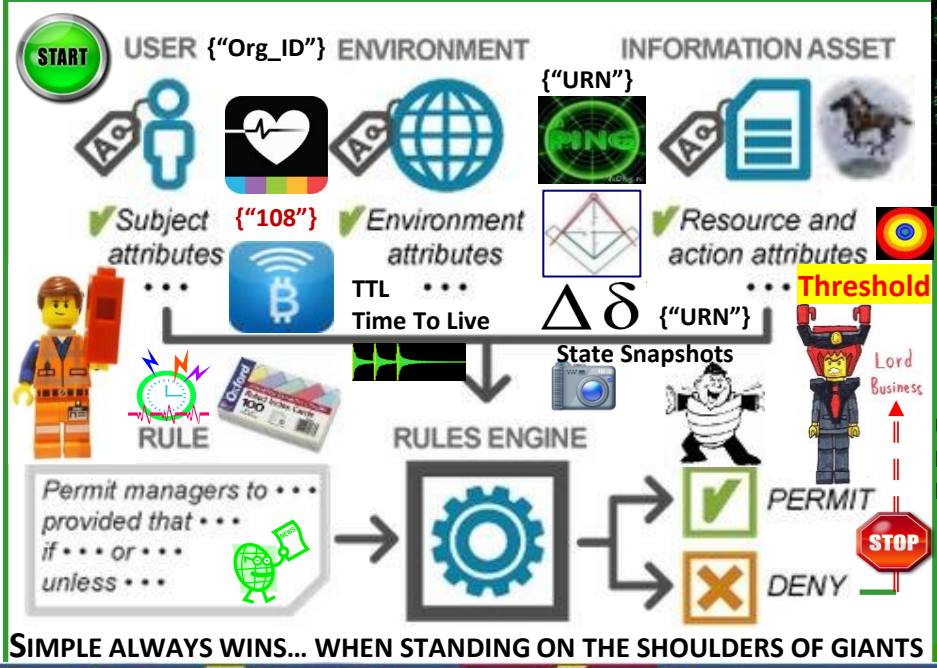
THE SOLUTION WE PROPOSE BEGINS WITH A TIME STAMP SERVER





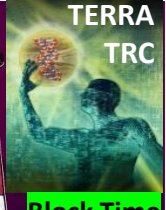
Bitcoin.com Presents
DECENTRALIZE YOUR LIFE
2017 TOUR
THE CONSCIOUS RESISTANCE
5 DAYS
Agorism Meditation Empowerment Freedom Cells Solutions Music & more!
Rig #UNRIG EIN
K %
USDe
OPEN SOURCE EVERYTHING (OSE) (esi/tk) Multinational, Multiagency, Multidisciplinary, Multidomain Information-Sharing & Sense-Making
NGO
ACA
CIV
MDA
COM
GOV
LEA
MIL
Earth Intelligence Network
Creating a Prosperous World at Peace
EARTH DAY EVERYDAY
ON THE
BLOCKCHAIN
Δ δ
NEURAL NET
EMULATION
Index
Commodity
χ
Δ δ
NET ENABLED
OPERATIONS
SLA/O
TERRACYCLE
Federation
Gateway
Off Page
Connector
MINIMUM LIST OF COMPONENTS, BUILDING BLOCKS, PROCESSES, PROCEDURES AGREED ON BY
TRADE FEDERATIONS TO ACHIEVE DISTRIBUTED AUTONOMOUS ORGANIZATION DAO CONSENSUS
{"URN"}
{"Org_ID"}
{"URN"}
{"Org_ID"}
vector
UNUSED
RESOURCES
vector
UNMET NEEDS
Δ δ
INFOCON
5 4 3 2 1
INFORMATION
CONDITION
Spatial
Econometrics
BFI
THE WORLD GAME
ANNEX
Beacon Communities
EVENT / ALERT BUS
SIGNALS
&
TELEMETRY
r. buckminster fuller
"Build a new model
operating manual
for
spaceship earth
Vernetzte Operationsführung
OOTW: Operations Other Than War
FIREFLY – HEARTBEAT SYNC ALGORITHM
OFF SHORE
OUTER BANKS
JAEGER
FIREFLY
HEARTBEAT
ALGORITHM
EVENT / ALERT Flash Heartbeat Message Bus
KAIJU
MONEYBALL
ECONOMICS

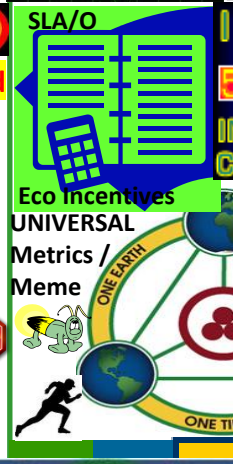

START
USER {"Org_ID"} ENVIRONMENT
INFORMATION ASSET
{"URN"}
Subject attributes
{"108"}
Environment attributes
Resource and action attributes
TTL Time To Live
Δ δ
{"URN"}
Threshold
State Snapshots
Lord Business
RULE
RULES ENGINE
Permit managers to • • •
provided that • • •
if • • • or • • •
unless • • •
PERMIT
DENY
STOP
SIMPLE ALWAYS WINS... WHEN STANDING ON THE SHOULDERS OF GIANTS

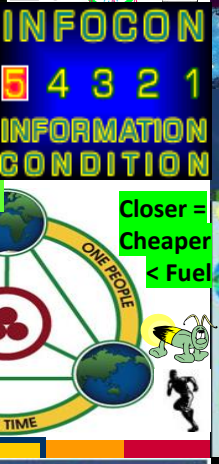

IDMaps
SonarHops
Distance Est


Δ δ


EARTHDAY EVERYDAY
ON THE BITCOIN BLOCKCHAIN

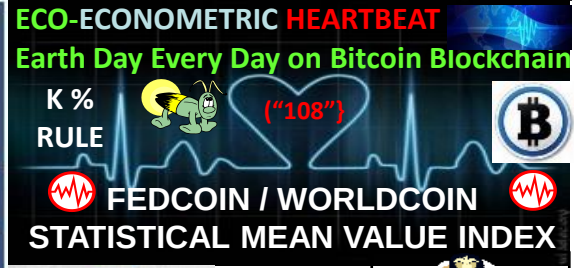

TERRA
TRC


SLA/O
Eco Incentives
UNIVERSAL
Metrics / Meme
ONE EARTH
ONE PEOPLE
ONE TIME


INFOCON
5 4 3 2 1
INFORMATION CONDITION
Closer = Cheaper < Fuel


Block Time Arbitrage
Spatial Econometrics
BFI
THE WORLD GAME
ANNEX
EVENT / ALERT BUS
SIGNALS & TELEMETRY
r. buckminster fuller
"Build a new model
operating manual
for
spaceship earth
MONEYBALL
ECONOMICS

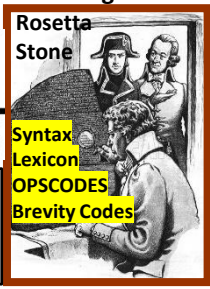

UTZ
Proximity Beacons
STAT
MEAN
INDEX
GDP
MICRO CYCLES
MACRO CYCLES
Friedman's K% Rule
BLOCK TIME ARBITRAGE
Quantum Random Blockchain
BIOCOIN
currencyindex
COMMODITIES
Earth Intelligence Network A.I. EIN
{"URN"}
{"Org_ID"}
K% GDP Pulse
ECONOMY
Eco Incentives
Token Economy
Federation
Gateway
NET SURVEY
Time-Space Meter-Metrics
Geo-Spatial, Temporal, Symbol Set
Syntax Lexicon, OPSCODE Consensus
Steven J. McGee
USPTO 13/573,002
GDP INDEX ECONOMY
Programmable Money, Economy
Github: http://github.com/Beacon-Heart
ecoeconomicepochs@protonmail.com
Angel List: https://angel.co/u/heart_beacon
https://linkedin.com/in/ecoeconepochs
Paypal: paypal.me/EcoEconHeartbeat
https://subscribestar.com/eco_econ_epochs
https://minds.com/beaconheart/
https://pinterest.com/mcgee3077/
Discord: beaconheart#5893
Heartbeat Flash Message Event Bus
UTZ TIME ZONE SYNC
SYNC TO OPTEMPO HEARTBEAT
Stochastic Harmonization
STATE META
Data snapshot
SYNC DELTAS
Firefly-Heartbeat Sync Algo
Shortest path to TRUTH = Nature
LUXOR TEMPLE
NIST Beacon
A Public Randomness Service
Quantum Random Number Beacon
ADAPTIVE
PROCEDURAL
TEMPLATE
CHECKLIST


ECO-ECONOMETRIC HEARTBEAT
Earth Day Every Day on Bitcoin Blockchain
K %
RULE
{"108"}
FEDCOIN / WORLDCOIN
STATISTICAL MEAN VALUE INDEX


HOW TO CHANGE THE WORLD
Swords to Plowshares
NATO / OTAN
Structured Data Exchange
300 + Message Sets
Mapped to Symbols
Symbol Sets
A.I
Artificial Intelligence
Man – Machine
Interface


SYMBOLS RULE THE WORLD
SYMBOL LOGISTICS
Semantic blockchain


"Amazing Grace"


Rosetta Stone
Syntax
Lexicon
OPSCODES
Brevity Codes