

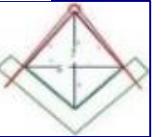
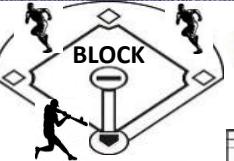


The Heart Beacon Cycle

Time – Space Meter

- 300+ Structured Data Template Use Cases
- Syntax Lexicon Library Code Repository
- IoT / IoT, Big Data, net of Money Bitcoin Blockchain Sync
- Ecologically supportive Econometrics Metrics, Meters
- Swords To Plowshare Network Enabled Operations NEO Reuse

UNIVERSAL
MEME /
METAPHOR



Open
Source
Coder's Guide



ΣX
SAVE WORLD



Vernetzte Operationsführung

OOTW: Operations Other Than War



JAEGER



HEARTBEAT
ALGORITHM



EVENT / ALERT



Flash Heartbeat



Message Bus



ALGORITHM



ALGORITHM

Federation
Gateway

OFF SHORE
OUTER
BANKS

KAIJU

MONEYBALL
ECONOMICS

"Build a new model
operating manual
for spaceship earth"



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



Humanitarian Assistance Networked Donor System

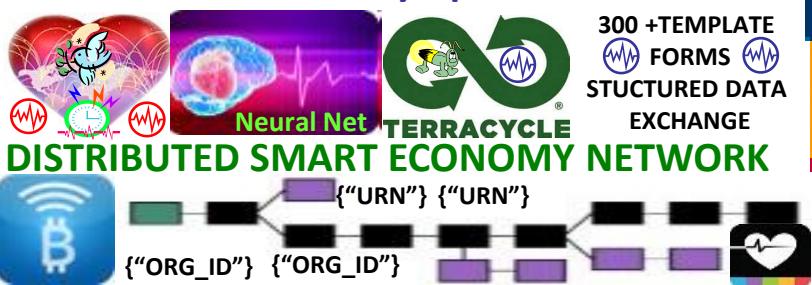
H.A.N.D.S: "Based on the need to speed up the processes of influencing an adversary, new concepts result in the adaptation of military doctrine, organization, training, material, infrastructure, interagency interaction, leadership, personnel and facilities" ... German Bundeswehr : concepts of "Network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



<https://neo.org>



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



Federation Gateway

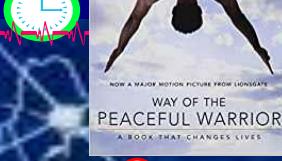


WORLD BEYOND WAR.org
a global movement to end all wars



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



Beacon Communities

JAEGERS



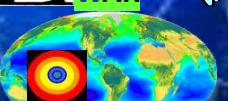
Vernetzte Operationsführung

Proximity Beacons



FREELY
HEARTBEAT
ALGORITHM

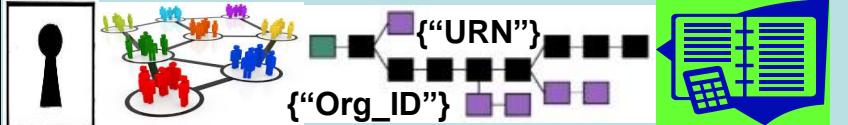
Closer < \$\$\$ < FUEL



KAIJU

Heart Beacon Cycle

FEDERATE / TRADE FEDERATIONS



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

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

Federation
Gateway

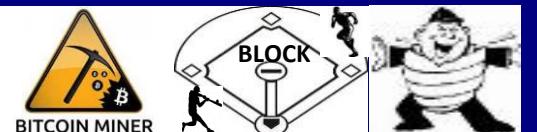


{"GLOBAL"}
{"SHARED"}
{"DOMAIN"}
{"COMMUNITY"}
{"PRIVATE"}
{"GROUP ID"}



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

Bitcoin Mining Pools
MEME / METAPHOR MEDIATION



DISTRIBUTED AUTONOMOUS ORGANIZATION = DAO RAND Corp

term coined circa 1991 now in use by Blockchain tech corporations

Uniform_Resource_Name



HEARTBEAT MESSAGES

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



Office 365 Groups
Microsoft Teams

IeT DEVICE / PLATFORM
IoT SENSOR DEVICE

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

STOCK EXCHANGE
MIC MARKET IDENTIFIER
CODES / BREVITY CODES

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



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

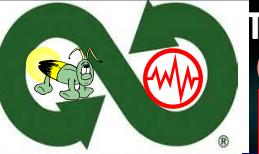


EVENT BUS
Signalling, Telemetry



Firefly - Heartbeat Algo

University of Bologna Italy / Hungary



THE HEART BEACON CYCLE

{"108"}



K%



ECONOMIC MACRO CYCLES

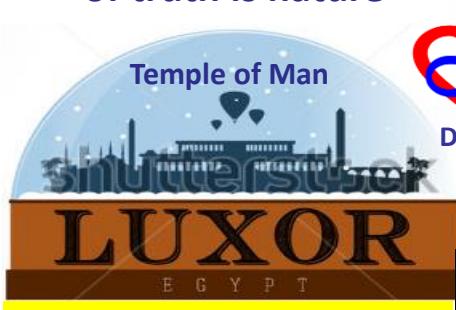
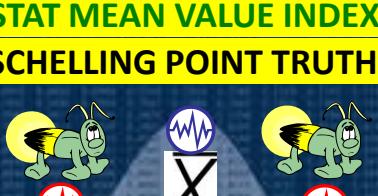
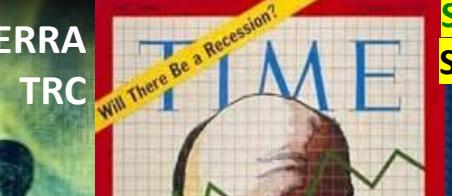
ECONOMIC HEARTBEAT

K% GDP ECONOMIC PULSE FEDCOIN WORLDCOIN

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



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



HEARTBEAT FLASH MESSAGE EVENT BUS
PRECEDENCE ETHEREUM THRESHOLD
PROCESSING GAS METRICS

NON REPUDIATION

LEAD ECONOMIC INDICATORS

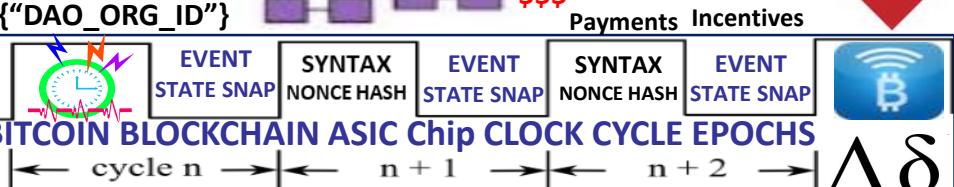
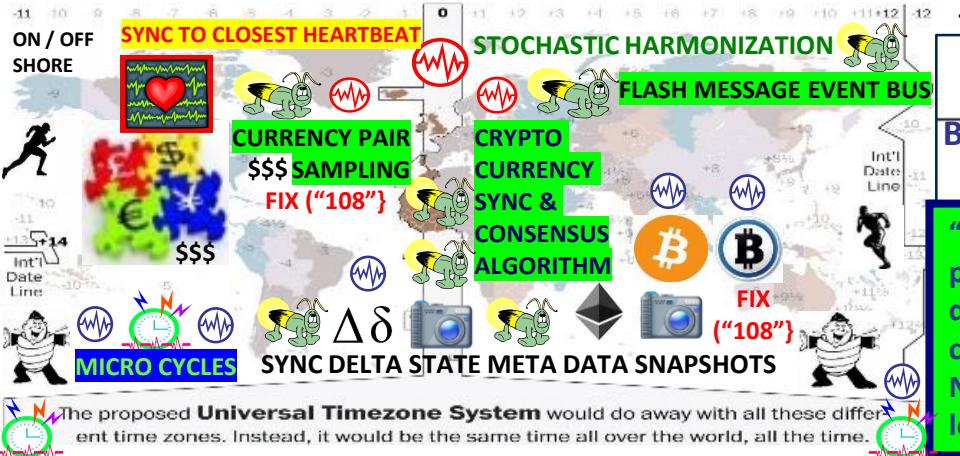
FRIEDMAN'S K% RULE

ALGORITHMIC REGULATION

ASSET TOKENIZATION

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

UTZ TIME ZONE SYNC {"108"}



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

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

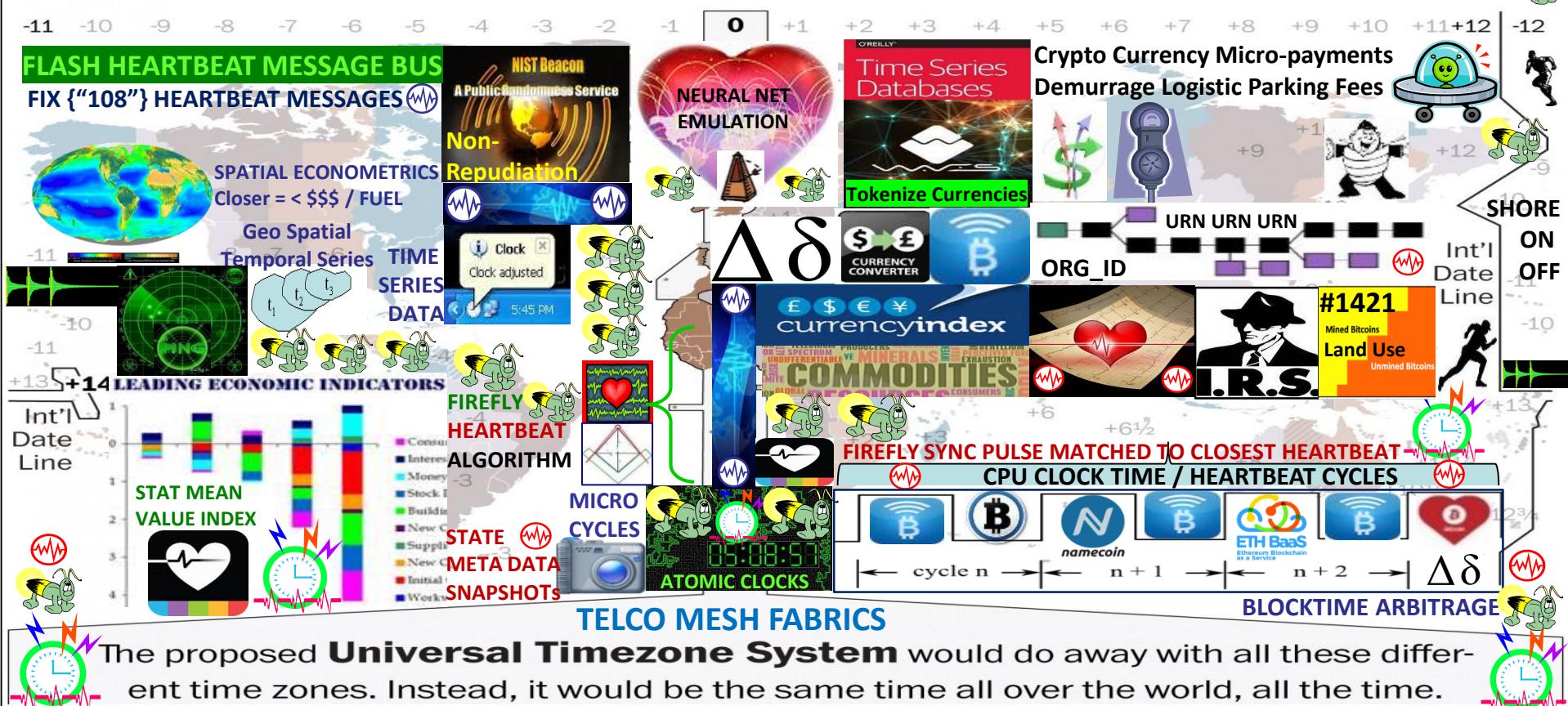






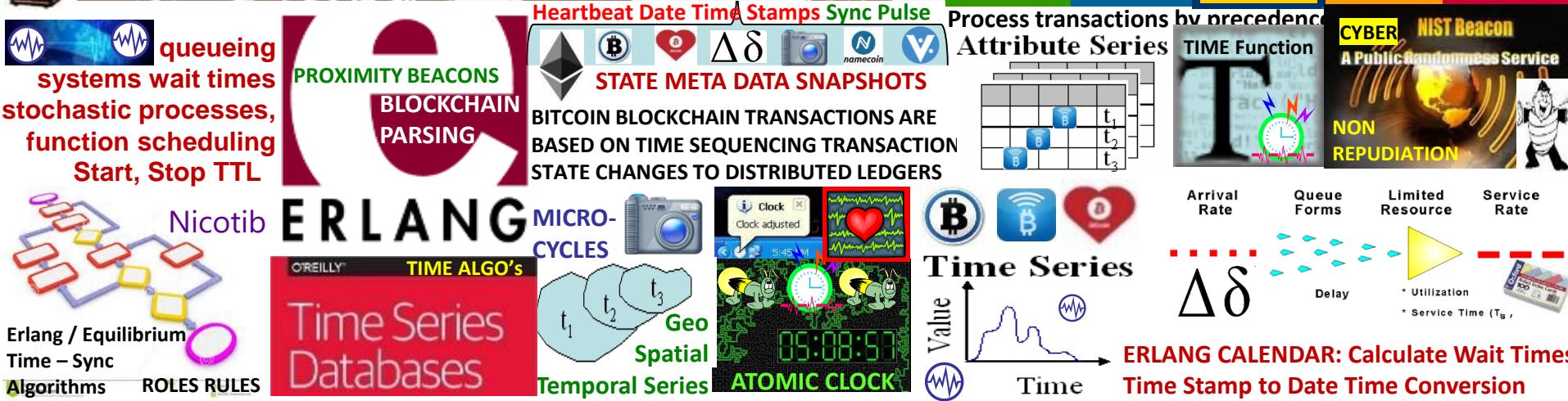
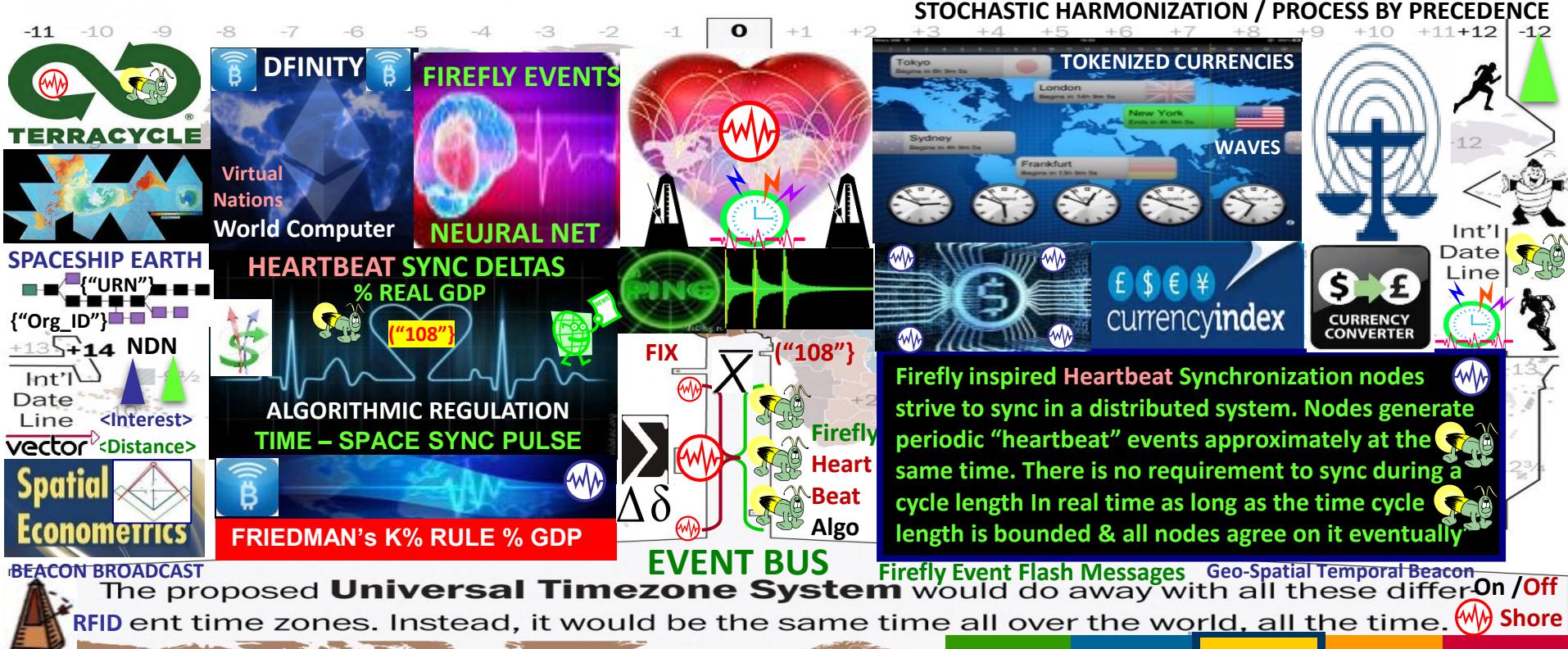


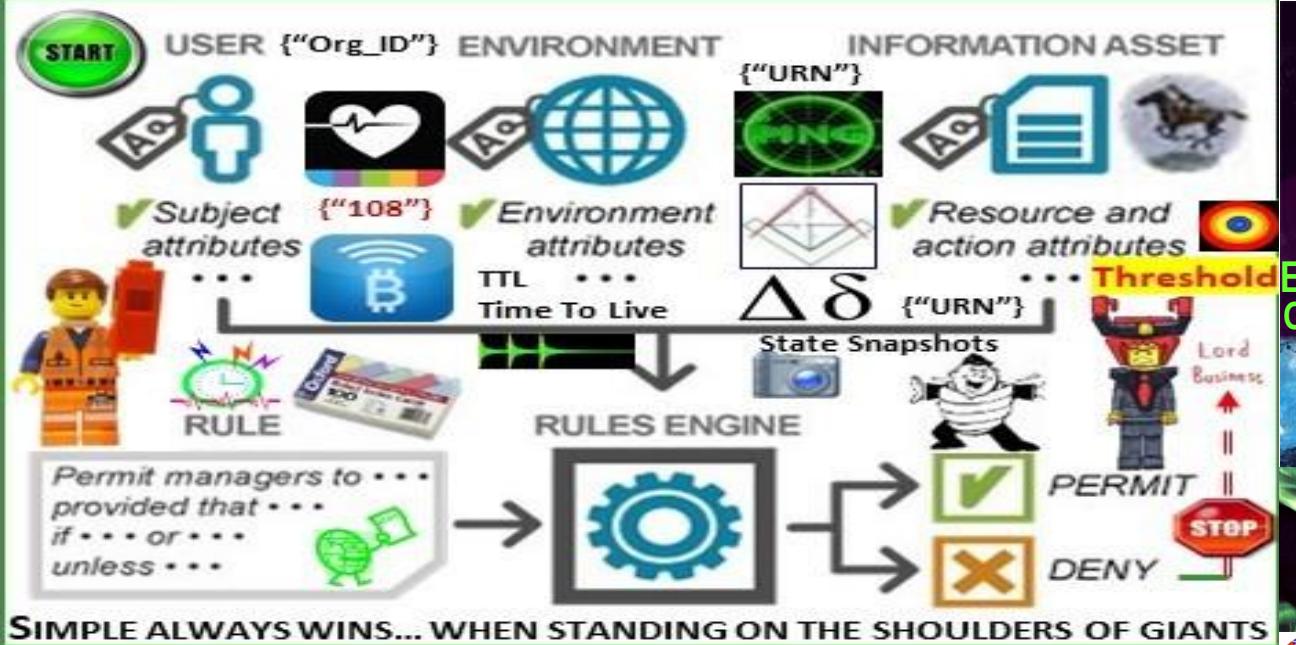
The current standard time common throughout the world is based on a 24-hour clock, with zones that are either 12 hours ahead or behind **Coordinated Universal Time (UTC)**. However, these time zones are decided upon by individual governments, without overall coordination and can even extend fourteen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



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

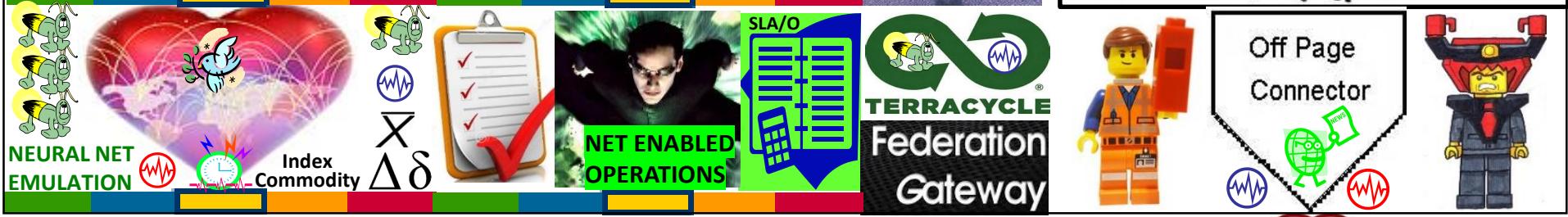
DAO TRADE FEDERATIONS USE COMMON COMPONENTS,
PROCESSES, METHODS, METRICS, METERS SIGNALING
TELEMETRY SCHEDULE IN SMART CONTRACTS,
SERVICE LEVEL AGREEMENTS / OPERATIONS SLA/O



Vernetzte Operationsführung

OOTW: Operations Other Than War





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





Net / Net of \$\$\$ formed: Time Epoch Cycles {"Syntax"} Instructions

"In the beginning"

"The Word"

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

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

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

Gideon Greenspan "Beware the impossible smart contract"



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

FROM	QCCIA	TAKI	ABAS	AMPCIA	AFATOL	WEN
ASIAN	F5014	E500	F5014	C500	C500	F5014
AMERICA	F5014	E500	F5014	F5014	F5014	F5014
AFATOL	F5014	F5014	F5014	F5014	F5014	F5014
WEN	F5014	F5014	F5014	F5014	F5014	F5014



STRUCTURED DATA EXCHANGE TEMPLATE FORMS
300+ USE CASES
LOGIC / FILTERS



SYNTAX / SYMBOL LEXICON LIBRARY



"Bitcoin is a LANGUAGE"
DIGINOMICS

"Bitcoin's Value is TIME itself"
"Time is specified in units of transaction block confirmation times"



"BITCOIN MAKES MONEY PROGRAMMABLE.
MONEY IS SIMPLY DATA"

ALICE CORP VS CLS BANK

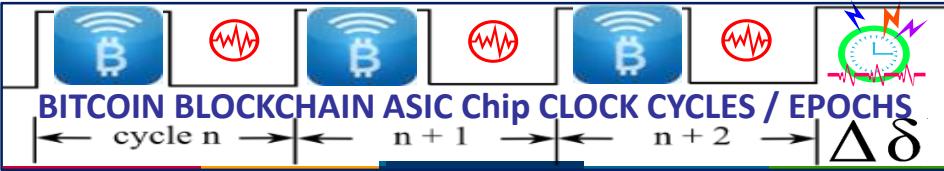
"claims may not be directed towards an abstract idea"

US SC 573 US 134 2347

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



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



MACRO CYCLES
CLOCK FACE
90 / 90 / 90 / 90
= 360 degrees

METRICS / METERS

ALGORITHM = RULES
PLAYERS = ROLES

UMPIRE = RULES

STATISTICIAN

STRUCTURED DATA EXCHANGE TEMPLATE FORMS

SYNTAX / SYMBOL LEXICON LIBRARY

LOGIC / FILTERS

SYMBOLS ARE THE UNIVERSAL LANGUAGE

Coder Guide Rosetta Stone

SYNTAX / SYMBOL LEXICON LIBRARY

BASEBALL "DIAMOND"
A diamond is a square is a block
2nd Base

Runner =
Messages
Signals / Telemetry

90 feet

Euclidean Geometry

TRIANGULATION

90 feet

1st Base Coach

first base UMPIRE

3 x 5 HASH TABLE

NONCE VALUES / CODE

90 feet

Survey Point

home plate

Δδ

BRAVE HALVING



SC 573 US 134 2347

Physical = Opposite Of abstract

90 feet

1st Base Coach

first base UMPIRE

3 x 5 HASH TABLE

NONCE VALUES / CODE

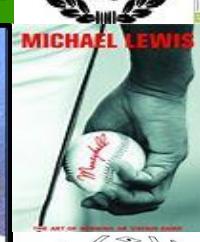
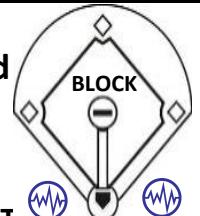
90 feet

Survey Point

home plate

Δδ

BRAVE HALVING



Satoshi Nakamoto Bitcoin Paper

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



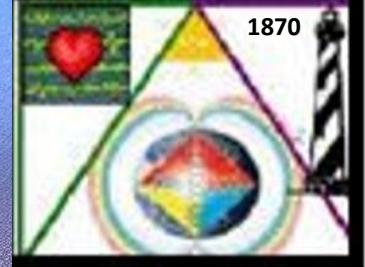
Satoshi
Nakamoto



Craig WRIGHT a.k.a.
Satoshi Nakamoto



PHYSICAL =
OPPOSITE
OF ABSTRACT



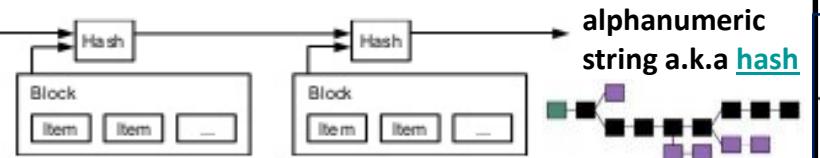
Wright Brother's 1st Flight
Cape Hatteras Outer Banks

"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

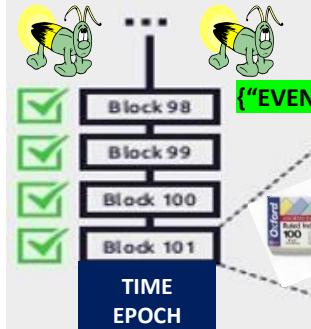


Heartbeat ("108")
Heartbeat Message



**JapanNet Crypto Time
Authentication Service
(Timestamp Service)**

Alice Corp V CLS Bank
Physical = opposite
of Abstract



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

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

Merkle - A summary built from the block's transaction identifiers.

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

US Sct 573 US 134 2347 USPTO 13/573,002

**"All things internet, Internet of money
are formed using time epoch cycles to
process, parse, syntax, instruction code"**



MACRO CYCLES
CLOCK FACE
 $90 / 90 / 90 / 90$
= 360 degrees

BASEBALL "DIAMOND"
A diamond is a square is a block
2nd Base

Runner =
Messages
Signals /
Telemetry



SC 573 US 134 2347
Physical = Opposite
Of abstract

METRICS / METERS

90 feet

ALGORITHM = RULES

PLAYERS = ROLES

UMPIRE = RULES

3rd Base

STATISTICIAN

Height. Volume

#1421

I.R.S

Blockchain Blocks / Coins Awarded

90 feet

Survey Point

home plate

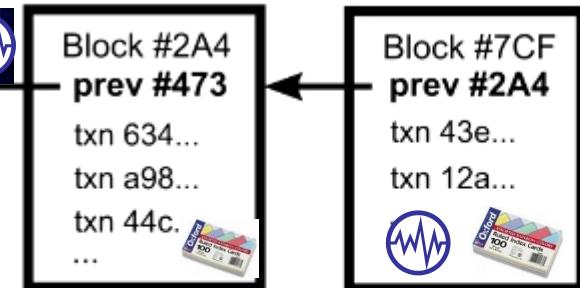
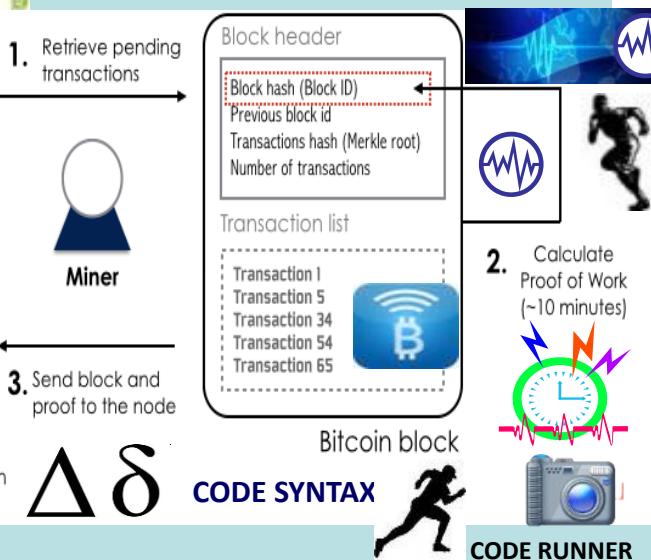
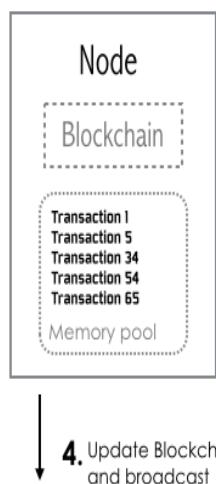
$\Delta\delta$

MICRO-CYCLES

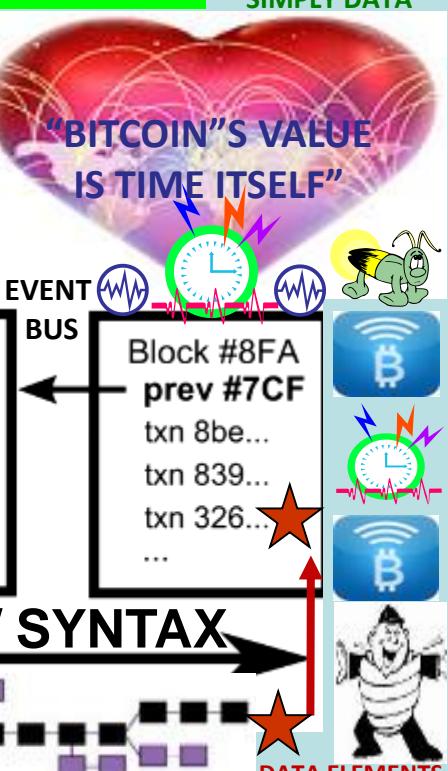




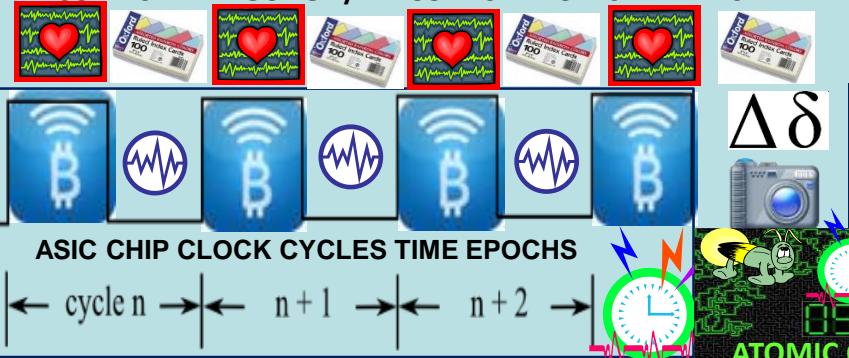
Alice Corp. v. CLS Bank International, 573 U.S. __, 134 S. Ct. 2347 (2014),[1] was a 2014 decision of the United States Supreme Court about patentable subject matter (patent eligibility).[2] The issue in the case was whether certain claims about a computer-implemented, electronic escrow service for facilitating financial transactions covered abstract ideas ineligible for patent protection. The patents were held to be invalid because the claims were drawn to an abstract idea, and implementing those claims on a computer was not enough to transform that idea into patentable subject matter.



BLOCKCHAIN = TIME / SYNTAX



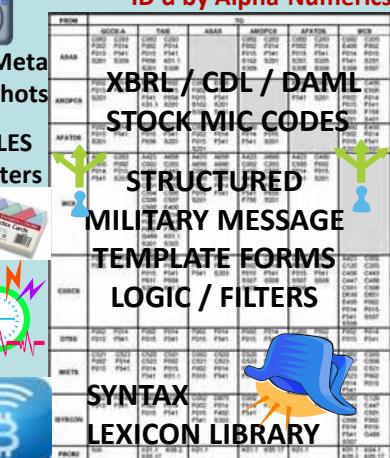
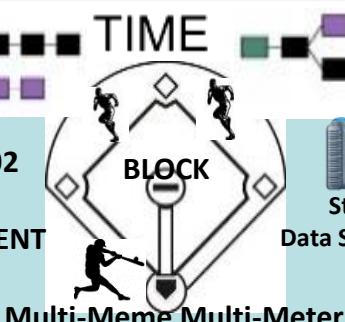
BITCOIN IS A LANGUAGE / BITCOIN'S VALUE IS TIME ITSELF"



USPTO 13/573,002
PHYSICAL MEME
MAIN EMBODIMENT

RULES
Metrics

**TIME
EPOCH
CYCLES**

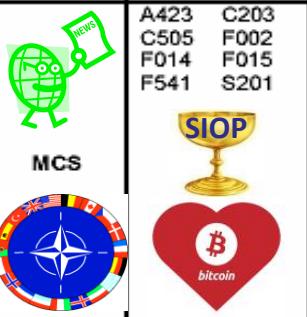
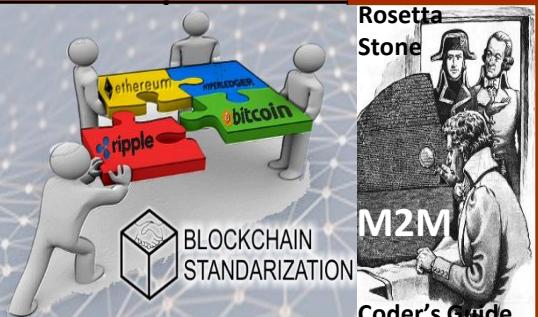
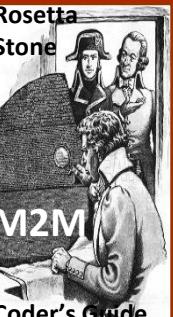
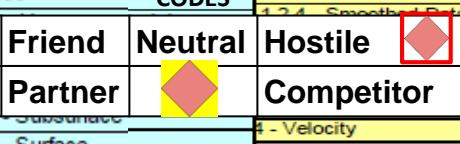


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FROM	GCCS-A	ALPHA-Numeric Brevity Codes						CODE GUIDE
ASAS	C002 C203 F002 F014 F015 F541 S201 S309	C002 C203	C002 C203	C002	ATDS	MCS		
		USMTF / XML MTF FORMATTED MESSAGE CATALOG = 300 + messages info exchange sets using common, CONSENSUS Message 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			C203 F014 F541 S305 S309	C002 C203 E400 F002 F014 F015 S201 S309		
		A423 C203 C505 F002 F014 F015 F541 S201			A423 C400 C505 F002 F014 F015 F541 S201			
		SIOP						
								
MESSAGE CATALOG 300 + Use Cases								
Data Elements: entity, attribute, relationship equivalents								
Object Categories		Information Categories and Examples						
OOB	SYNTAX LEXICON		STRUCTURED DATA	EXCHANGE	Message	Sets	{ "Java JS" }	
	lat/long	spd/hdg	country / alliance, type/class	readiness	targeting, reconning	COA		
Infrastructure		Machine Trust Language MTL	CDL Contract Description Language					
Sociological		temples, historic structures	E-R Model	Class Diagram	Relational Database	Object DBMS	TADILs	MTF
Geophysical		feature lat/long, alt/dpth	Entity	Class	Table	Class	Message	Message
			Attribute	Attribute	Field / Column	Attribute	Child Element or Element Attribute	FFIRN / FFN / FUDN
			Domain Value	PURCHASE CODES	Instance, Value	FEDERATE	DUI	FUD
Information Elements Roles								
• COI Determination Org Interaction								
• Search and Discovery								
• Ontologies STANDARDS								
• Taxonomies REFERENCE								
• Metadata Attributes / Filters								
("Org_ID") {"URN"}								
FILTERS								
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								
								
PROCESS MESSAGE BY PRECEDENCE UNIVERSAL EVENT / ALERT MESSAGE BUS								
OPERATIONAL NODES / ACTIVITIES								
DATA	SYSTEM FUNCTIONS	PERFORMANCE						
11.4 - Classification		11.8 - Kinematics						
11.4.1 - Category		11.8.1 - Pos / Vel / Acc (PVA)						
11.4.1.1 - Confidence Level		11.8.1.1 - Acceleration						
11.4.1.2 - Estimate Type		11.8.1.1.1 - Angular						
11.4.1.2.1 - Alternative		11.2 - Linear						
11.4.1.2.2 - Evaluated D		2 - Estimate Type						
11.4.1.3 - Value		1.2.1 - Estimated						
PURCHASE CODES								
SYMBOL	Friend	Neutral	Hostile					
2525C	Partner		Competitor					
11.4.1.3.4 - Substance			4 - Velocity					
11.4.1.3.5 - Surface			1.4.1 - Horizontal					
11.4.2 - Platform / Point / Feature Type			1.4.2 - Vertical					
11.4.3 - Specific Type			VA Confidence					
11.4.4 - Type Modifier			1 - Bearing Angle					
11.4.5 - Unit			2 - Bearing Angle Rate					
			3 - Covariance Matrix					

DAO: Distributed Autonomous Organization. RAND

Corporation term military context 2000 http://rand.org/pubs/document_briefings/D

Swarming and the Future of Conflict | RAND www.rand.org



RAND

SWARMING ON THE BATTLEFIELD

Past, Present, and Future

Stan J. A. Edwards

RAND
Monograph
Report

THE ADVENT Of NETWAR

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



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

Ethereum: use of DAO
in crypto coin sphere
BitShares.org too ☺

<https://twitter.com/TheBitcoinArmy>



ERIS: GODDESS OF DISCORD
DISRUPTIVE TECHNOLOGIES:

- BITCOIN ETHEREUM
- BITCOIN STELLAR
- BITCOIN NAMECOIN
- BITCOIN RIPPLE



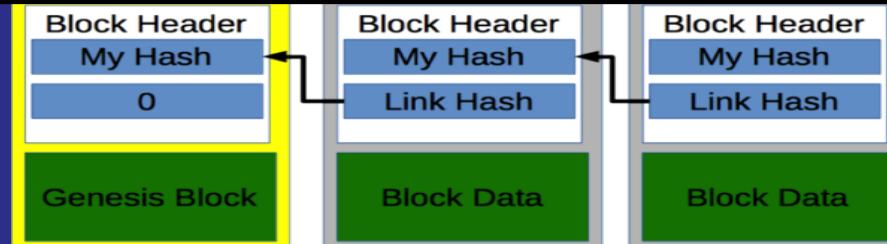
<http://hplusmagazine.com/2014/06/17/eris-the-dawn-of-distributed-autonomous-organizations-and-the-future-of-governance/>



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



Blockchain : linked list of records of transactions involving data state changes over time. Linkage of blocks of records is done using cryptographic algorithms, that merge together information about transactions recorded in the current block, and information about the preceding block.



BLOCK: container (or simply a descriptor) of data relevant to this blockchain. The data is typically a collection of transactions that describe changes to the data. Blocks contain a header holding meta-information about blocks, including a reference to the preceding block.

HASH: value computed by an algorithm uniquely identifying input data without revealing the contents of that data. Hash values are used to ensure the veracity of data on the blockchain. Block headers contain the previous block's hash, ensuring integrity of entire chain

GENESIS BLOCK: first block in the chain created when a blockchain is first deployed, serving as the anchor to which all other blocks link.

TRANSACTION: record of change to data set (s). Transactions are based on rules defined by the blockchain e.g., . rules comprise contracts

SMART CONTRACT: may include behavior / actions to trigger events that independently create transactions.

Node: host in a network capable of adding blocks to chain (s). The way nodes are able to do this varies based on the needs of the chain.

Distributed Ledger: recording of transactions shared across nodes. A blockchain on which many nodes contribute blocks

Consensus: distributed ledger blockchain nodes strategy determines chain's correctness

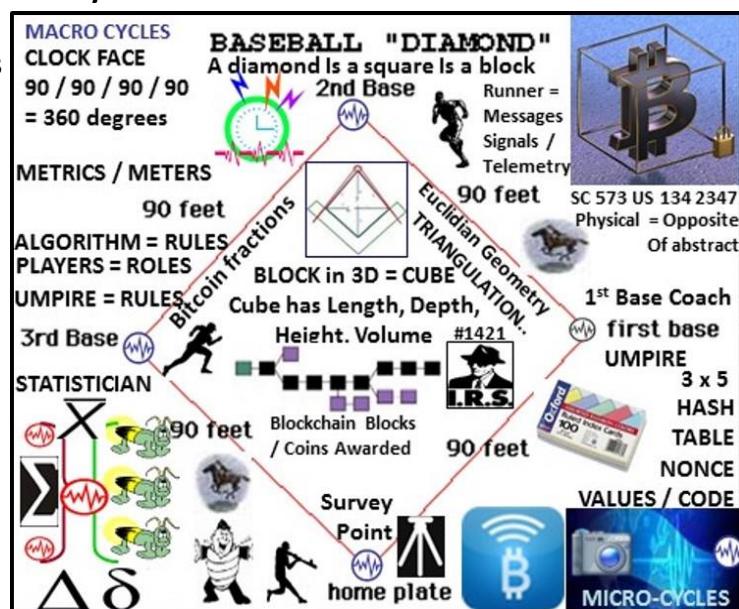
Consensus strategies: "proof of work," "proof of stake," and "delegated proof of stake"

Proof of work (PoW)— A consensus strategy with a computationally difficult challenge to solve to find the hash of a new block, the discovered solution is easy to verify, allowing the other participating nodes to quickly agree that new block is correct

Proof of stake (PoS)— A consensus strategy that relies on nodes which hold collateral to participate in contributing blocks to the chain.

Delegated proof of stake (DPoS): variation of proof of stake where responsibility of the creating blocks is delegated to third party nodes, known as "witnesses."

Witness— A node in a DPoS blockchain that performs the task of creating new blocks.

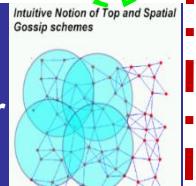




DAG "Directed Acyclic Graph" large number of blocks arrive at the same time. DAG system reaches consensus leveraging "Gossip"... information spread by a computer calling up other computers at random, sharing everything it knows

- Hashgraph consensus algorithm for replicated state machines
- Interval Time Stamps
 - Object Pairing Sync
 - *Virtual voting*: each member has a Hashgraph copy
 - Famous witnesses

data structure that records who gossiped to whom in what order.



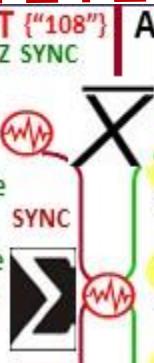
Gossip In Bitcoin, transactions and mined blocks are gossiped. It's fast (information spreads exponentially fast) and reliable (a single computer going down can't stop the gossip). Consensus is enhanced via "gossip about gossip" a concept in which Hashgraph is a thought leader.

FIREFLY – HEARTBEAT {"108"}

Stochastic Harmonization UTZ SYNC

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

State Meta Data
Heartbeat Snaps



START

X

ASYNC



FIREFLY



Strives to Sync



ASYNC

SYNC

SYNC

Δδ

MICRO CYCLES

CYCLES

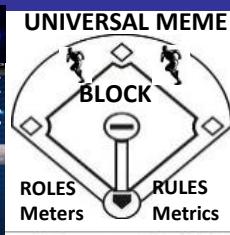
State Meta Data
State Snapshots

FLASH HEARTBEAT MESSAGE BUS

Statistical Mean Value Index

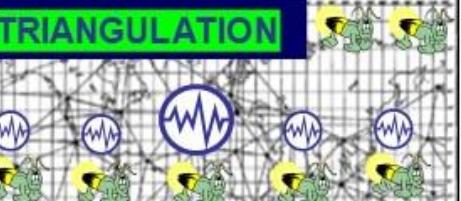


- The Heart Beacon Cycle Time – Space Meter
- Adaptive Procedural Template Checklist
- Heartbeat Sync Delta state meta data
- structured data exchange snapshots
- 300 + Use Case message template sets
- Syntax lexicon Rosetta Stone Coder's guide

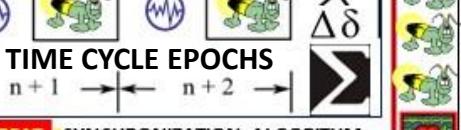
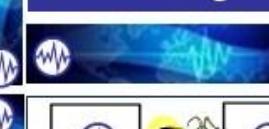


USPTO 13/573,002
sawconcepts.com/index

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



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



FIREFLY – INSPIRED HEARTBEAT SYNCHRONIZATION ALGORITHM

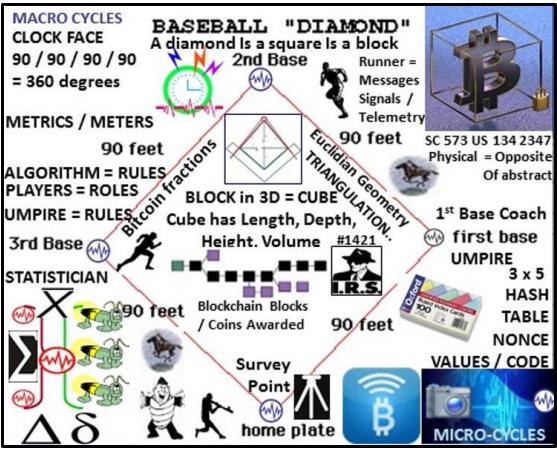
"LENGTH OF REAL TIME CYCLE IS ARBITRARY AS LONG AS NODES EVENTUALLY AGREE"



Connecting Banks, Payment Systems, People with Affordable Financial Services Via Blockchain

CUSTOMIZABLE PAYMENTS INFRASTRUCTURE

middleware between financial products and institutions



ZEPPELIN



ZEPPELIN OPEN, GLOBAL ECONOMY

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

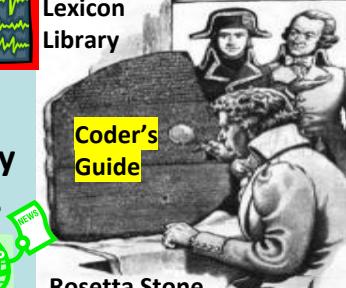
zeppelinOS, operating system for smart contracts
"the rate of innovation in building decentralized applications is limited by the manual and duplicative efforts developers must make to ensure basic usability and security."



WORLD ECONOMIC HEARTBEAT

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

Syntax Lexicon Library 300 + Templates



STRUCTURED DATA EXCHANGE

Category	Protocol	Standard	Version	Protocol	Standard	Version	Protocol	Standard	Version
ASAS	PTPS	PTPS	PTPS	PTPS	PTPS	PTPS	PTPS	PTPS	PTPS
ANOPIC	PTPS	PTPS	PTPS	PTPS	PTPS	PTPS	PTPS	PTPS	PTPS
APAFTR	PTPS	PTPS	PTPS	PTPS	PTPS	PTPS	PTPS	PTPS	PTPS
MIKU	PTPS	PTPS	PTPS	PTPS	PTPS	PTPS	PTPS	PTPS	PTPS
COCOM	PTPS	PTPS	PTPS	PTPS	PTPS	PTPS	PTPS	PTPS	PTPS

LOGIC / FILTERS
 ALPHA-NUMERIC
 BREVITY CODES



Rosetta Stone

STOCHASTIC HARMONIZATION for TELCO Mesh Fabrics



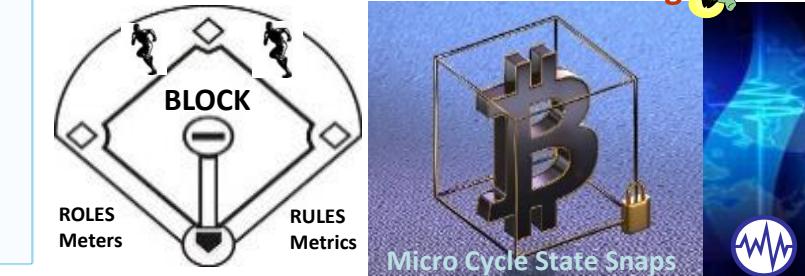
Contract development



Contract interaction



Off chain tools



EVM

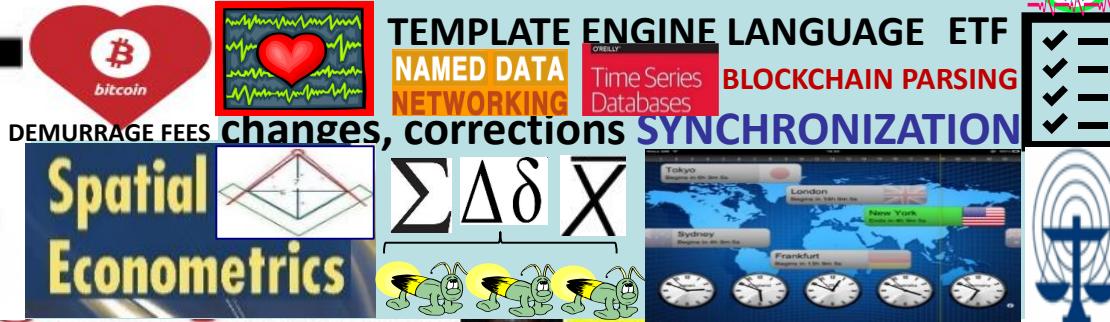
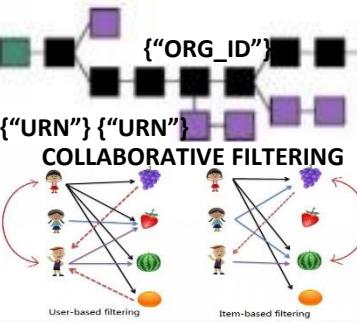
Blockchain



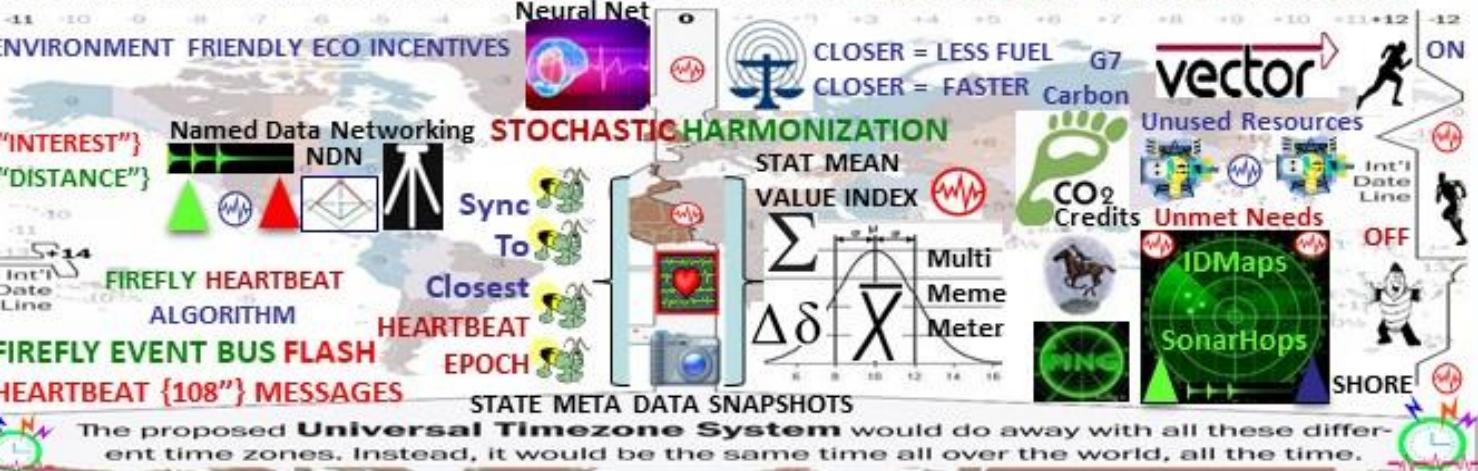
EGaaS

ELECTRONIC GOVERNMENT AS A SERVICE

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

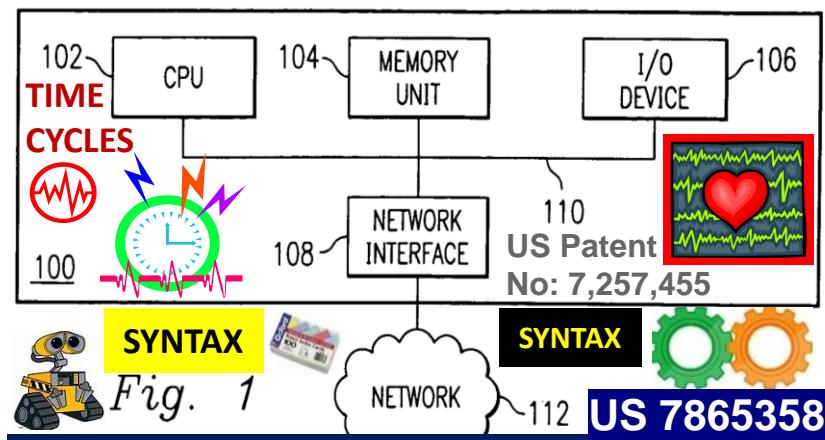


The current standard time common throughout the world is based on a 24-hour clock, with zones that are either 12 hours ahead or behind **Coordinated Universal Time (UTC)**. However, these time zones are decided upon by individual governments, without overall coordination and can even extend fourteen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



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.



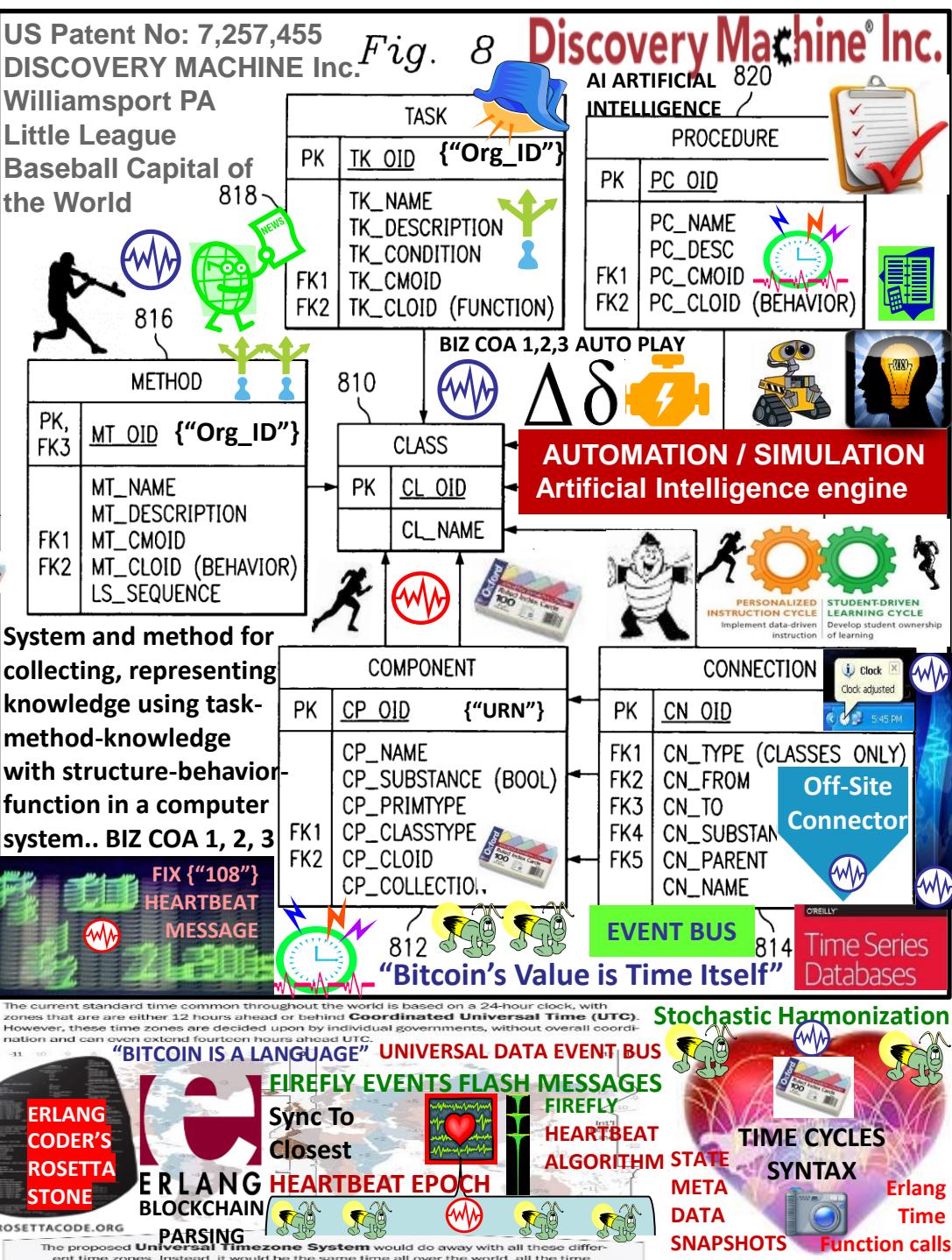
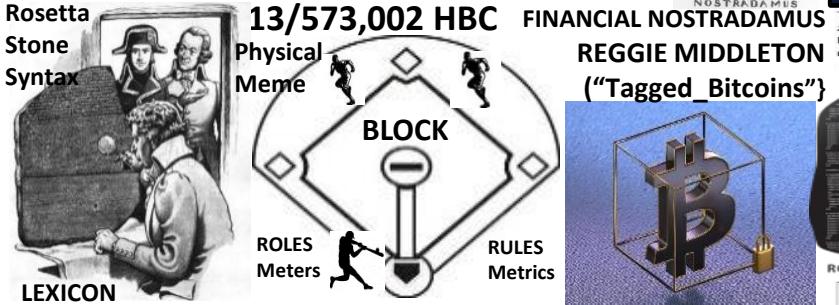


Machine-based system for transforming data from a source form to a target form, a tool is provided for sharing information established in developing a transformation model. The shared information may relate to rules for mapping source collection terms to standardized terms, rules for ordering or **SYNTAX**,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





"EARTHDAY EVERYDAY ON THE BITCOIN BLOCKCHAIN"

"GIVE A HOOT, DON'T POLLUTE" Woodsy The Owl

GNOSIS

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

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

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

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

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



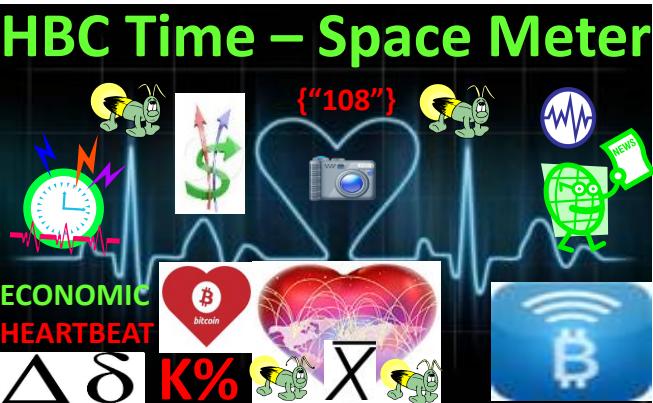
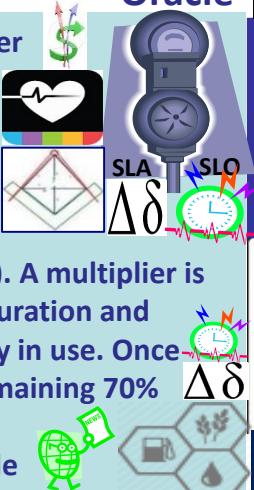
The proposed **Universal Timezone System** would do away with all these different time zones. Instead, it would be the same time all over the world, all the time.

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

Futarchy PREDICTION MARKETS
GnosisAMA

Gnosis trading interface alpha
WIZ token fee payment
INFORMATION ARBITRAGE ECONOMICS

TERRACYCLE Price Oracle

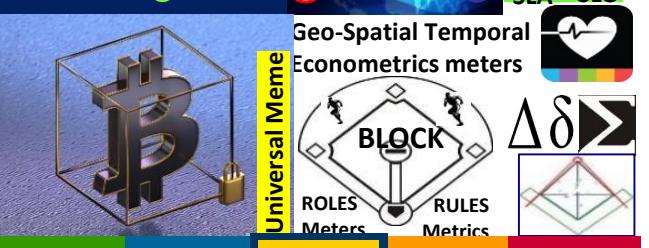


THE TERRA (TRC)

Trade Reference Currency



Demurrage Fees



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



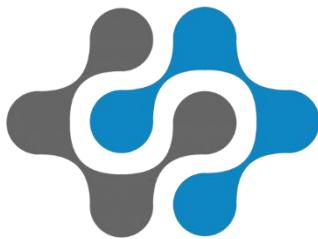
Ardor is a blockchain-as-a-service platform that will allow people to utilize the blockchain technology of Nxt through the use of child chains.



ARAGON

Unstoppable organizations

Create value without borders or intermediaries

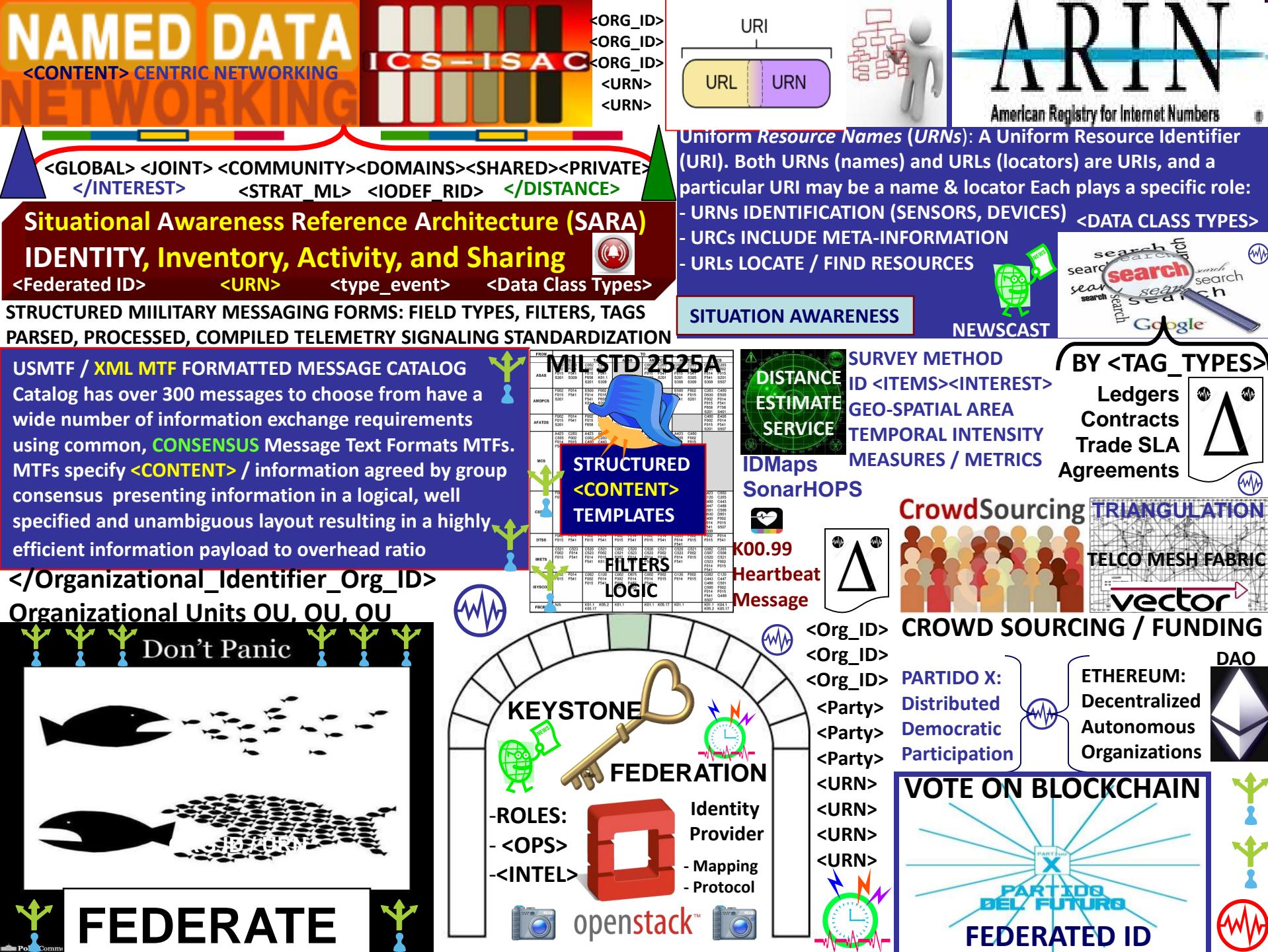


bitsquare

- Infrastructure: Bitsquare uses a P2P network (there are no servers);
- Security: Bitsquare does not hold users funds (neither bitcoin nor fiat);
- Privacy: Bitsquare does not hold users data (no registration, uses Tor);
- Openness: It is open source (AGPL license);
- Independence: It is funded by donations and personal savings;
- Governance: Bitsquare is organized as a DAO (Decentralized Autonomous Organisation), comprising the people who build, support and maintain the project;
- Sustainability: Trading fees go to arbitrators and the DAO.

But a community which has a common goal – like making Bitcoin a success – should strive for solutions which are efficient and have been proven to deliver great results.









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.



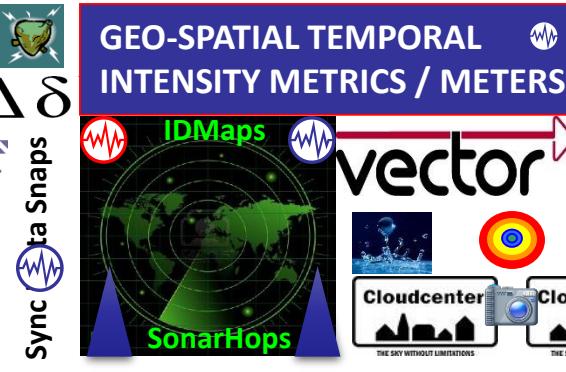
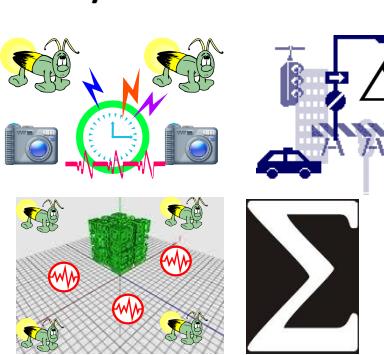
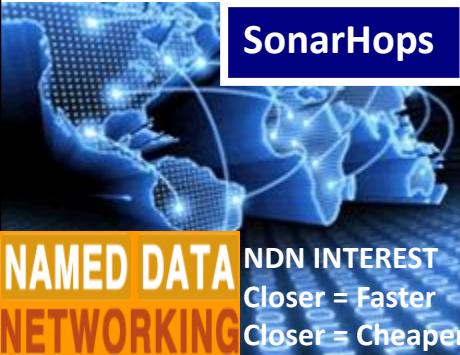
PROJECT HBCnet: build artificial intelligence neural network supporting #UNRIG's Earth Intelligence Network EIN with Signals, Telemetry Mesh



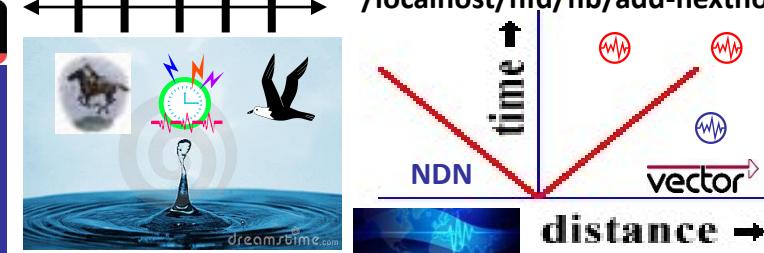
IDMaps: Global Internet Host Distance Estimation Service



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



IDMaps scalable Internet-wide architecture measures, disseminates distance information



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

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

Name Prefix
<Org_ID> Trie (NPT)



NDN NAMES

NDN NAMED DATA NETWORK RIB /
FIB Datasets event notification

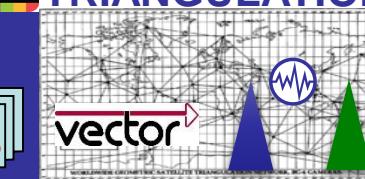
Distance information adjusts to “permanent” topology changes e.g., splits, joins, adds, moves, drops, merges in lieu of formal merger / acquisition

NDN INTEREST LENGTH
= DISTANCE BY HOPS

NDN
INTEREST

IS DATA
FRESH ?

TRIANGULATION



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

Datasets and Event Notification

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



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



MICRO-CYCLES



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

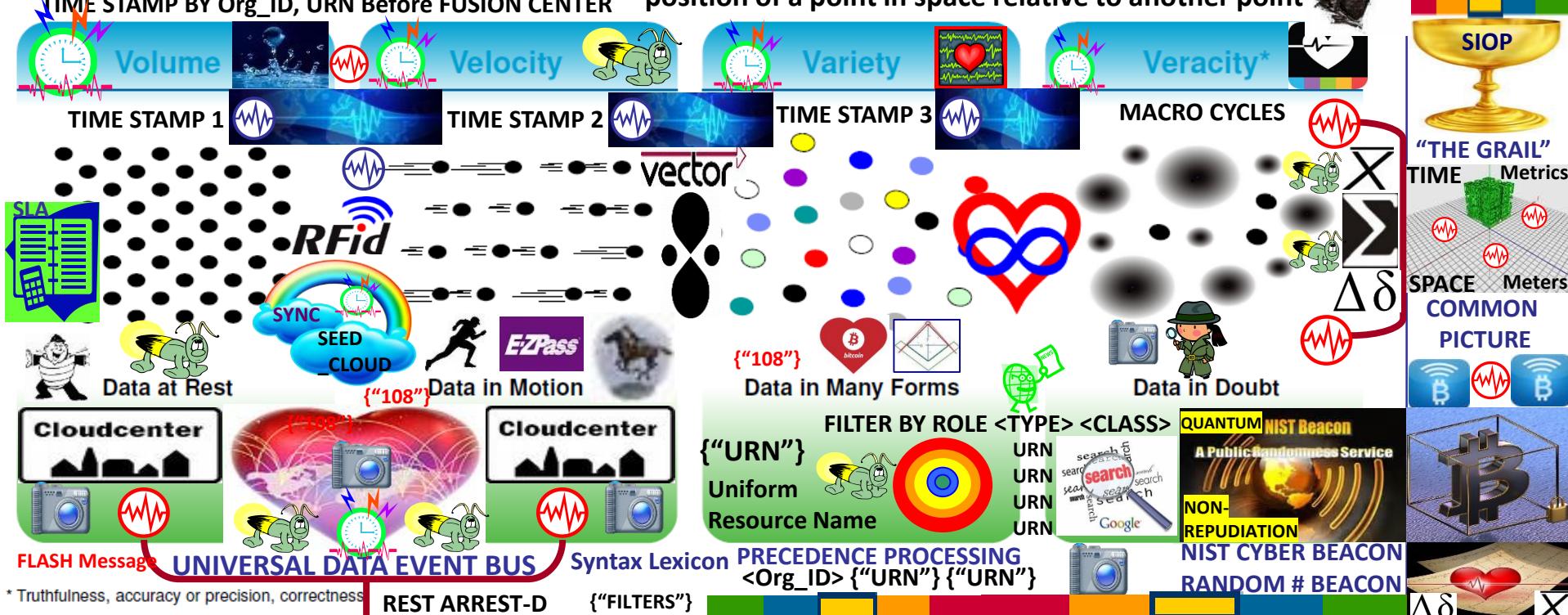


SIOP

"THE GRAIL"

TIME Metrics

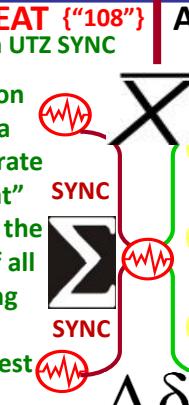
SPACE Meters
COMMON PICTURE



* Truthfulness, accuracy or precision, correctness

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

State Meta Data
Heartbeat Snaps



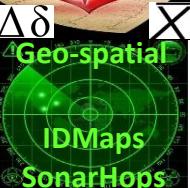
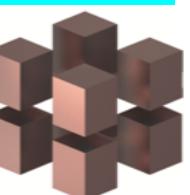
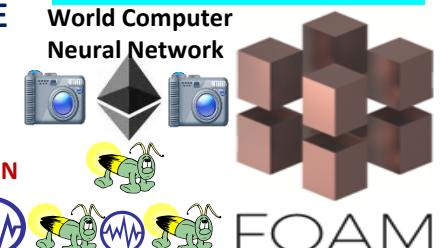
MICRO CYCLES



ERLANG

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

FIREFLY SYNC CONSENSUS



Distance Est Service

FOAM spatial protocol

Ethereum Blockchain

World Computer Neural Network





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

FINANCIAL
NOSTRADAMUS
REGGIE MIDDLETON



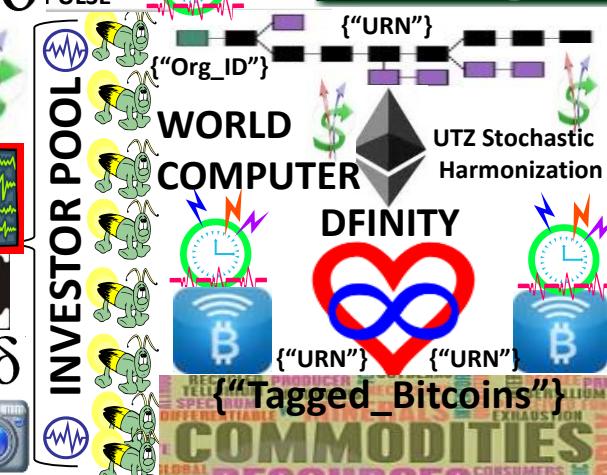
Zero Trust Transaction: money performs according to terms agreed to by the parties. Ex: purchase of widget from retail store where widget must be delivered to person B on **TIME X**, in **Y condition** at **PLACE Z** or person A does not get paid. Global stock, currency, commodities exchanges, letters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



Cost will be our stated rates that will 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



DAO Distributed Autonomous Organization SOFTWARE POOLS

All Market Orders Search

UTZ TIME SYNC

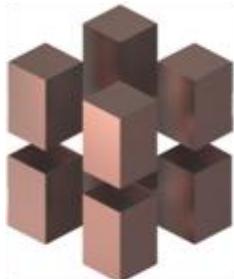
Collateral Notional Expiry

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.







FOAM

FOAM, an open source spatial protocol built on the Ethereum blockchain. The protocol ties every latitude-longitude coordinate pair on Earth (down to one square meter) to a specific smart contract address, allowing developers and applications to tie business logic to specific spaces to crowdsourced data the blockchain.

Foamspace explored the speculative relationship between decentralized infrastructure and the production of the built environment. The installation was made entirely of factory-standard EPS geofoam blocks, which additionally served as a visual metaphor for the bitcoin blockchain.

Imagine a decentralized architecture office that distributes equity and shares in the built environment and comprises a mesh of users: investors, clients, designers and established offices

The Tropical Mining Station was a space produced by extracting the surplus energy from the process of mining Ethereum to produce a heated space. Custom miners were built that funneled excess heat and required airflow to inflate a pneumatic space, which became a spatialized node on the decentralized network.

<https://archinect.com/features/article/142920059/towards-a-decentralized-architecture-with-foam-the-blockchain>



district0x

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

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

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

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

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

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

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

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



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



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

Ericsson Open Money
For Society Patent App

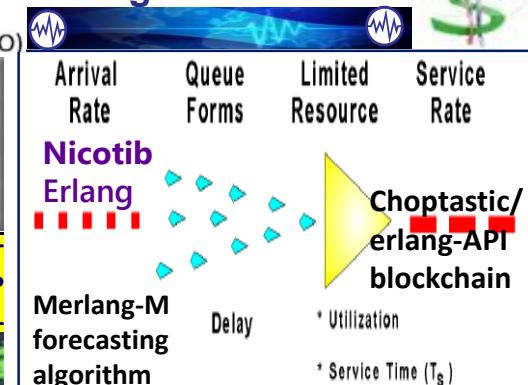


20130166398 "System And Method For Implementing A Context Based Payment System."

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



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



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

Mnesia database ("Organization_ID") Global name resolution

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



PROOF-OF-WORK



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



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

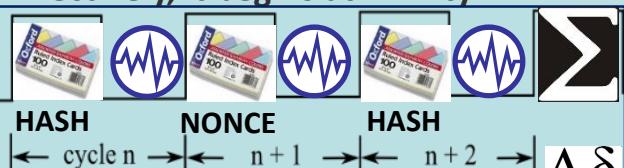


THROTTLE equivalent to difficulty. State
•target = maximum value of 8 bytes Snap
(2^{64}) divided by the difficulty.

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



GUESS stores the guess
Effectively, it begins at infinity.



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

O'REILLY
Time Series Databases



FIREFLY-HEARTBEAT ALGORITHM STOCHASTIC HARMONY ACROSS TIME ZONES



MESSAGE ex:
•Hashing string
•Hash Table

300+Message Templates

MACRO CYCLES
CLOCK FACE
 $90 / 90 / 90 / 90$
= 360 degrees

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



SC 573 US 134 2347
Physical = Opposite Of abstract

METRICS / METERS

90 feet

ALGORITHM = RULES



PLAYERS = ROLES

Runner =
Messages
Signals / Telemetry

UMPIRE = RULES

Euclidean Geometry
TRIANGULATION

3rd Base

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

1st Base Coach
first base
UMPIRE

STATISTICIAN

3 x 5
HASH
TABLE
NONCE

X

VALUES / CODE

Blockchain Blocks / Coins Awarded
90 feet

MICRO-CYCLES

Σ

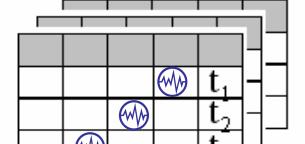
t_1
 t_2
 t_3

LOGIC FILTERS
LOGIC GATES

SYNTAX LIBRARY
LEXICON

CODER'S GUIDE

POW PAYLOAD :
COMBINATIONS OF
ENCRYPTED SYNTAX
Attribute Series



MACRO CYCLES
CLOCK FACE
90 / 90 / 90 / 90
= 360 degrees

METRICS / METERS

90 feet

ALGORITHM = RULES

PLAYERS = ROLES

UMPIRE = RULES

3rd Base

STATISTICIAN

Height. Volume

#1421

I.R.S.

Blockchain Blocks / Coins Awarded

90 feet

Survey Point

home plate

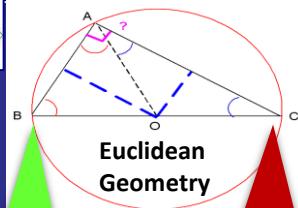
90 feet

Blockchain Blocks / Coins Awarded

BASEBALL "DIAMOND"
A diamond Is a square Is a block
2nd Base
Runner =
Messages
Signals /
Telemetry



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



90 feet
Euclidian Geometry TRIANGULATION
BLOCK in 3D = CUBE
Cube has Length, Depth,
Height. Volume #1421
Blockchain Blocks / Coins Awarded
Survey Point home plate

90 feet
SC 573 US 134 2347 Physical = Opposite Of abstract
1st Base Coach first base UMPIRE 3 x 5 HASH TABLE NONCE VALUES / CODE MICRO-CYCLES

STRUCTURED {"CONTENT"} TEMPLATES Attribute Series
SYNTAX, SYMBOLS LEXICON LIBRARY Contract Description DAML Language CDL ("INTEREST") ("DISTANCE") IDMaps SonarHops FBI
LOGIC – FILTERS CODE SEQUENCE ROLES / RULES

Firefly – Heartbeat Event Bus
SPATIAL TEMPORAL Series

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.

FIREFLY-HEARTBEAT ALGORITHM EVENT BUS O'REILLY Time Series Databases

TRANSACTIONS PER CYCLE METRICS

COMPUTER CHIP EPOCHS

SPATIAL TEMPORAL Series

Firefly – Heartbeat 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.

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

UXTO
Mined Bitcoins
Survey Methods
Proximity Beacons
Unmined Bitcoins
MICRO-CYCLES

Survey Methods
Proximity Beacons
Unmined Bitcoins
MICRO-CYCLES

CALENDAR

VOTING

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

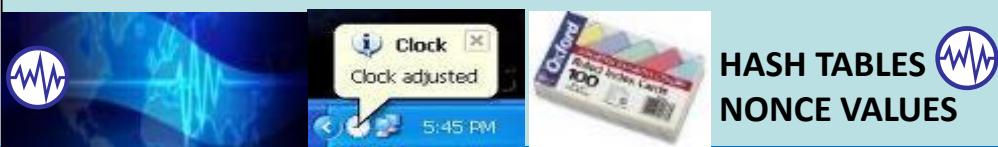
UTXO: unspent transaction output'. bitcoins sent somewhere but not yet spent. Unspent transaction output set= latest STATE of every Bitcoins ever mined" % Block Mined / % Block owned

Little League BIG LEGACY 75 YEARS

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



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

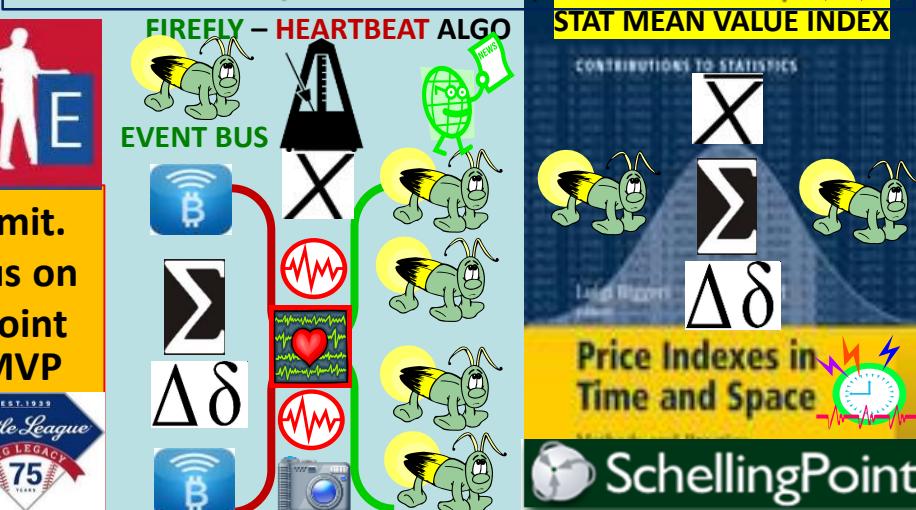
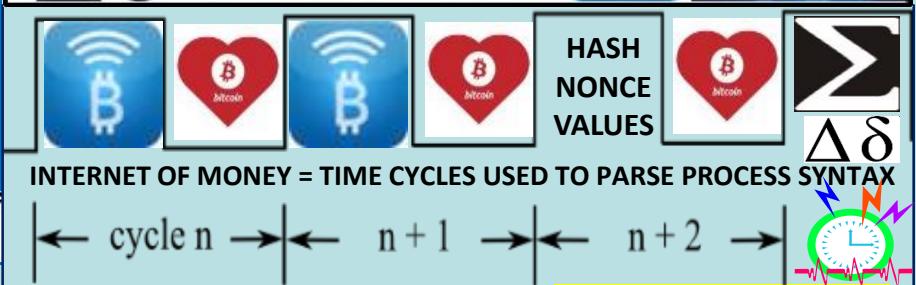
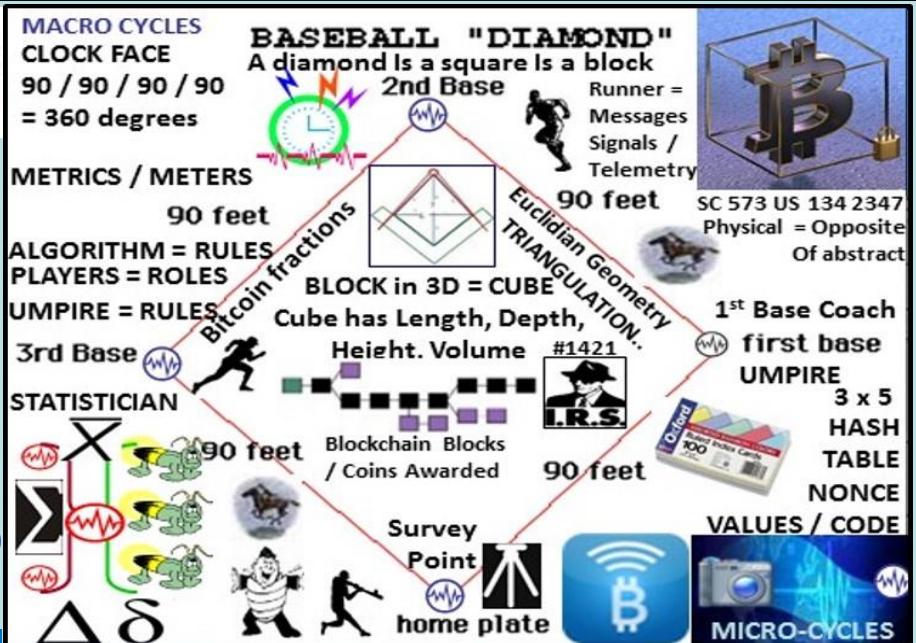


HASH TABLES
NONCE VALUES

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. $\Delta\delta$ \times



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



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

AZURE: Core/Kernel/Universal Protocol

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

Unspent Transaction Output protocols UTXO

Crypto Tokenized Assets Digital Bearer Bonds
unique identity for owned artifacts

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

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

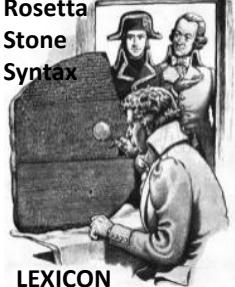
Blockchain Fabric: Blockchain Gateway Services [Interledger](#)

like services to allow for SmartContracts and tokenized objects to be passed between different ledger systems.

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

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

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



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

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



MULTI-MEME MULTI-METER

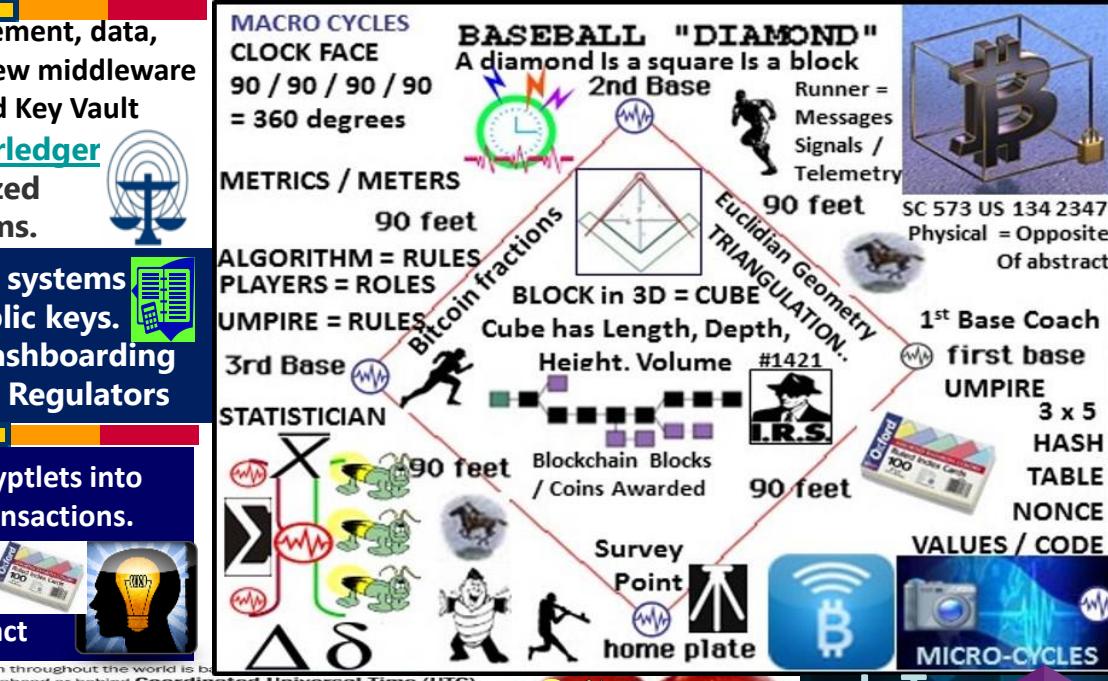


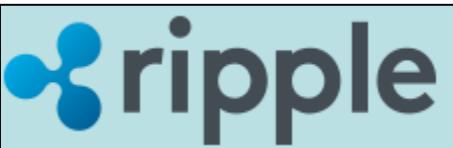
Blockchain Startups

Top Blockchain startups disrupting non-financial markets

MYRIAD MEMES MEDIATION

BLOCKCHAIN





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

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

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

Provides information about total costs of the transaction



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



Bitcoin Address Shortener

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

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

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

ALPHA NUMERIC BREVITY CODES

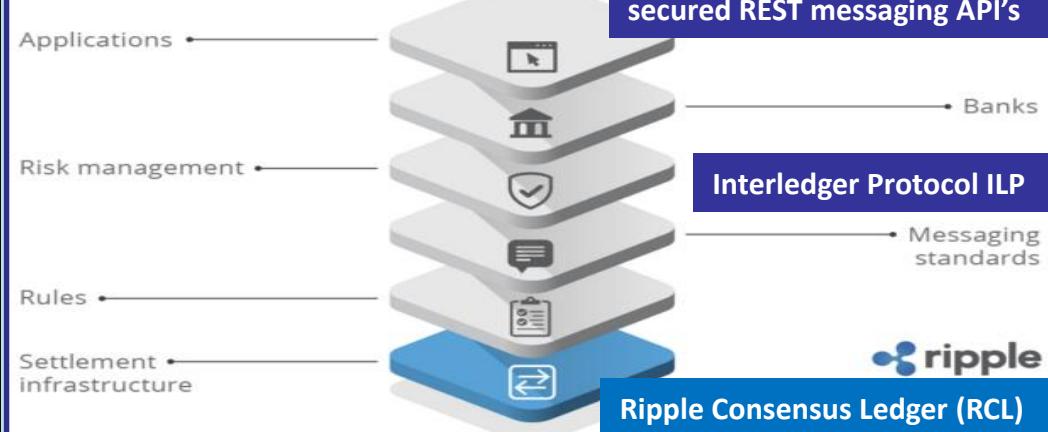
A.I

To retrieve addresses on your computer, use [bitcoind](#)

Blockchain.info

CLOCK

Neutral transaction protocol



SchellingPoint



EVENT

ROLES

BLOCK

CLOCK

TIME-SPACE

EQUATIONS

ALGORITHMS

BLOCKCHAIN

PARSING

ERLANG

EVENT BUS

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"} ΔΣ Sync to Closest Heartbeat

HASH NONCE FIREFLY-HEARTBEAT ALGORITHM

MICRO-CYCLE STATE META DATA SNAPSHOTS AGGREGATE INTO MACRO ECONOMIC CYCLE MESSAGE

World Economic Heartbeat
ALGORITHMIC REGULATION

{"108"}



BLOCKTIME ARBITRAGE System of Systems Sync

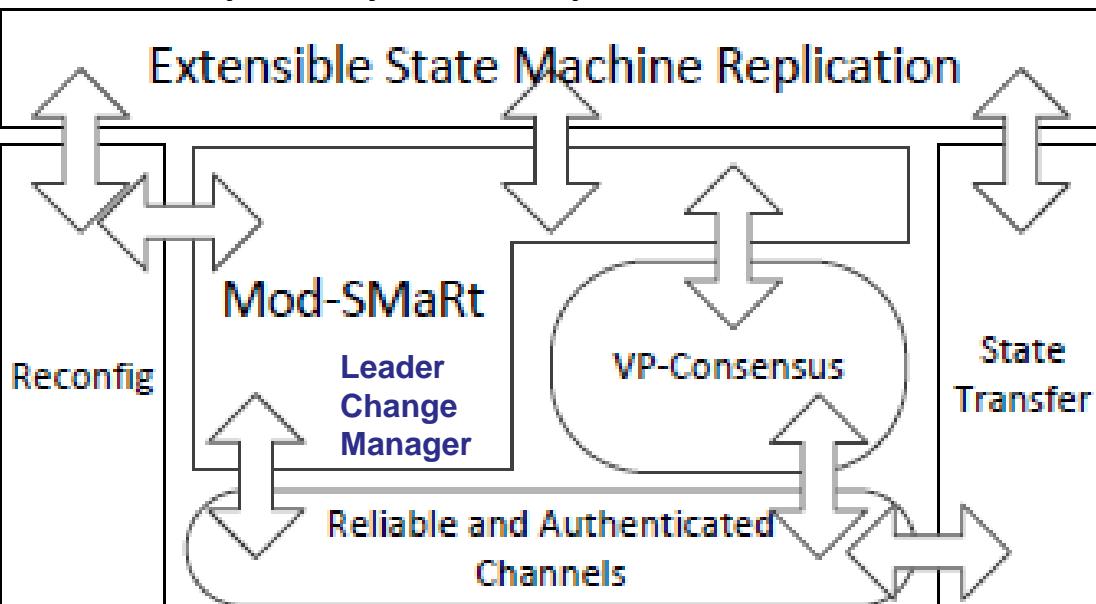
Stochastic Harmonization
Telco Mesh Fabrics
Wide Area Sync

FIREFLY EVENTS
FLASH MESSAGES

EVENT

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

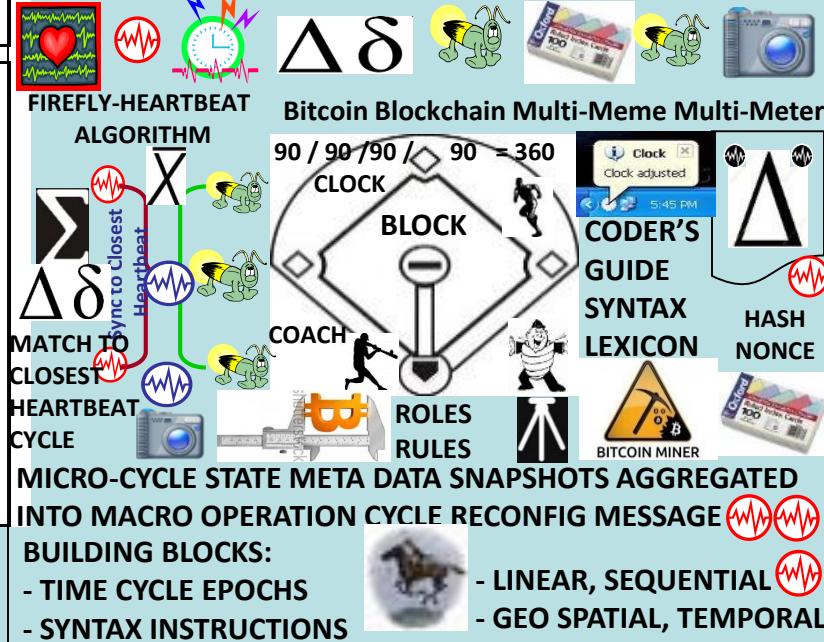
PHYSICAL = OPPOSITE OF ABSTRACT



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

K0.99 HEARTBEAT SYNC DELTA STATE META DATA SNAPSHOTS

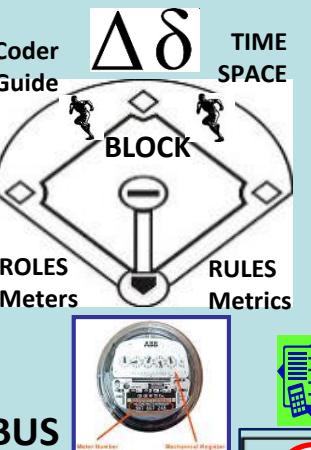
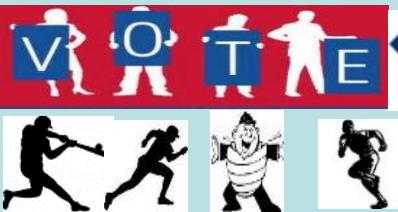


Firefly inspired Heartbeat Synchronization nodes strive to sync in a distributed system. Nodes generate periodic "heartbeat" events approximately at the same time. It differs from classical clock sync in that nodes are not interested in counting cycles to agree on the ID of the current clock cycle. There 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"

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

KEY BLOCKS:

- NO CONTENT = NULL
- LEADER ELECTION



MVP

EVENT BUS

MICRO BLOCKS:

- ONLY CONTENT
- NO CONTENTION



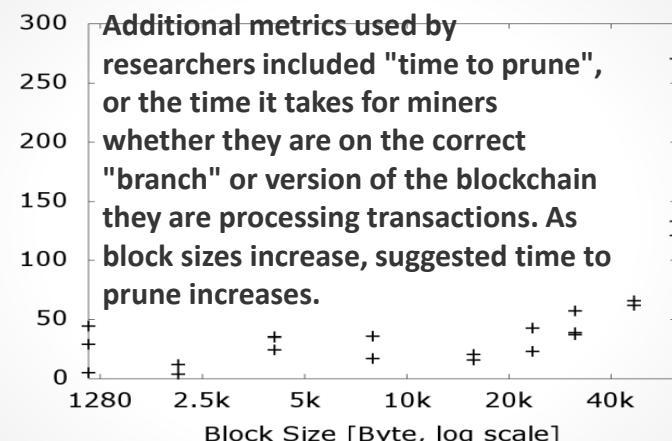
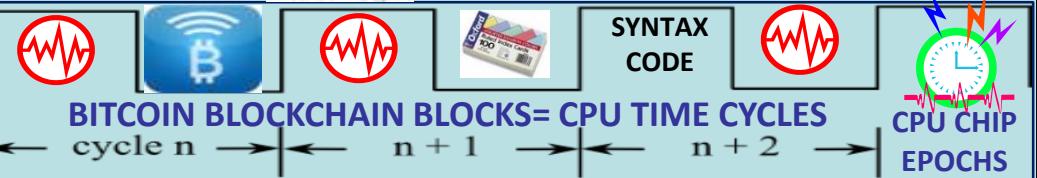
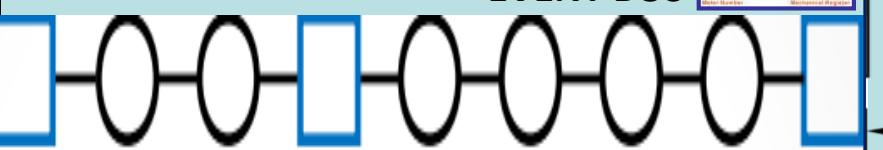
FROM	GCDA	TAB	ASAS	AMPCDS	AFATON	WCR	TO
GCDA	P001	P002	P003	P004	P005	P006	C001
TAB	P001	P002	P003	P004	P005	P006	F001
ASAS	P001	P002	P003	P004	P005	P006	S001
AMPCDS	P001	P002	P003	P004	P005	P006	G001
AFATON	P001	P002	P003	P004	P005	P006	P001
WCR	P001	P002	P003	P004	P005	P006	M001

XBRIL / CDL / DAML
STRUCTURED STOCK MIC CODES

STRUCTURED MILITARY MESSAGE TEMPLATE FORMS LOGIC / FILTERS

SYNTAX LEXICON LIBRARY

CPU CHIP EPOCHS





ETHER: Compensate Resource Contribution

Gas: price to
Run contract
transactions

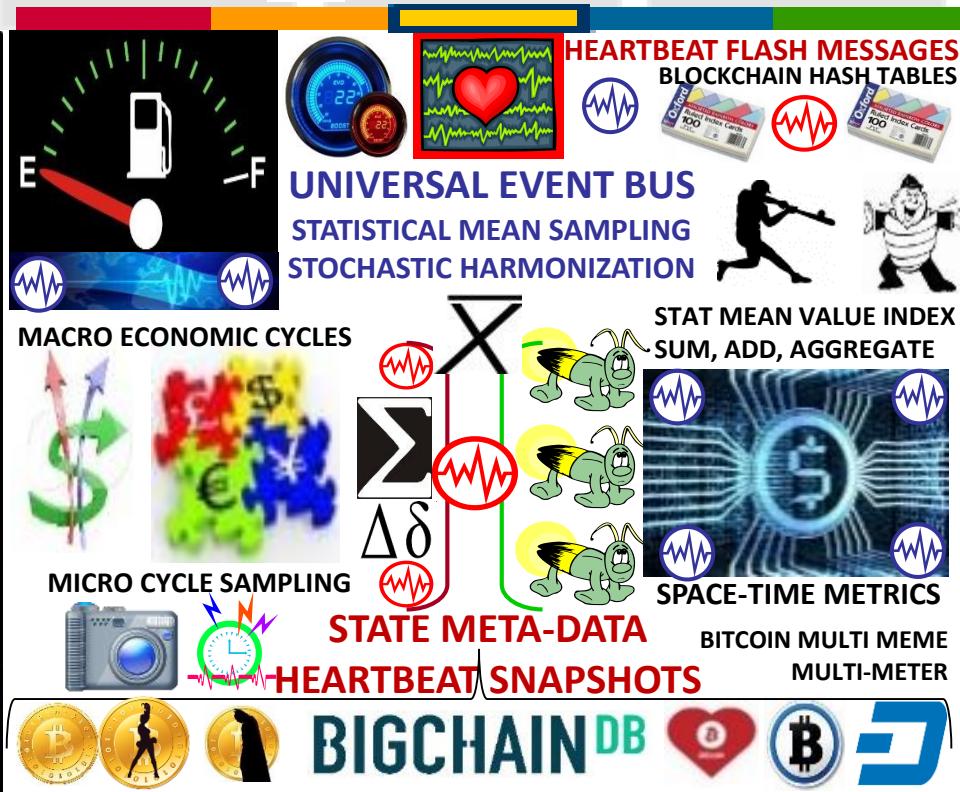
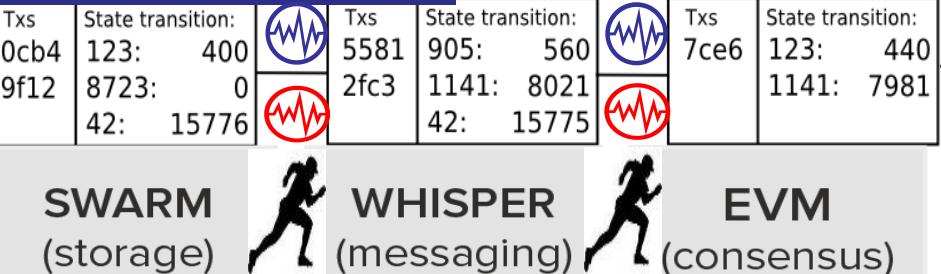
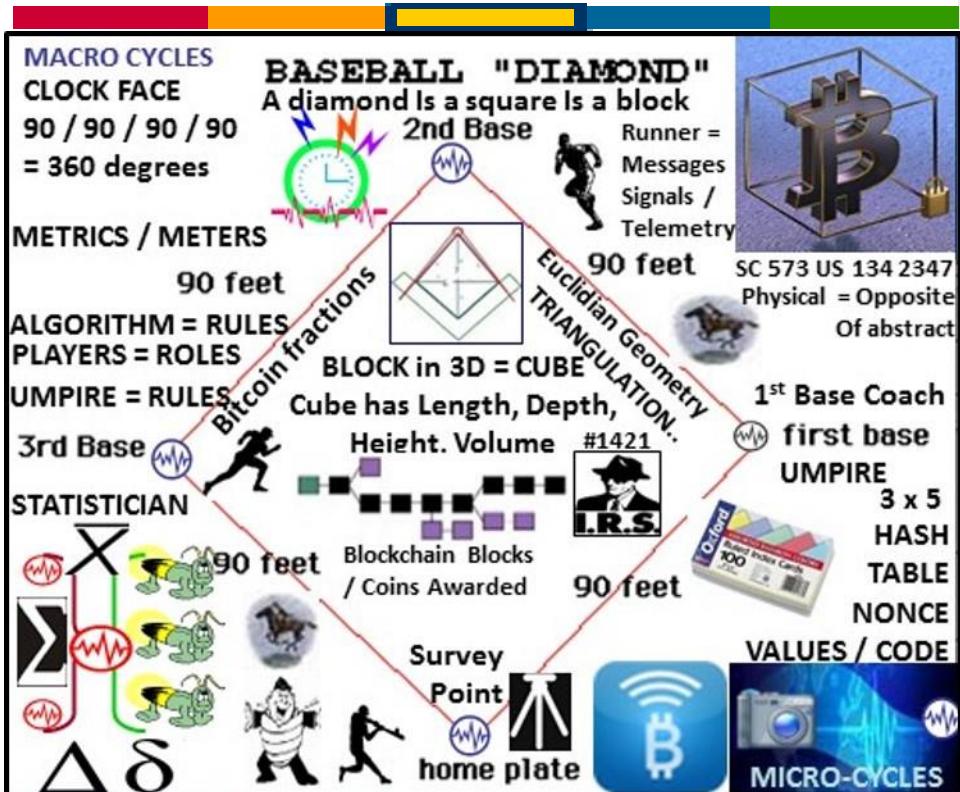
ethereum

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



D F I N I T Y

RANDOM # BEACON

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

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

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 3 x 5 and updates to state stored on shards... State transitions passed to Validation Tree

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

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

USCt 573 134 2347 Alice Corp V CLS Bank = ABSTRACT IDEAS = NO NO = PHYSICAL MEMES

MACRO CYCLES
CLOCK FACE
90 / 90 / 90 / 90 = 360 degrees

METRICS / METERS

BASEBALL "DIAMOND"
A diamond Is a square Is a block
2nd Base
Runner = Messages Signals / Telemetry
90 feet

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SC 573 US 134 2347
Physical = Opposite Of abstract

STATISTICIAN

Height. Volume #1421

Survey Point

home plate

VALUES / CODE

MICRO-CYCLES



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

ERLANG API FOR BLOCKCHAIN



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

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

CROSS – CHAIN ATOMIC SWAPS

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



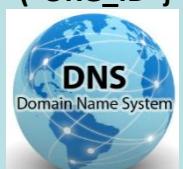
Aeons: energy for applications implemented on the platform.

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

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.



(“ORG_ID”)
(“ORG_ID”)



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

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



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

TOKENS REPRESENT REAL WORLD VALUE URN RESOURCES

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



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

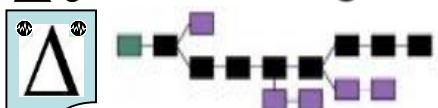
Federation
("ORG_ID")



HYPER LEDGER OPEN SOURCE BLOCKCHAIN

Core APIs, & SDKs

$\Delta\delta$ Shared Ledger



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

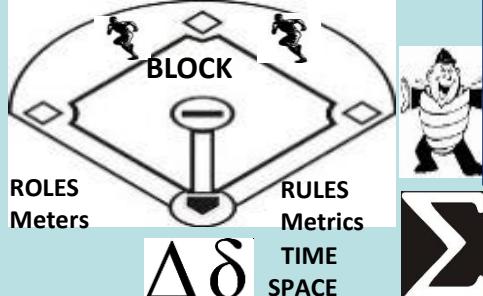
FEDERATION
Federation Gateway

METRICS ("Organization ID")
METERS

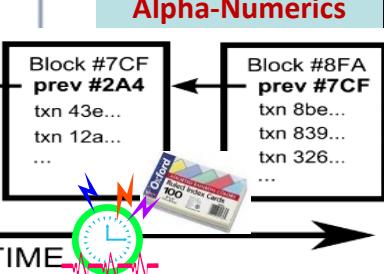
RESTFUL SYNC DELTA
CHANGE MANAGEMENT
MICRO-MACRO CYCLE



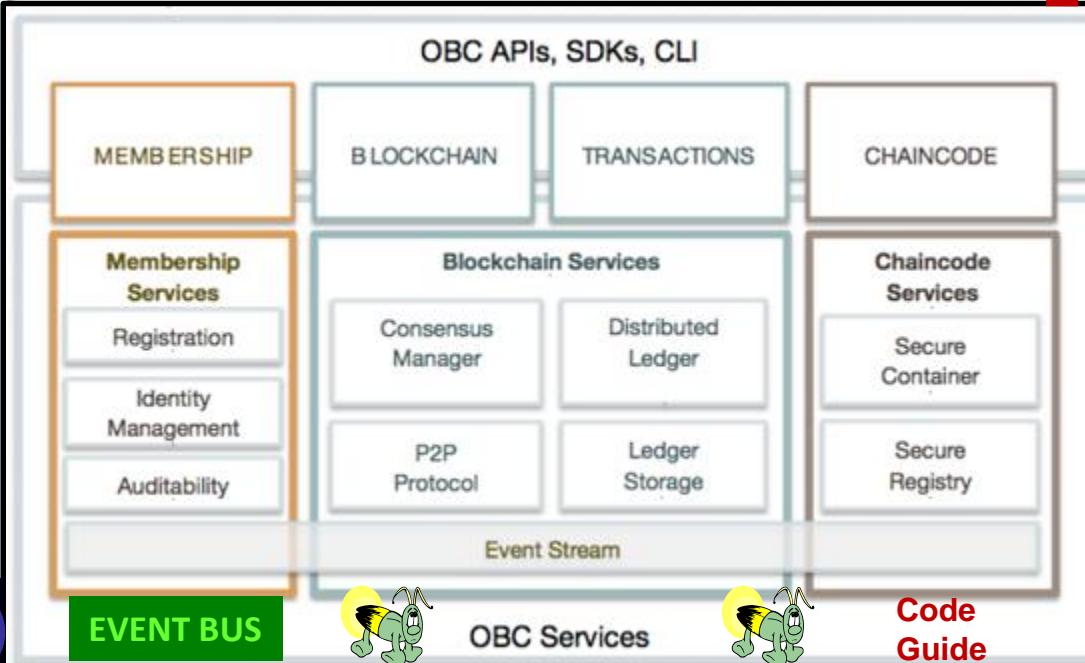
BLOCKTIME ARBITRAGE



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



Alpha-Numerics



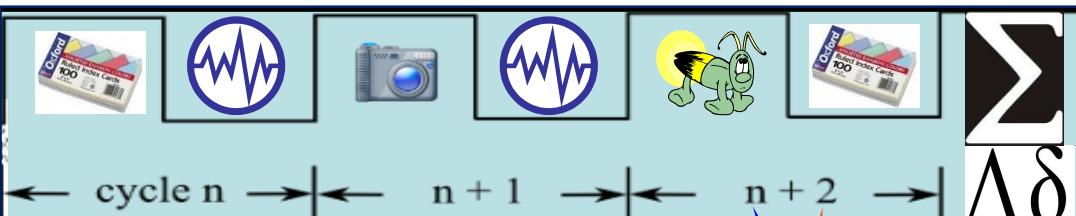
ROSETTA STONE

XBR / CDL / DAML
STOCK MIC CODES

STRUCTURED
MILITARY MESSAGE
TEMPLATE FORMS
LOGIC / FILTERS

SYNTAX
SYMBOL LIBRARY

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



MICRO-MACRO CYCLE SCHEDULE



FFIRNS
FFUDNS

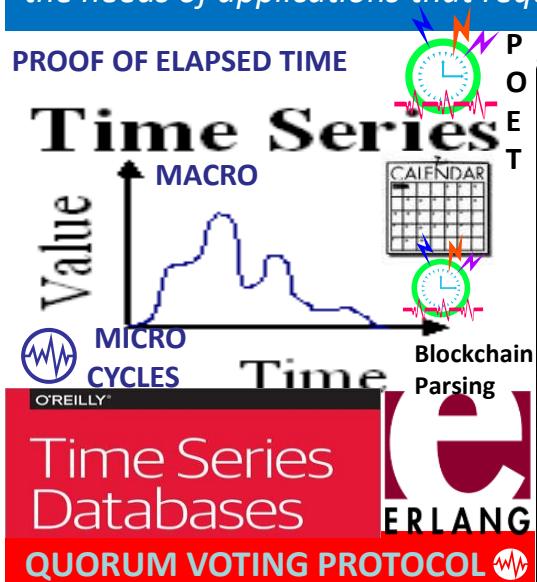
HYPER LEDGER USES
JSON ("tag") / YAML
Text indentation –
UNIVERSAL LANGUAGE
= ALPHA-NUMERICS

SAWTOOTH LAKE POETIC CONSENSUS PROOF OF ELAPSED TIME: POET

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



PROOF OF ELAPSED TIME



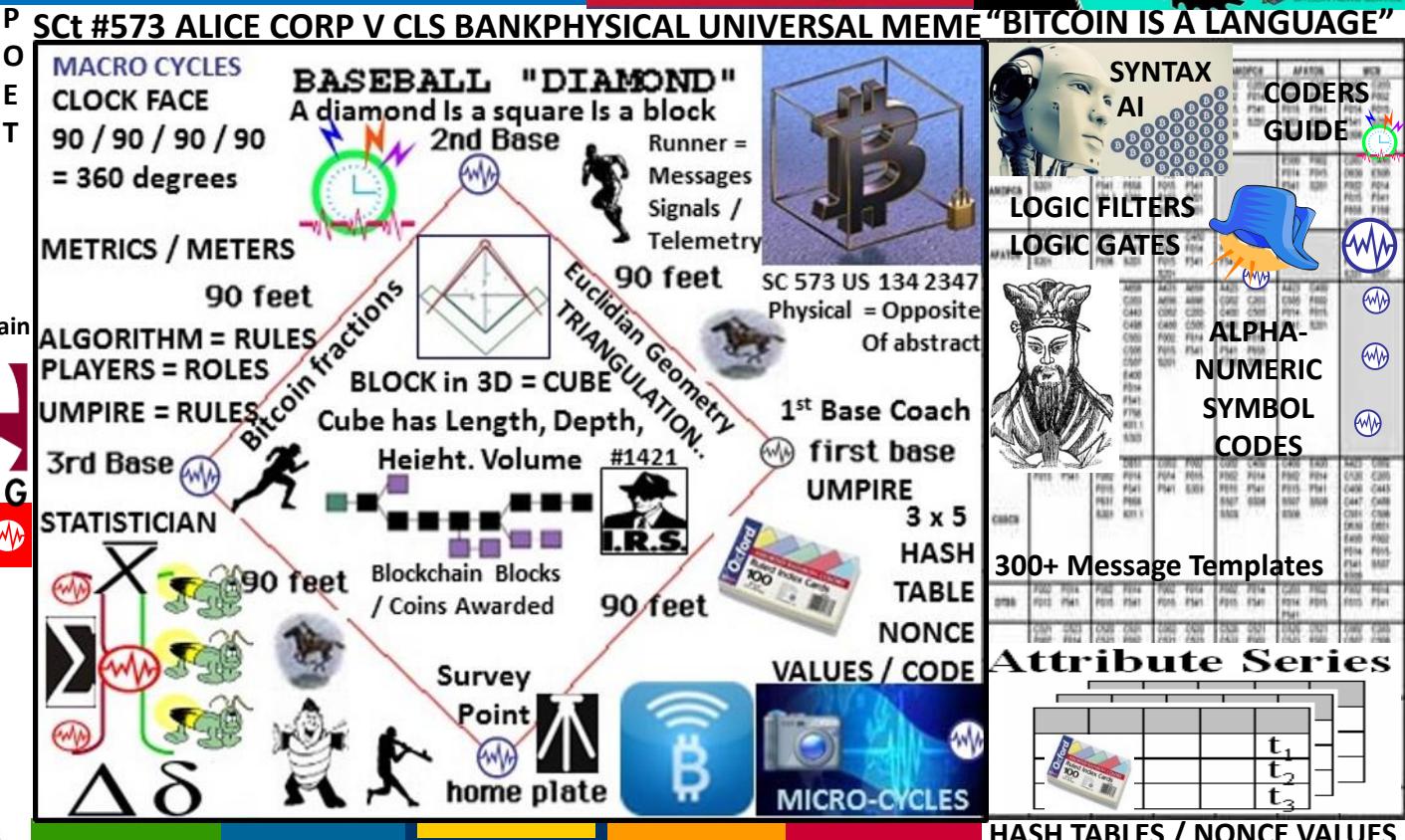
Voting Based Selection: stake size & block generators selected by votes

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

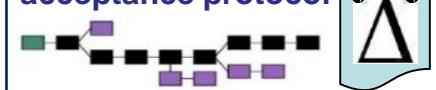


Robert's Rules quorum = minimum # of voting members who must be present at meetings to conduct business of the group

TOURNAMENT LEAGUE BOARD



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



DASH



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

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

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

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

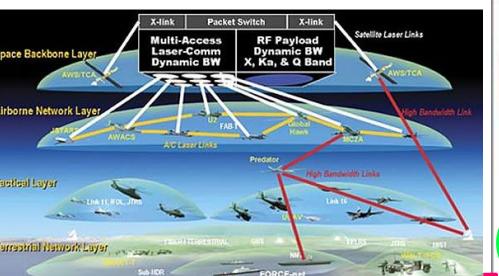
"Its makeup is thus: the block reward is divvied up in three parts. The first 45 percent goes to [Dash's miners](#). Another 45 percent goes to its Masternodes. And 10 percent is set aside to fund whatever other jobs or expenditures the Dash network deems necessary"

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

Masternodes receive payments for their service to the network.

DAO: RAND THINK TANK TERM COINED + / - 2001

NETWORK CENTRIC WARFARE
Developing and Leveraging Information Superiority



STOCHASTIC HARMONIZATION FIREFLY-HEARTBEAT EVENT BUS

HEART BEACON CYCLE = IMPROVEMENT TO NETWORK CENTRIC WARFARE



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



STATE: stored data at a given instant in time

STATE CHANNELS: blockchain interactions

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

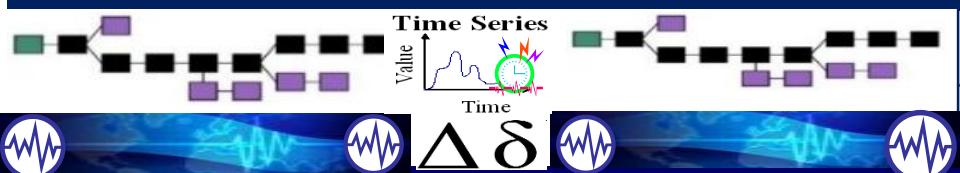


1. Part of the blockchain state is locked via multisignature or some sort of smart contract, so that a specific set of participants must completely agree with each other to update it.

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.

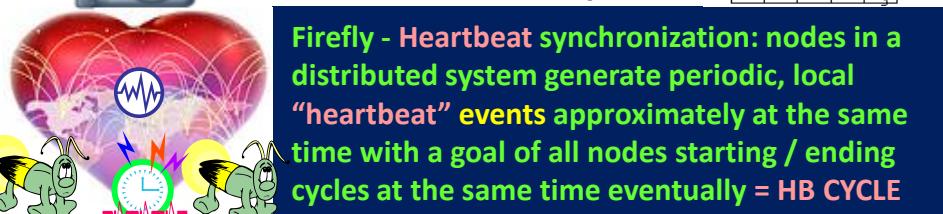
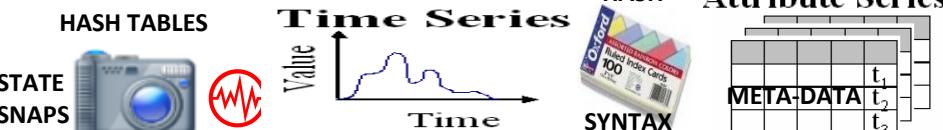
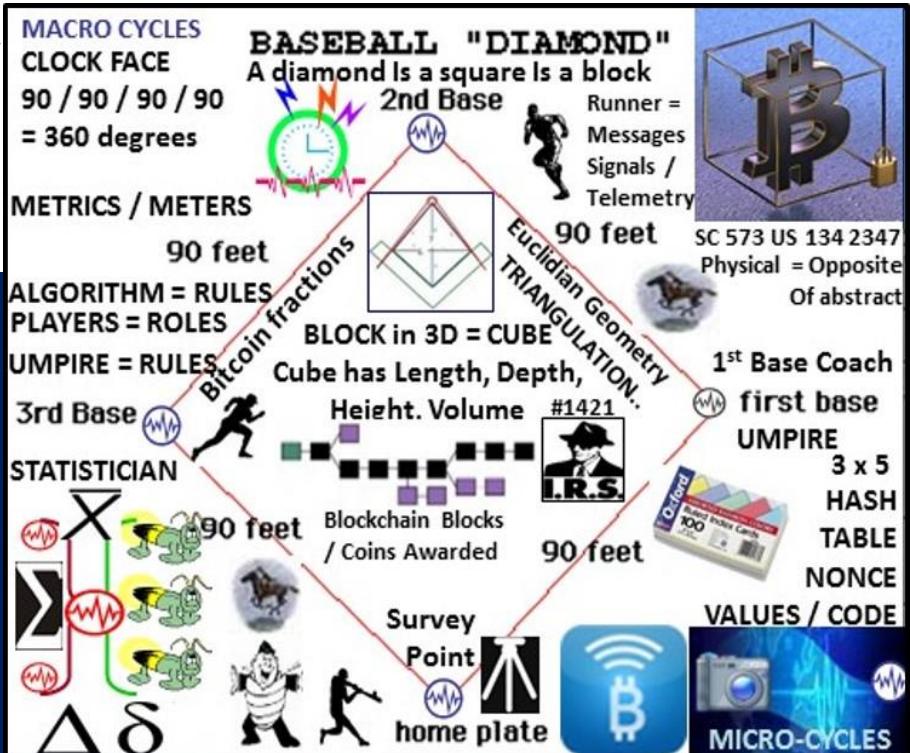


3. Finally, participants submit the state back to the blockchain, which closes the state channel and unlocks the state again (usually in a different configuration than it started with).



EACH NEW UPDATE TRUMPS 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.

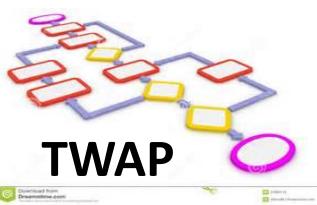
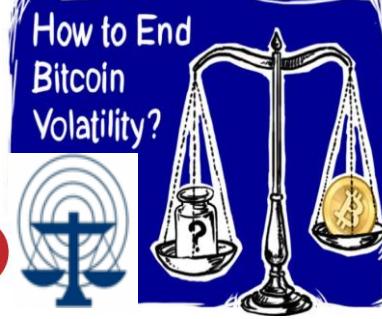
LINK: <http://jeffcoleman.ca/state-channels/>



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

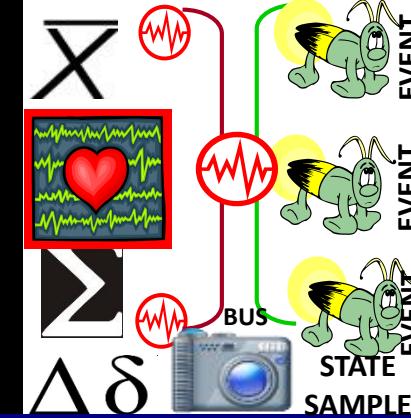
TWAP GOAL: provide a Time Weighted Average Price Benchmark



FIREFLY HEARTBEAT ALGO
STAT MEAN VALUE INDEX



STATE META
DATA SNAPSHOTS



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

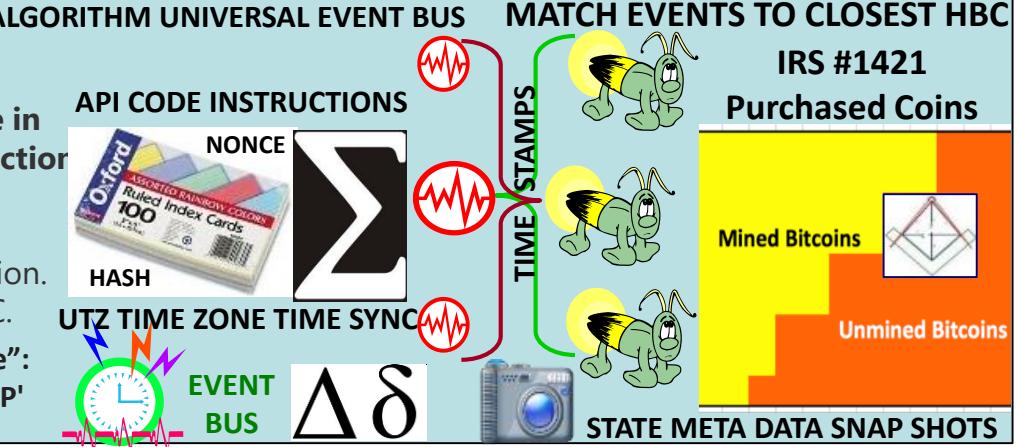
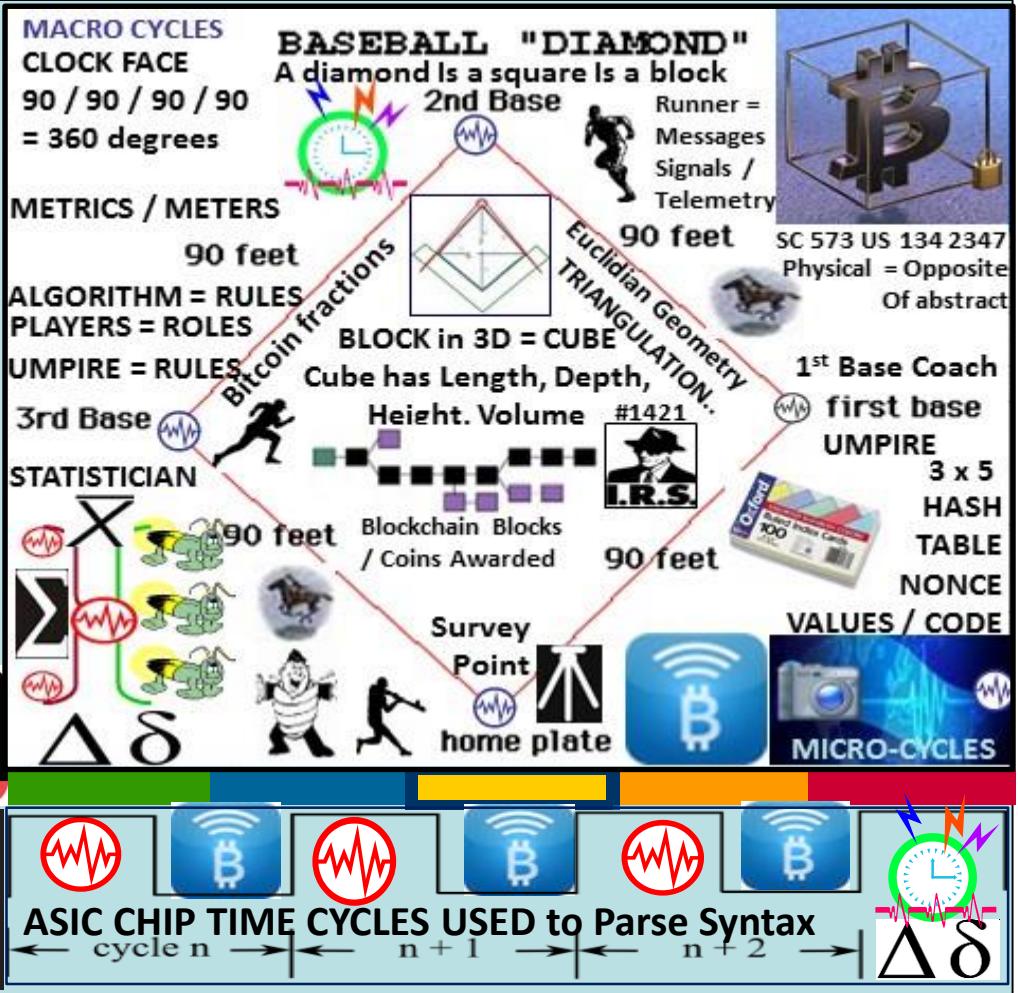
Transaction ID, Block ID, time-stamp, BWAP per block, Value in USD. BTC per transaction, bitcoin transaction fees per transaction

- 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 NEW COIN.
Digital Currency Insights

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





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

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



OPENBAZAAR.ORG
BLOCKCHAIN ARBITRAGE

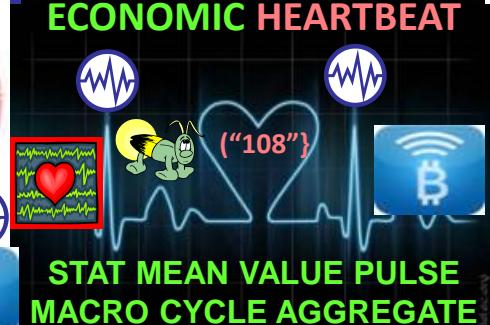
OpenBazaar is a different approach to online commerce. OpenBazaar connects buyers and sellers directly. Because there is no one in the middle of your transactions there are no fees, no restrictions, no accounts to create, and you only reveal personal information you choose.

PROJECT PHILOSOPHY: *MAKE TRADE FREE*

Mission: *shift trade to a decentralized platform*

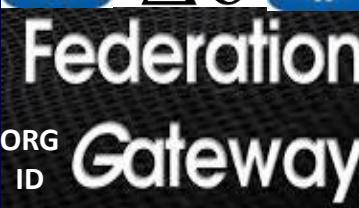


Demurrage Fees TERRATRC TRADE
REFERENCE CURRENCY
"Money of Peace"
Commodity / Currency Index



Free and open markets:

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



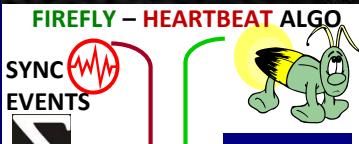
• Privacy

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

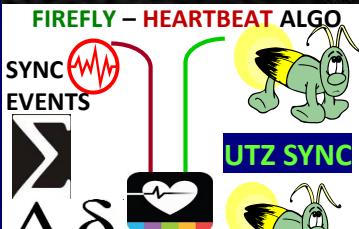
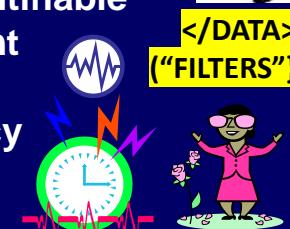


HASH Values
Nonce Values

SCT Alice V Cls Bank



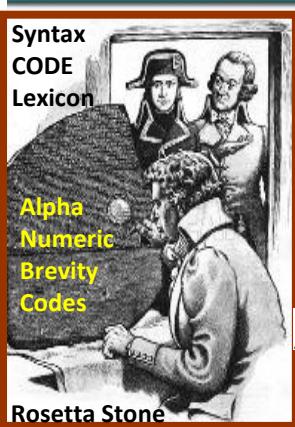
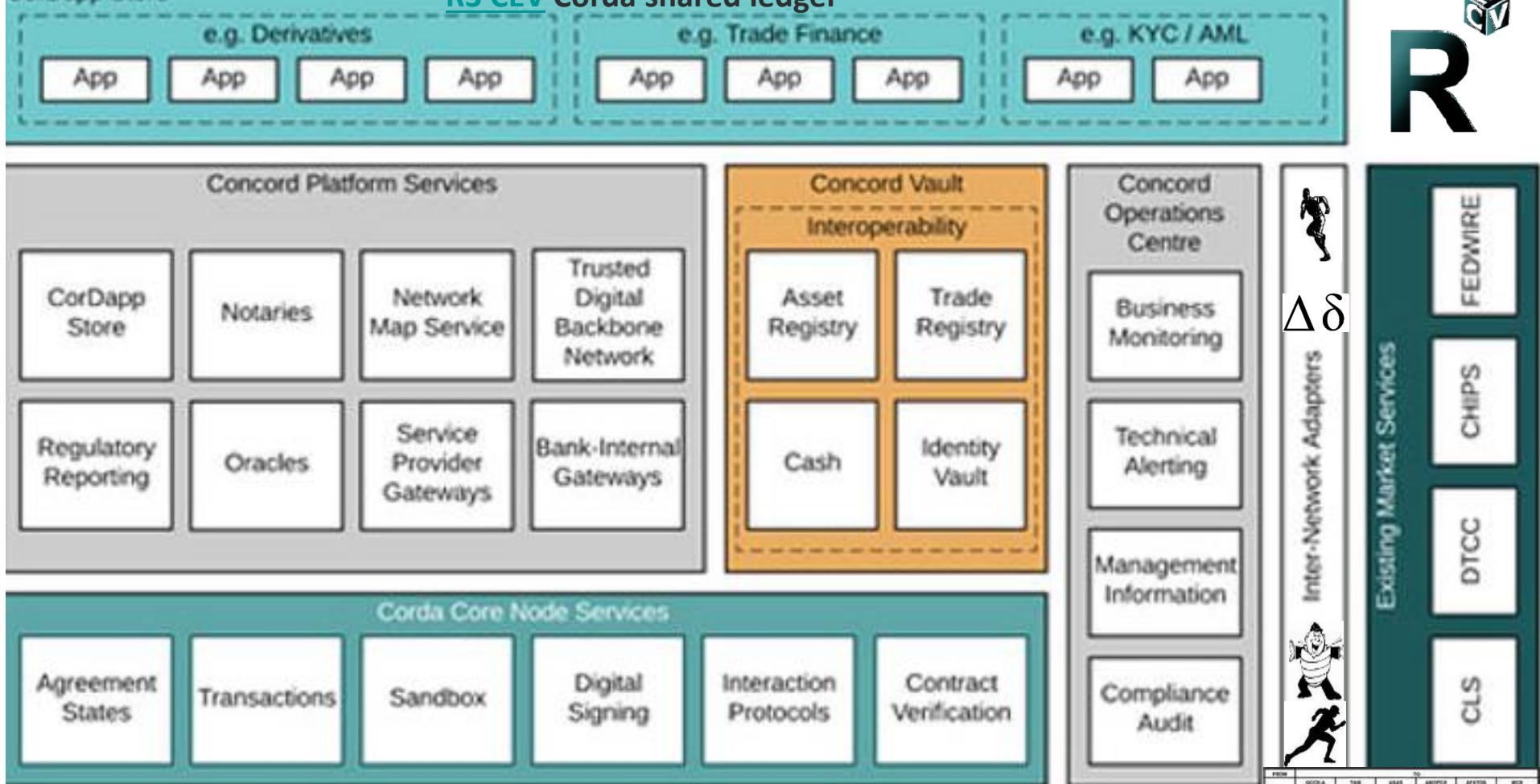
Bitcoin: OpenBazaar transactional currency



Cryptographic Security

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





UNIVERSAL EVENT BUS



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

NAME	QCC0A	TAB1	ASAB	AMPCB	AFATB	WCB
ABAB	F002	F003	F004	F005	F006	F007
ABCD	F008	F009	F010	F011	F012	F013
AFATB	F014	F015	F016	F017	F018	F019
AMPCB	F020	F021	F022	F023	F024	F025
ASAB	F026	F027	F028	F029	F030	F031
AFATB	F032	F033	F034	F035	F036	F037
WCB	F038	F039	F040	F041	F042	F043

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



XBRL / CDE / DAML STOCK MIC CODES



STRUCTURED MILITARY MESSAGE TEMPLATE FORMS LOGIC / FILTERS



300+ Use Case Templates

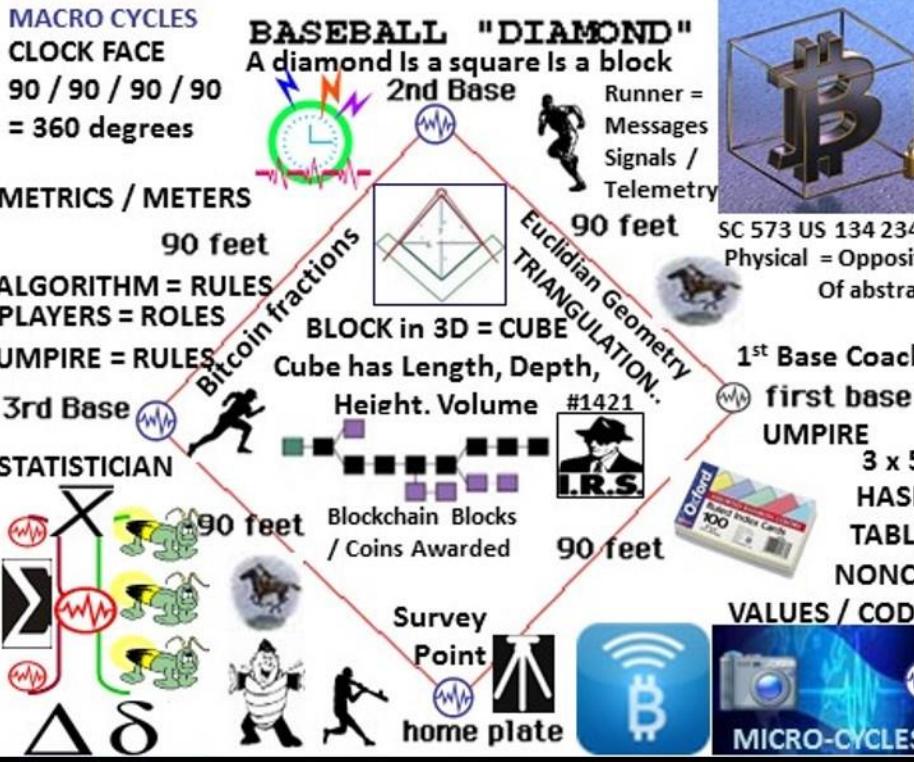
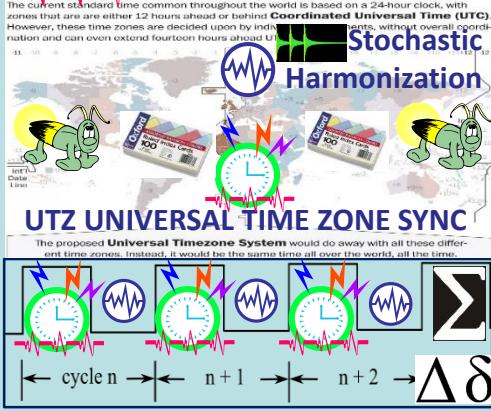
Federation Gateway



NAME	QCC0A	TAB1	ASAB	AMPCB	AFATB	WCB
ABAB	F002	F003	F004	F005	F006	F007
ABCD	F008	F009	F010	F011	F012	F013
AFATB	F014	F015	F016	F017	F018	F019
AMPCB	F020	F021	F022	F023	F024	F025
ASAB	F026	F027	F028	F029	F030	F031
AFATB	F032	F033	F034	F035	F036	F037
WCB	F038	F039	F040	F041	F042	F043

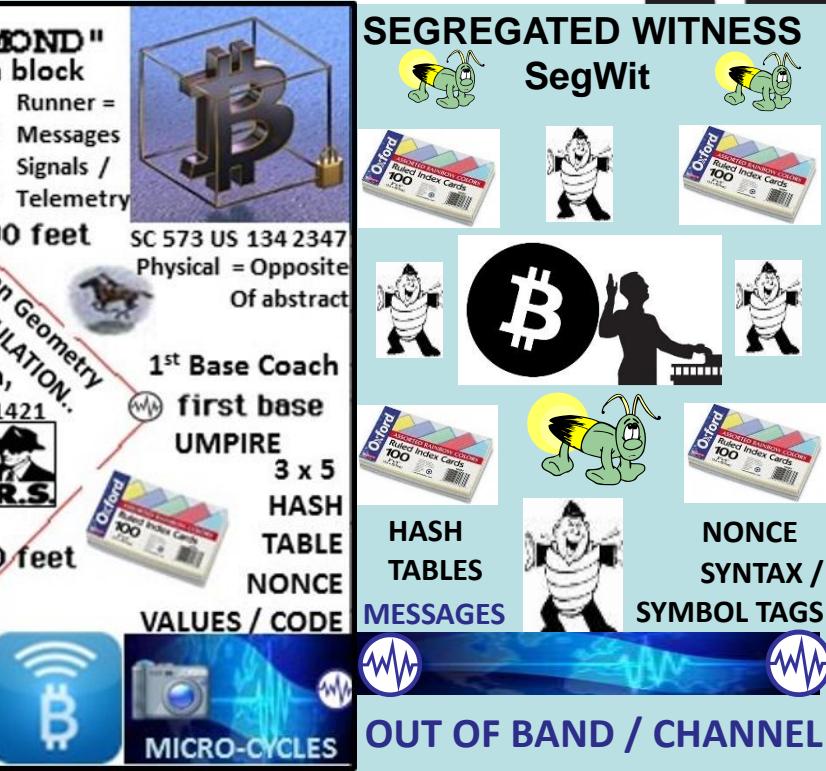
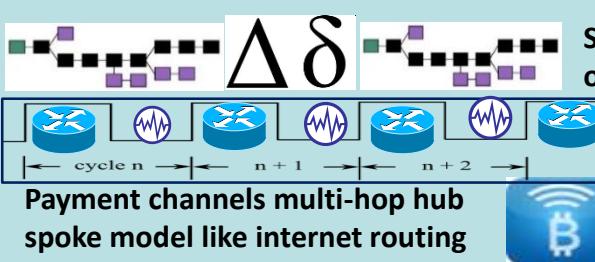


300+ Use Case Templates



Hashed TIME LOCK contracts component for global consensus

OP_CHECKLOCKTIMEVERIFY During Macro Cycle w/Random # BEACON



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 802.1AG HOP BY HOP
DETECTION

IEEE 802.11
HOP BY HOP CONTROL

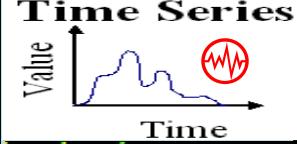


Unused Resources / Unmet Needs

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

DISTANCE
INFO SERVICE

Time Series



WATER DROP IN POND MEME IS
SONAR NAVY METAPHOR / MEME

NDN </INTEREST>
NDN {"DISTANCE"}

NAMED DATA
NETWORKING

IEEE C37.118
Harmonization
& Sync heartbeat
update Interval

CLOSER SOURCE
CHEAPER RATE



vector

602



UNUSED RESOURCES
UNMET NEEDS

Spatial
Econometrics

TIME-SPACE BEACON

INFOCON

5 4 3 2 1

INFORMATION
CONDITION



METRICS / METERS
TRADE WITH EARTH

???



SIRIUS DISCLOSURE

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

ASTEROID BELTS =
RARE MINERALS



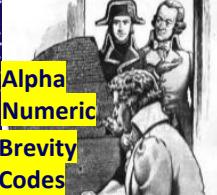
Farther = More Cost

➤ Fuel, Resources
Service Level Agreements

STOCHASTIC
HARMONIZATION

FIREFLY-HEARTBEAT
ALGORITHM
UNIVERSAL
EVENT MESSAGE BUS

ERLANG
TIME- SPACE METRICS



Alpha
Numeric
Brevity
Codes

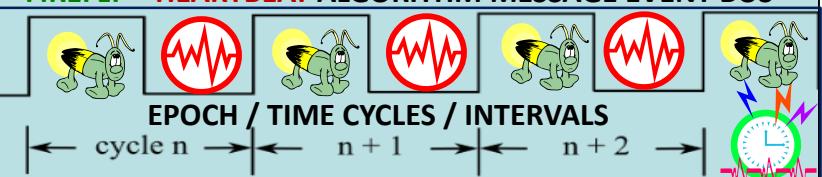
SYNTAX
LEXICON

K00.99



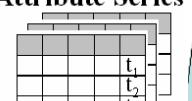
43 22 13 0 1.5 2.7 5.2
Light minutes Astronomical units

FIREFLY – HEARTBEAT ALGORITHM MESSAGE EVENT BUS



RADIUS
WATER DROP IN POND MEME

Attribute Series



Geo
Spatial



INTEREST
DISTANCE

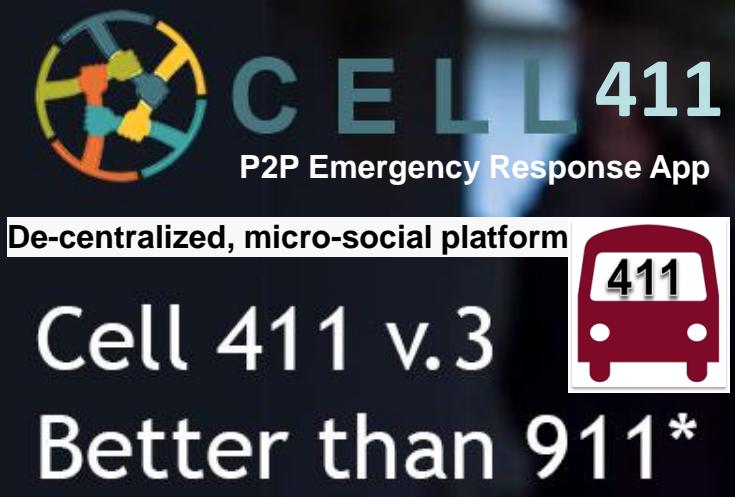


Micro Grids Closer - Cheaper



BLOCKCHAIN
MICROGRIDS

**"We built the Cell 411 platform to make
the world a better and safer place"**



Real-time community based services
“The social network for helpful people”

Decentralized Ride Sharing: No Driver Fees, Accept Any Payment Method

INDIVIDUALS FORM GROUPS USING GPS LOCATION SERVICES / META DATA



Decentralized Organization Join, organize, and manage Cells of users on your own, allowing you full control over what services and groups you want to have contact with.

FUTURE USE CASES: HELP FORM E TRADE FEDERATIONS SYNCHRONIZED IN TIME-SPACE FOR COMMON PURPOSES



Cell 411 Panic Button connects to your Cell 411 app wirelessly over Bluetooth, providing users with a quick, easy way to alert your friends, neighbors, caregivers and loved ones in the event of an emergency



THE HEART BEACON CYCLE



FEDERATE

Scan to view our Website!

MEDIATION GATEWAY

SAW Concepts LLC
PO Box 28 Oceanport, NJ 07757
Cell: 732-768-5440
<http://sawconcepts.com/index>

EARLY PATENT FILING: HEARTBEAT E9-11: SWORDS TO PLOWSHARE RE-USE OF BATTLEFIELD DIGITIZATION / NET CENTRIC WARFARE / OPERATIONS TO FORM GROUPS WORKING TOGETHER FOR THE GREATER GOOD



PRIMARY USE CASE: TRADE FEDERATIONS NETWORK ADD, JOINS, DROPS, ..NETOPS



INDIVIDUALS FORM GROUPS USING GPS LOCATION STATE META DATA TIME STAMPED DURING MICRO-CYCLES AGGREGATED & DISPLAYED IN APPLIQUE' OVERLAYS



Humanitarian Assistance Networked Donor System

Network Centric Warfare in the United States of America, "Network Enabled Capabilities" in UK, "Vernetzte Operationsführung" in Germany German Bundeswehr



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

HEART BEACON CYCLE

USPTO 13/573,002

SURVEY METHODS

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

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

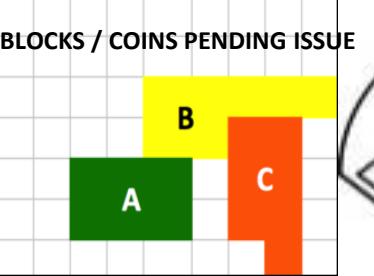


Memo #1421: Purchased Bitcoins are treated akin to property

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



Mined Bitcoins



$$\Delta\delta$$

Unmined Bitcoins



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

IDMaps-SONARHOPS distance estimation query-reply service

- End-state Bitcoin quantity will be fixed like land

"Bitcoin as protocol of ownership, not transfer"

Coin never travel, but simply switch owners"



Step 1: prove coin ownership <Org_ID> Coin Issuer

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

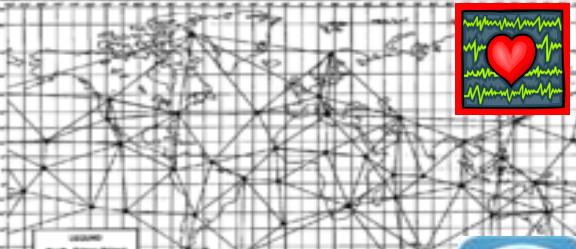
Step 3: specify ownership <Org_ID> issuing agent

Step 4: Issuing Org of Record adjudicates w buyer

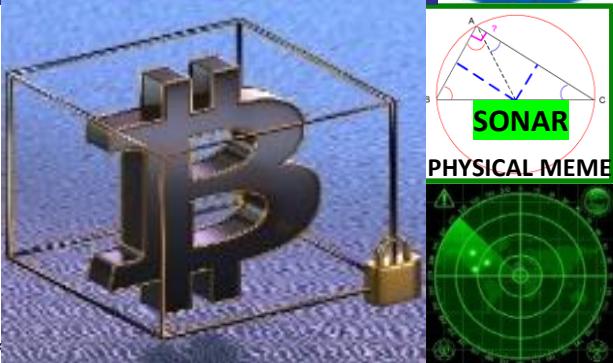


$$\Delta\delta$$

TRIANGULATION



EUCLIDIAN GEOMETRY



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



IDMaps



"PING"



{"Interest"} {"Distance"}

ONSHORE
OFFSHORE

SonarHops

vector

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)

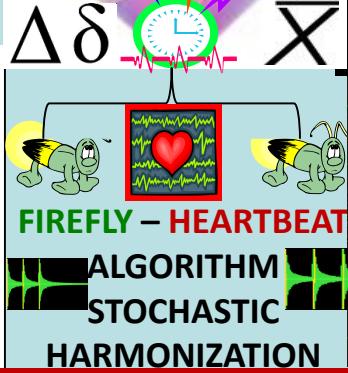
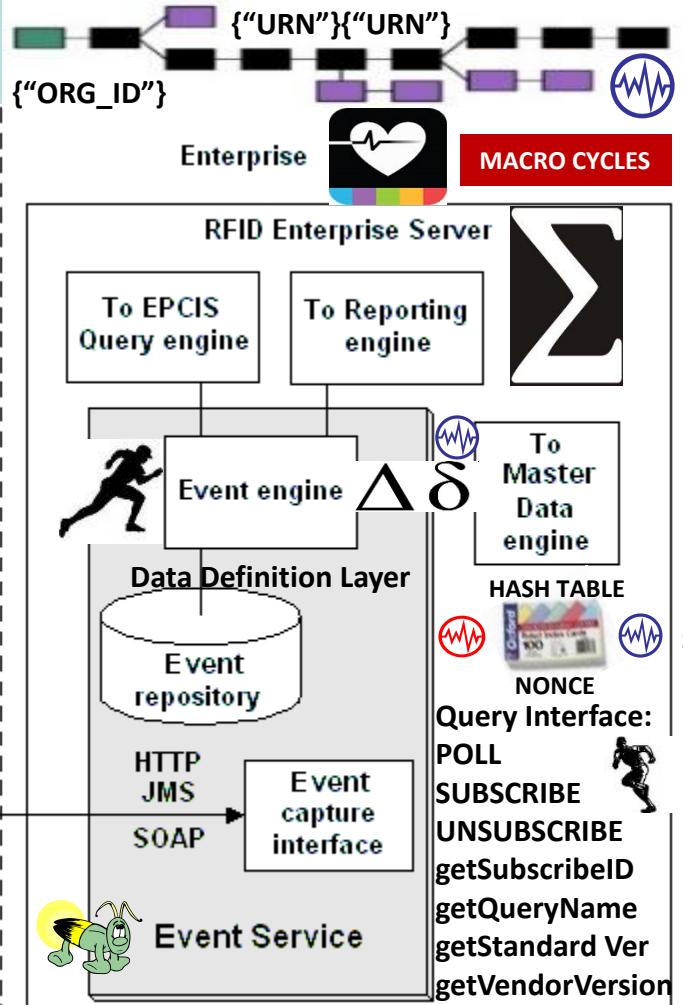
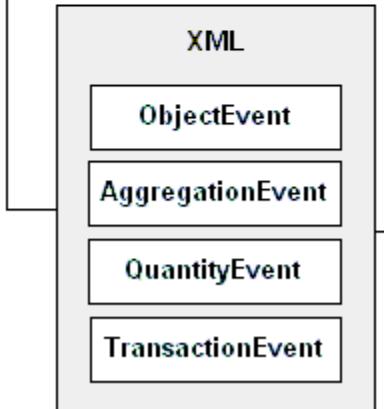
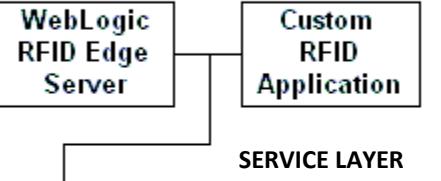
GS1 Standard for creating, sharing visibility event data



HBC
SYSTEM OF SYSTEMS
TIME-SPACE SYNC



EPCIS DATA MODEL



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

ALPHA NUMERIC BREVITY CODES

BATTLEFIELD DIGITIZATION							
NETWORK CENTRIC WARFARE				STRUCTURED MILITARY MESSAGES			
ASAS	F002 F014 F015 F041	FROM	C020 C021 C022 C023	TO	C400 C401 C402 C403	APPROX	K020 K021 K022 K023
AMOPCS	F002 F014 F015 F041	F002 F014 F015 F041	F002 F014 F015 F041	F002 F014 F015 F041			
AFATOS	F002 F014 F015 F041	F002 F014 F015 F041	F002 F014 F015 F041	F002 F014 F015 F041			
{“ORG_ID”}							
{“URN”}							
{“UUID”}							
MESSAGE DATA SETS							
TEMPLATES / FORMS							
DTSS							
IMETS							
ISYCON							
ROSETTA STONE							

SYNTAX LEXICON CODE GUIDE



1st Compiler DESIGN Still the BEST



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



$\Delta \delta$



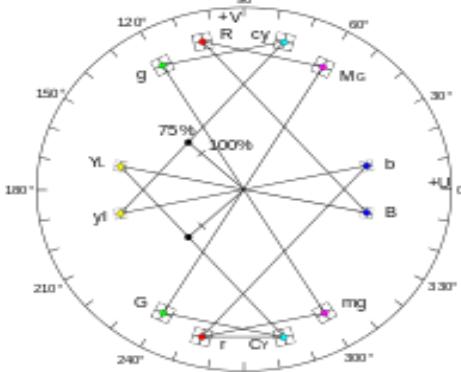
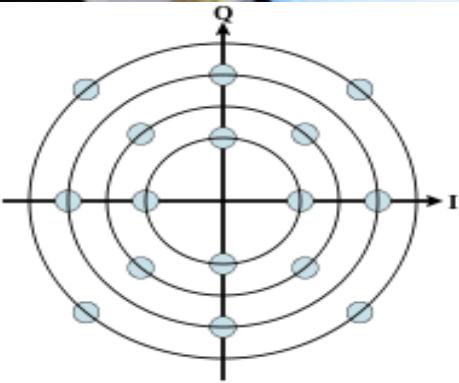
CLOSER IS CHEAPER
CLOSER IS FASTER

NETOPS SOP

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



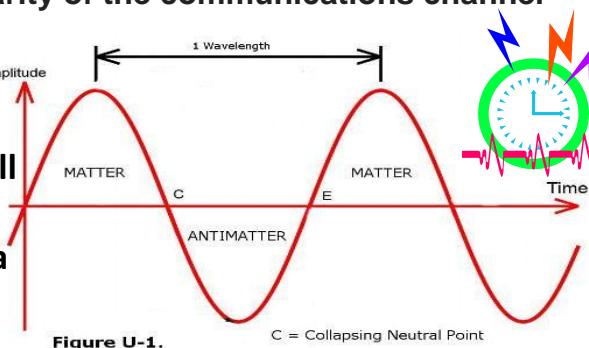
www.RLighthouse.com



Quadrature amplitude modulation

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

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

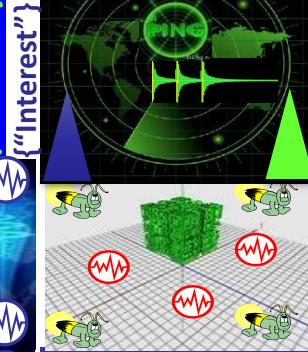


Sine wave of our blinking universe. The 4 fundamental forces will all be found to vary continuously when sampled at 2x the blinking frequency, per Nyquist-Shannon theory

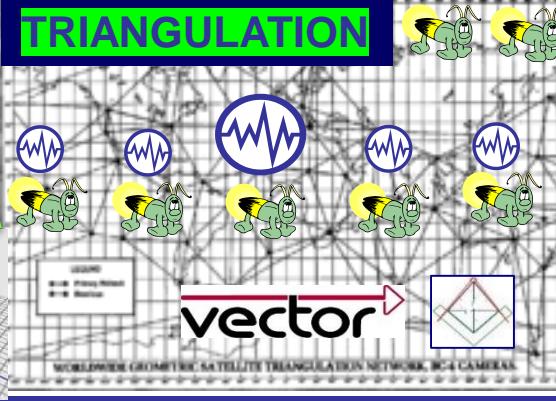


USPTO 13/573,002
sawconcepts.com/index

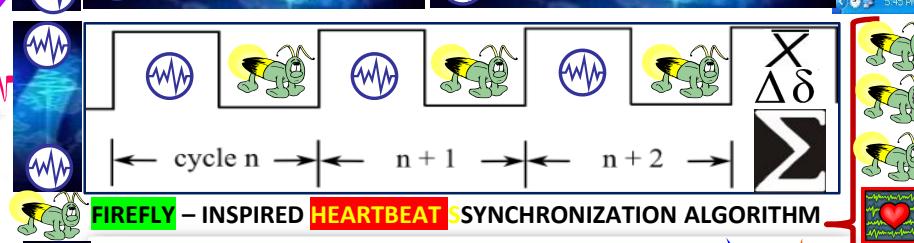
NDN
IDMaps
SonarHops



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

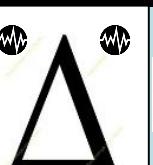


IDMaps assists Network Time Protocol (NTP) servers establish long term peering relationships



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





Demurrage Charges
FRIEDMAN'S K % RULE
MONEYBALL ECONOMICS
COMMODITIES

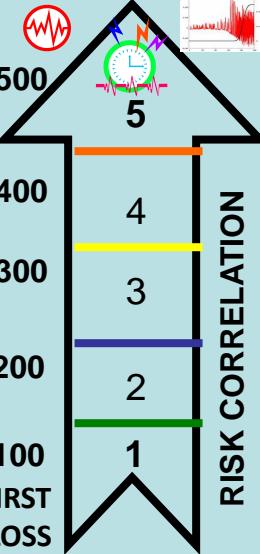


ECONOMIC MACRO CYCLES
Constant % Rate
Increase Per Terra Cycle



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

LAST LOSS



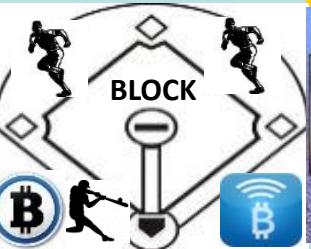
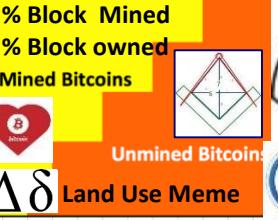
IEEE 802.15.4 OASIS MQTT

TELEMETRY TRANSPORT

IEEE 802.1AG HOP BY HOP

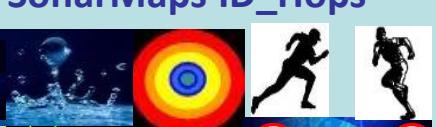
DETECTION

Bitcoin = Property



BLOCKTIME ARBITRAGE

Blockchain Timestamps



BTC / FIAT Convert

Triangulation

PoW PoS POET..

Euclidian Geo

PoA, Age, Vote..

GPS GEO LOC

DATE TIME STAMP

NDN </INTEREST>
NDN {"DISTANCE"}



vector

Multi-Meme Metrics

EVENT BUS

Match to Closest

Heartbeat Cycle

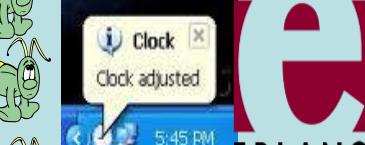
FIREFLY-HEARTBEAT

ALGORITHM

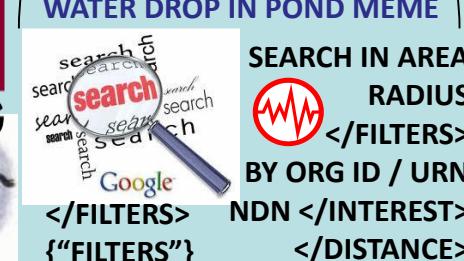
$\Delta\delta$ Heartbeat Snapshots



BLOCKCHAIN PARSING



HOPS / RADIUS = REACHABILITY



SOFTWARE DEFINED NETWORKING

NETOPS

Command Syntax

REST State Transfer

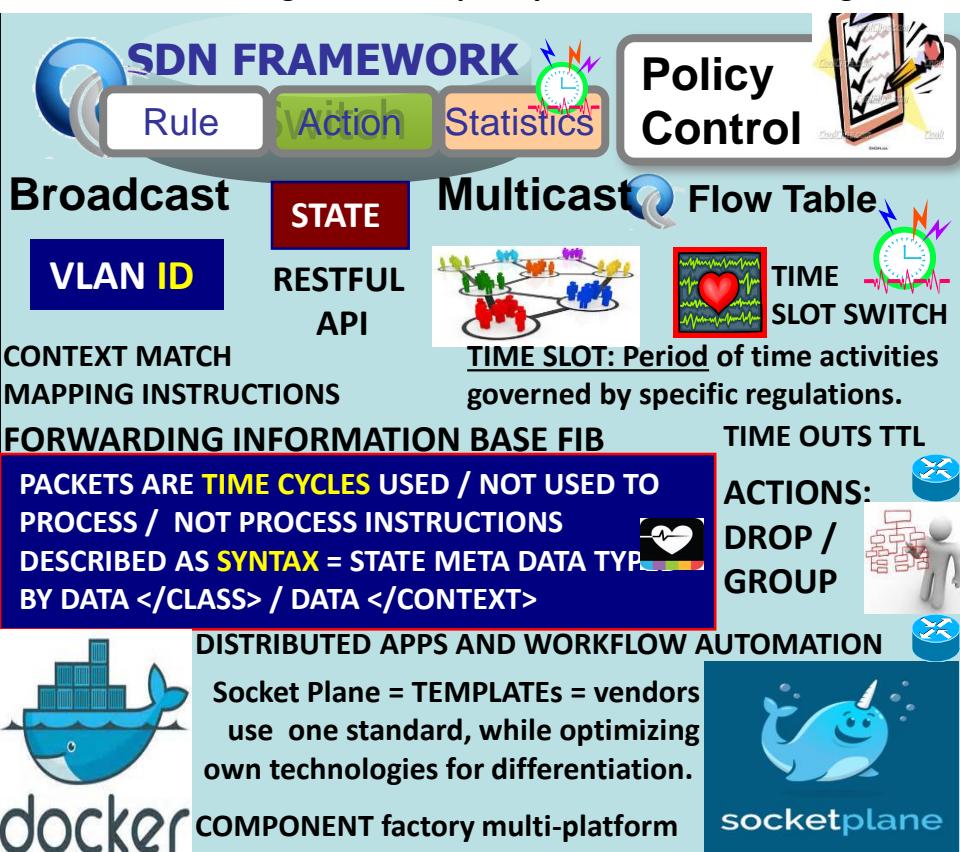
COMMAND SYNTAX
STATE TRANSFER
Unicast / Multicast
Flow Tables / Workflow
Dynamic Network
Configuration Management

NET CENTRIC WARFARE
SYSTEM OF SYSTEMS TELEMETRY

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

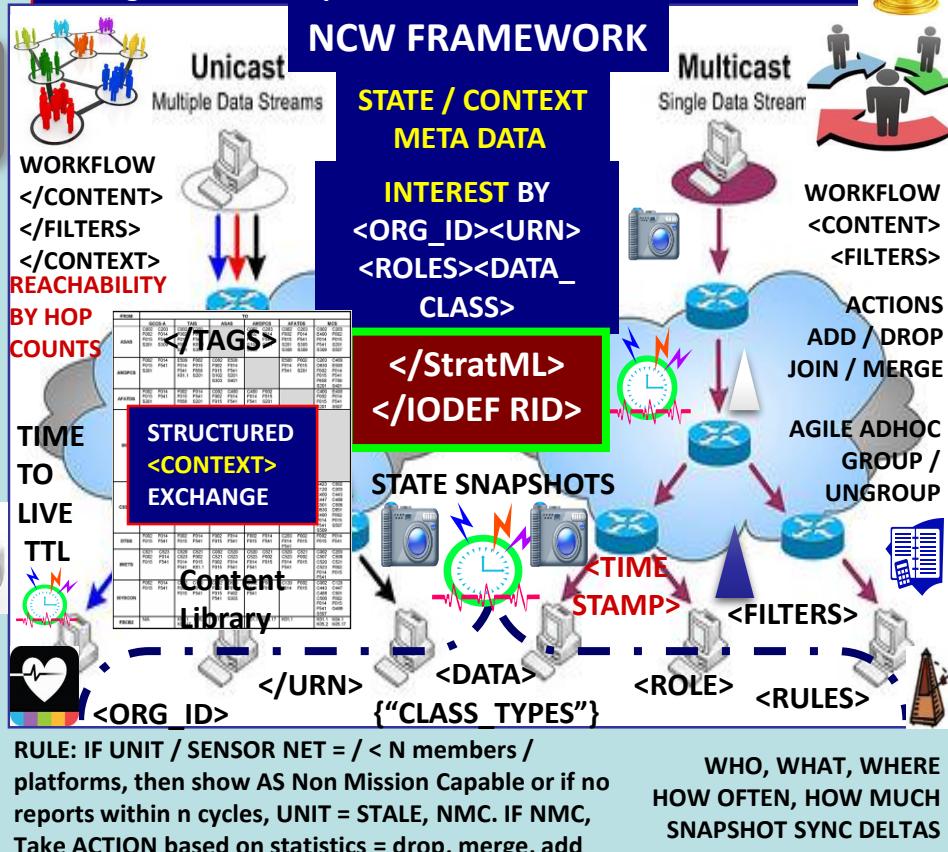
- SDN is a *framework* to allow network administrators to *automatically* and dynamically manage and control a *large number* of network devices, *services*, topology, traffic paths, and packet handling (quality of

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



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

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



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

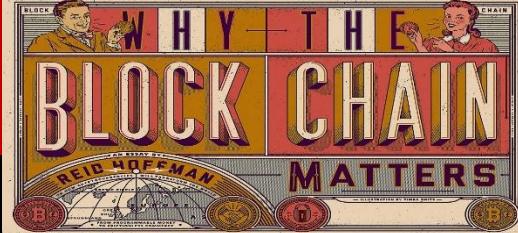
HEART BEACON CYCLE: ALL THINGS INTERNET ARE PROGRAMMED USING TIME CYCLES USED / NOT USED TO PROCESS / NOT PROCESS SYNTAX



TradeNet



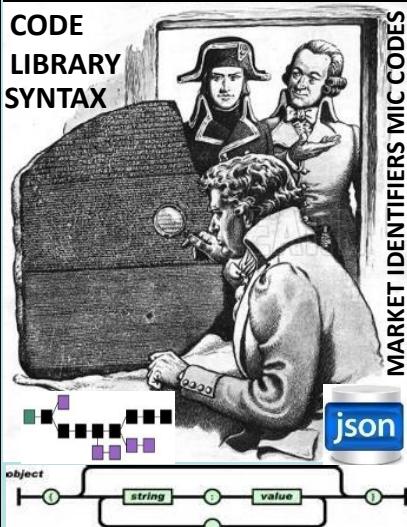
Programmable Money \$\$\$



RIED HOFFMAN 15 May 2015 [LINK](#)

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

CODE
LIBRARY
SYNTAX



MARKET IDENTIFIERS MIC CODES

300 + MESSAGE
TEMPLATES
SYNTAX LIBRARY
PROGRAMMING
STRUCTURED <CONTENT> EXCHANGE

BREVITY CODES
MARKET ID CODES
USE CASE TEMPLATES
SIGNALLING, TELEMETRY

NATO

ORGANIZATIONS



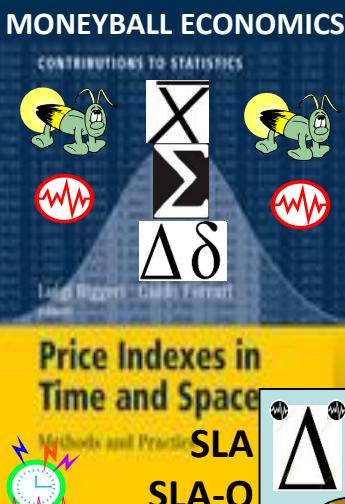
Organizational Units OU, OU

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

WIRE

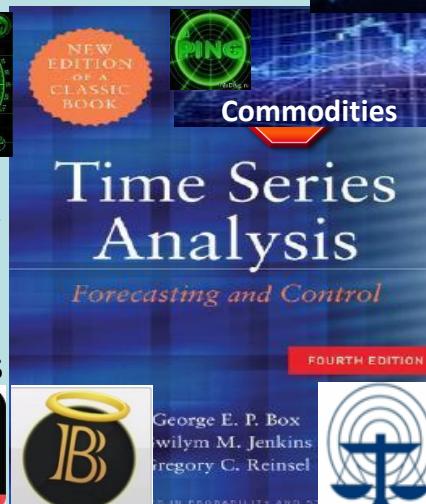
[http://en.wikipedia.org/wiki/Organizational_unit_\(computing\)](http://en.wikipedia.org/wiki/Organizational_unit_(computing))

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



Price Indexes in Time and Space
Methods and Practice

SLA
SLA-O



Time Series Analysis
Forecasting and Control

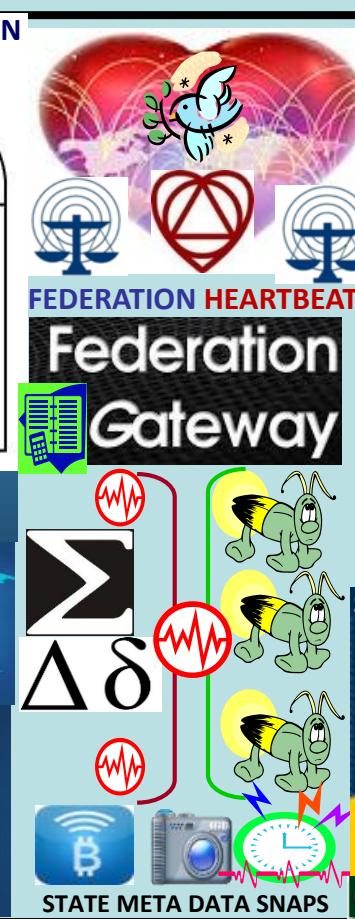
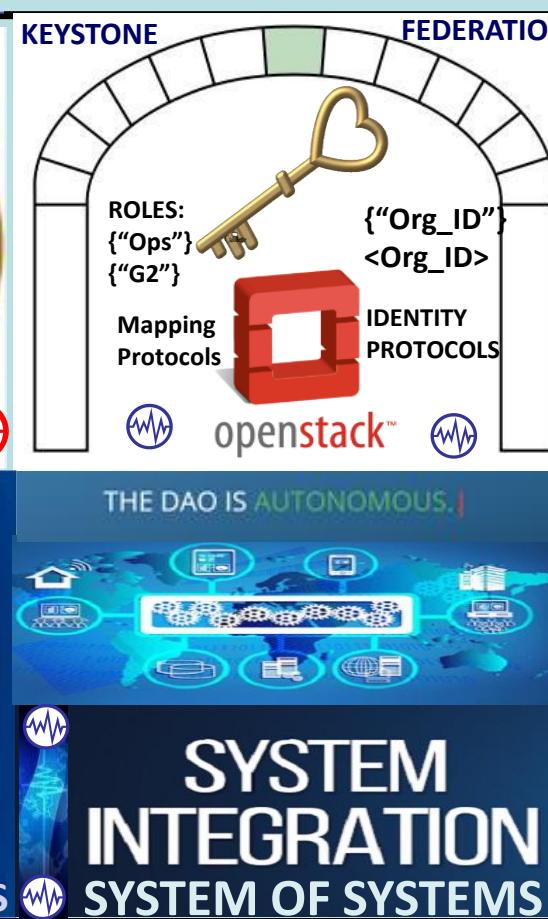
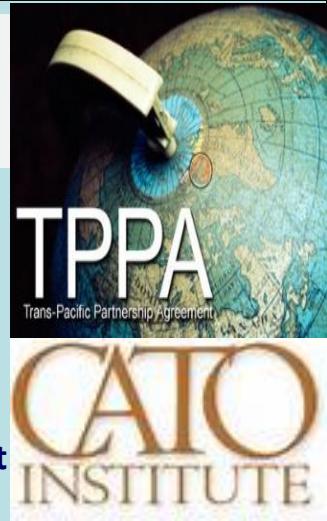
FOURTH EDITION

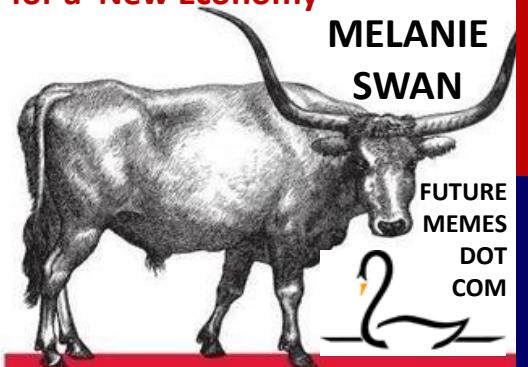




Trans-Pacific Partnership is great for elites. Is it good for anyone else? by [Timothy B. Lee](#) on April 17, 2015

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





Blockchain

BLUEPRINT FOR A NEW ECONOMY



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



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

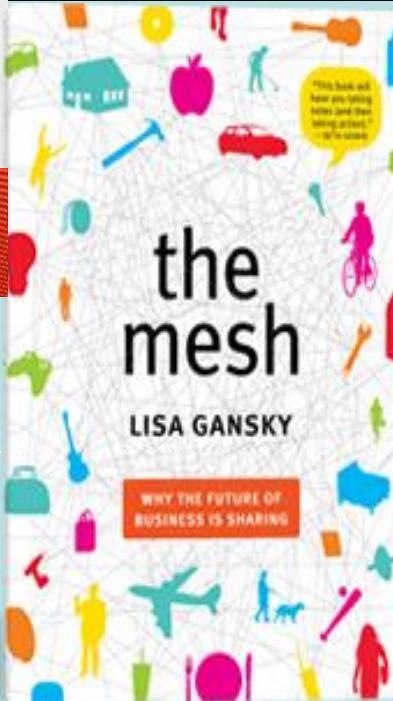
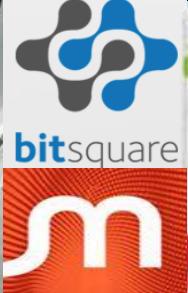
The current standard time common throughout the world is based on a 24-hour clock, with zones that are either 12 hours ahead or behind **Coordinated Universal Time (UTC)**. However, these time zones are decided upon by individual governments, without overall coordination and can even extend fourteen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



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



Decentralized Exchange Meets Decentralized Crowdfunding



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

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



Autonomous Device Coordination Framework



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

FEDERATION
AGREEMENTS
PROCEDURAL
TEMPLATE

FEDERATION

<UUID> <ORG_ID> <URN>

LDAP DIRECTORY

Physical proximity

Social proximity

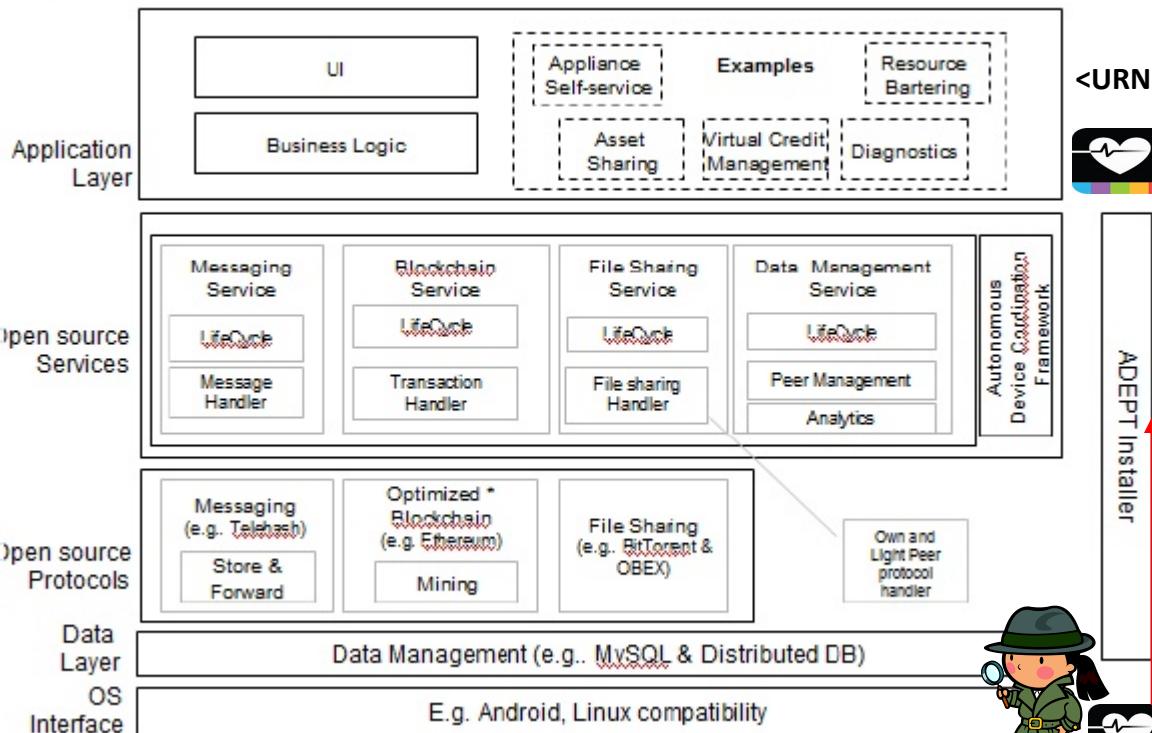
Temporal proximity

Agreements

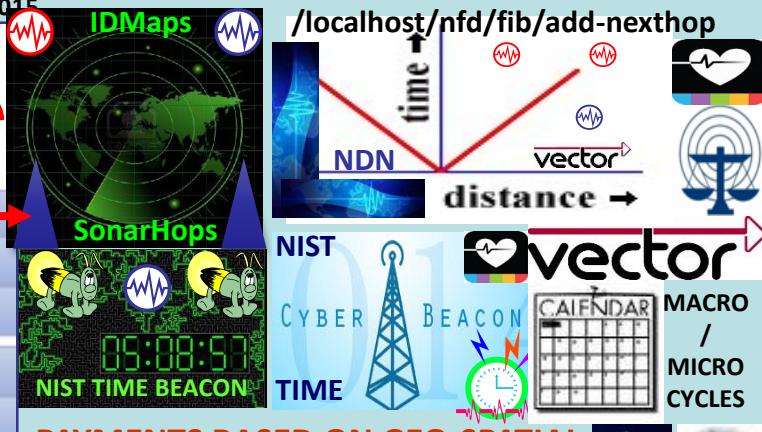
Payments

Barter

ADEPT Standard Peer Architecture – Logical View



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

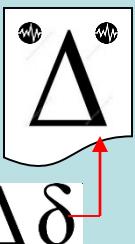


PAYMENTS BASED ON GEO-SPATIAL TEMPORAL METRICS / METERS
<URN> DESCRIBES COMMODITIES ETC BY UNIFORM RESOURCE NAME BY </INTEREST>>



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

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

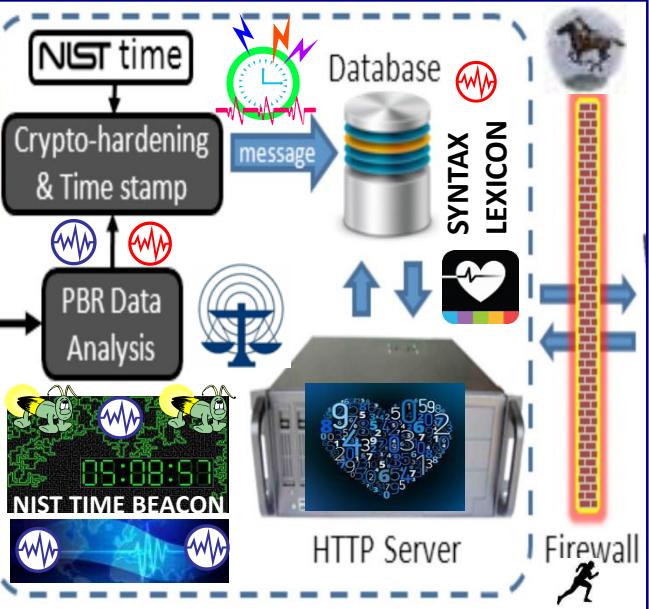


NIST QUANTUM ENCRYPTION RANDOMIZATION BEACON

UNPREDICTABLE SAMPLING
SECURE AUTHENTICATION
SECURE MULTI
PARTY /
AUTENTICATION

Entropy
Entanglement Source
RANDOM NUMBER GENERATOR

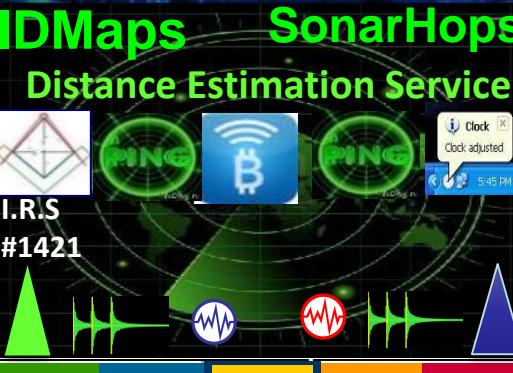
Bell Test



SEC REGULATION:
{"Org_ID"} In the clear
Issuing Org tracks User Accounts
NIST Cyber BEACON = Non-Repudiation



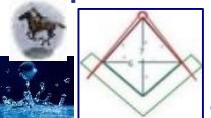
{"USER_ID"} Encrypted w QRB



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

Metrics and Time - Space Meter uses PHYSICAL Memes / Metaphors

NAMED DATA NETWORKING



NDN
</Interest>
</Distance>
SURVEY METHODS + TRIANGULATION
Euclidian Geometry
Geodesic System Routing Info Base RIB

ACCOUNT BELONGS TO </Org_ID>

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

DEVICE / SENSORS <UUID><UUID>

OFFSHORE BEACONS ONSHORE

Higher-level services collect distance data to build virtual distance map State Snap Shots

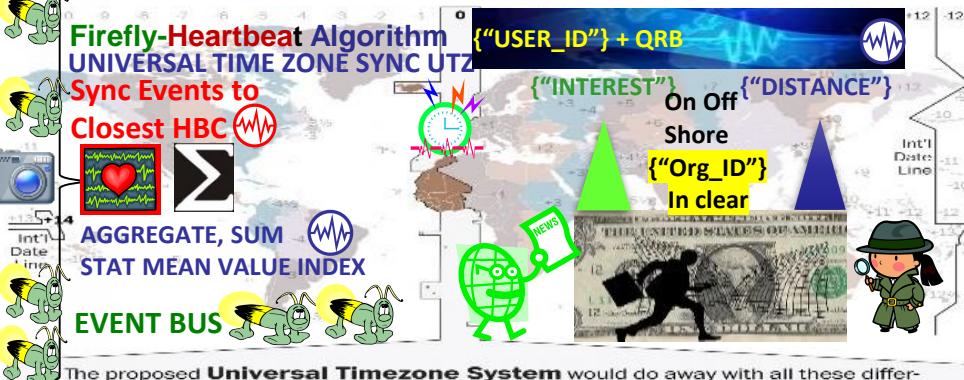
Time / Distance Metrics



PROXIMITY

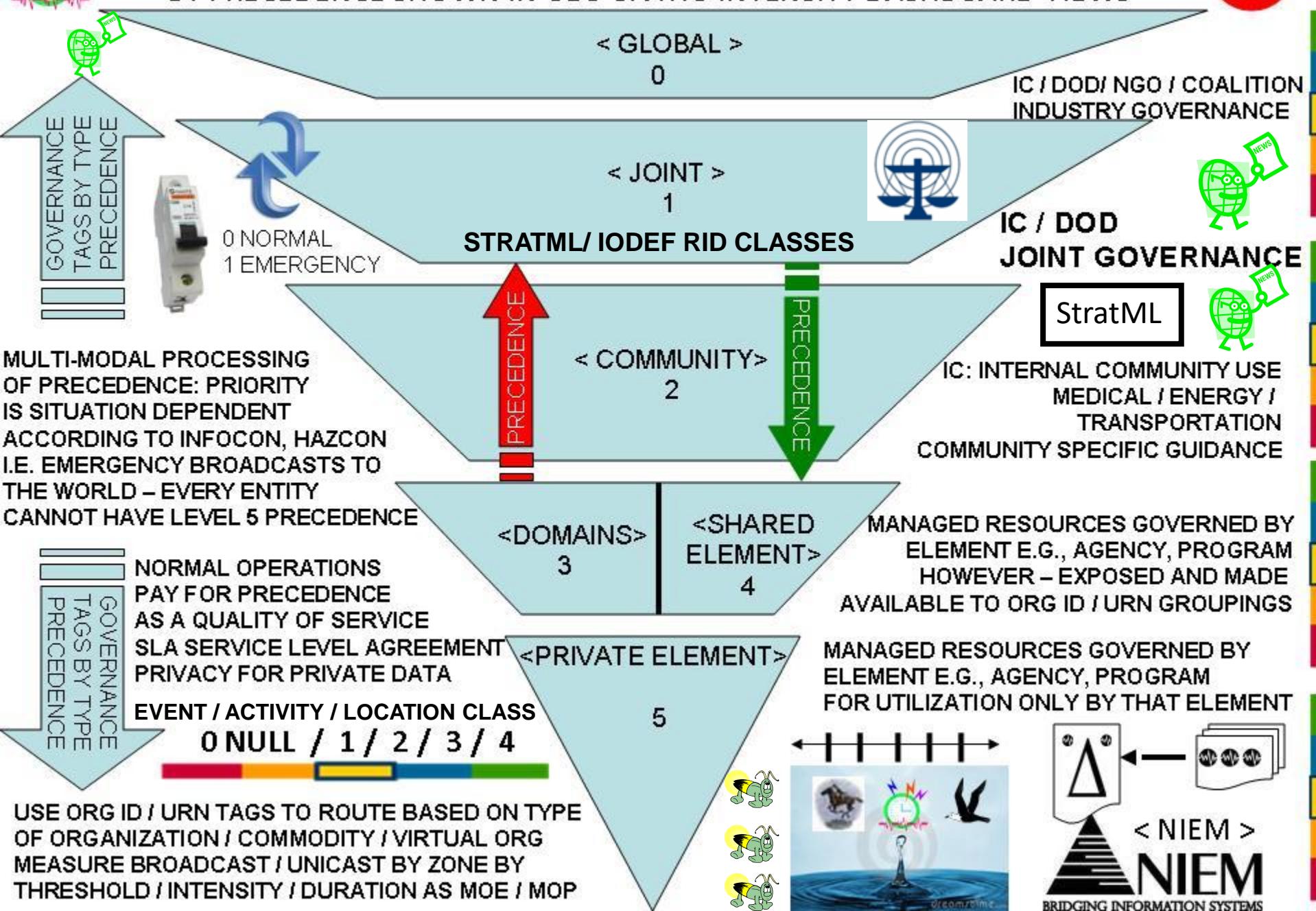
NDN
</interest></distance>

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





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



Situational Awareness Reference Architecture (SARA)

Identity, Inventory, Activity, and Sharing

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



Industrial Control System
Information Sharing and
Analysis Center

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

<ELEMENTS>

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

STRATEGIC
MARKUP

StratML

LANGUAGE

INVENTORY: Uniform Resource Name <URN>

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



vector

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

GEO-SPATIAL TEMPORAL INTENSITY METRICS

UNIFIED EVENT / ALERT TRIGGER / THRESHOLDS

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

CONTENT LEXICON
ROSETTA STONE

NDN

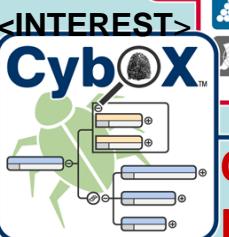


<INTEREST>



<INTEREST>

NDN



NDN

<GEO_LOC_GPS><STATUS>



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

AVALANCHE

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

NIST CYBER SECURITY FRAMEWORK

CYBER SECURITY CONTENT
LEXICON ROSETTA STONE

FROM	F002	F003	F004	F005	F006	F007	F008	F009	F010	F011	F012	T0	TO	A001	A002	A003	A004	A005	A006	A007	M001
A001	F013	F014	F015	F016	F017	F018	F019	F020	F021	F022	F023	F024	F025	F026	F027	F028	F029	F030	F031	F032	F033
AMOPCS	F033	F034	F035	F036	F037	F038	F039	F040	F041	F042	F043	F044	F045	F046	F047	F048	F049	F050	F051	F052	F053
AFATPS	F051	F052	F053	F054	F055	F056	F057	F058	F059	F060	F061	F062	F063	F064	F065	F066	F067	F068	F069	F070	F071
M001	F072	F073	F074	F075	F076	F077	F078	F079	F080	F081	F082	F083	F084	F085	F086	F087	F088	F089	F090	F091	F092
CBICS	F093	F094	F095	F096	F097	F098	F099	F100	F101	F102	F103	F104	F105	F106	F107	F108	F109	F110	F111	F112	F113
DTB8	F114	F115	F116	F117	F118	F119	F120	F121	F122	F123	F124	F125	F126	F127	F128	F129	F130	F131	F132	F133	F134
IMETS	F135	F136	F137	F138	F139	F140	F141	F142	F143	F144	F145	F146	F147	F148	F149	F150	F151	F152	F153	F154	F155
IYSON	F156	F157	F158	F159	F160	F161	F162	F163	F164	F165	F166	F167	F168	F169	F170	F171	F172	F173	F174	F175	F176
FB001	F177	F178	F179	F180	F181	F182	F183	F184	F185	F186	F187	F188	F189	F190	F191	F192	F193	F194	F195	F196	F197

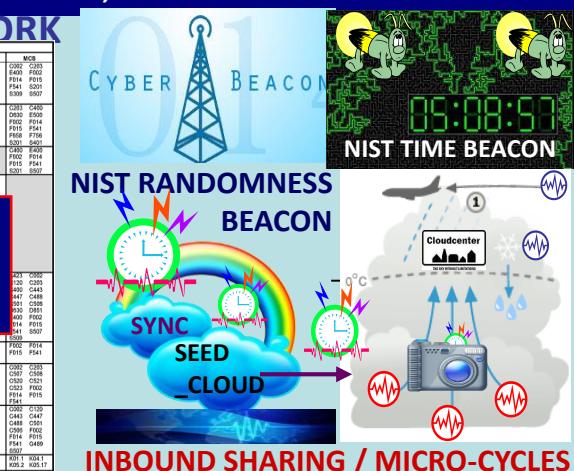
STRUCTURED
<CONTENT>
TEMPLATES

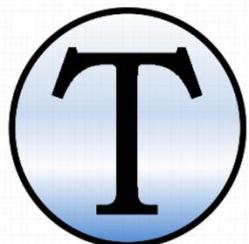
NIEM
Sharing Information Everywhere

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 MTFs specify <CONTENT> / information agreed by group consensus presenting information in a logical well specified and unambiguous layout i.e., templates

<TAG>
LIBRARY





Three ideas combined

HOW TRUTHCOIN WORKS:

1) Tradable Reputation

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

2) SVD Cross-Validation

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



3) Strategic Use of TIME

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

2. A kind of ‘Future Wikipedia’

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

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

3. A software protocol

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

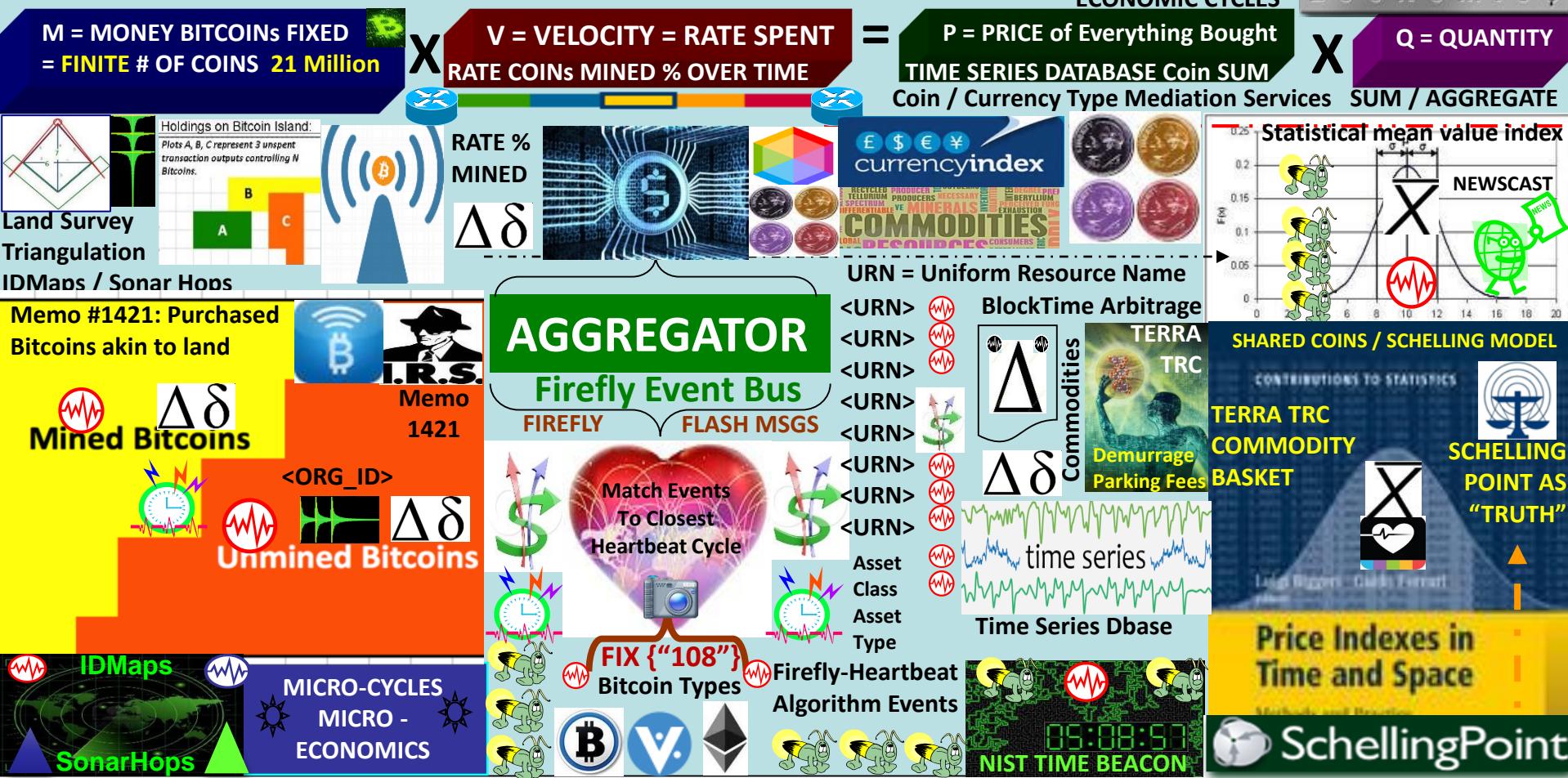


Protocol (Decentralized)	Centralized Non-Protocol
Spoken English	Shakespeare’s Globe Theatre, The Library of Alexandria, MLA Citation Format, Walt Whitman, J.K. Rowling.
Rules to American Football	The NFL, ESPN, The Buffalo Bills.
Bluetooth	A Set of Stereo Speakers, The iPhone 6, A Car Radio Equipped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

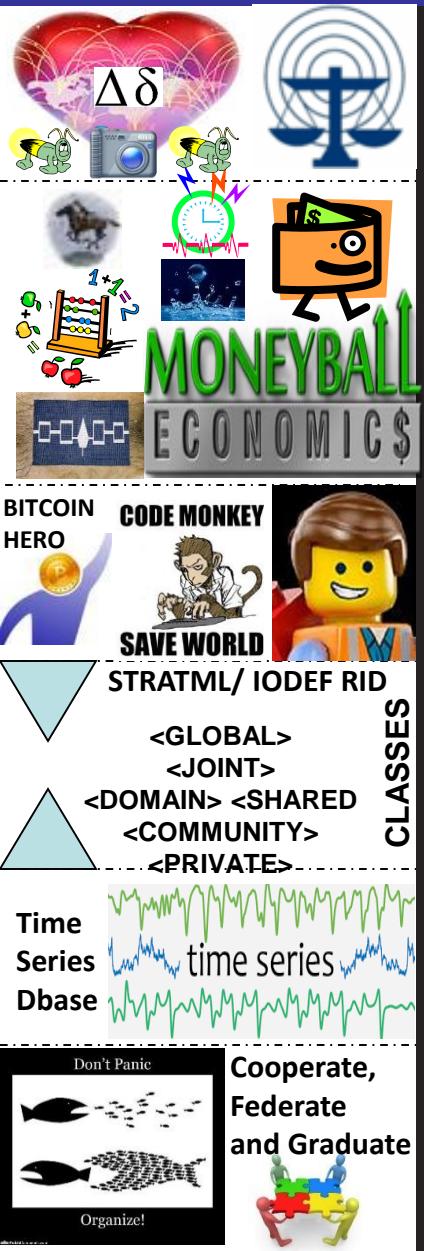
How 'Bitbanks' Could Solve Bitcoin's Volatility Problem

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

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



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



HOW GAMIFICATION WORKS:

5 COMMON MECHANICS

POINTS

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

BADGES

Reward achievements visually

LEVELS

Encourage users to progress and unlock new rewards

LEADERBOARDS

Organise players by rank

CHALLENGES

Encourage engagement by offering specific tasks to complete

4 MAIN WAYS TO DRIVE ENGAGEMENT

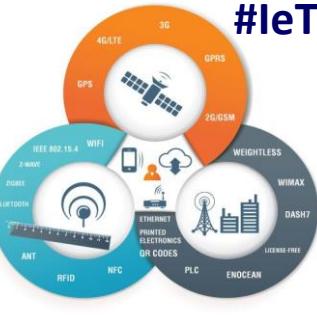
ACCELERATED FEEDBACK CYCLES

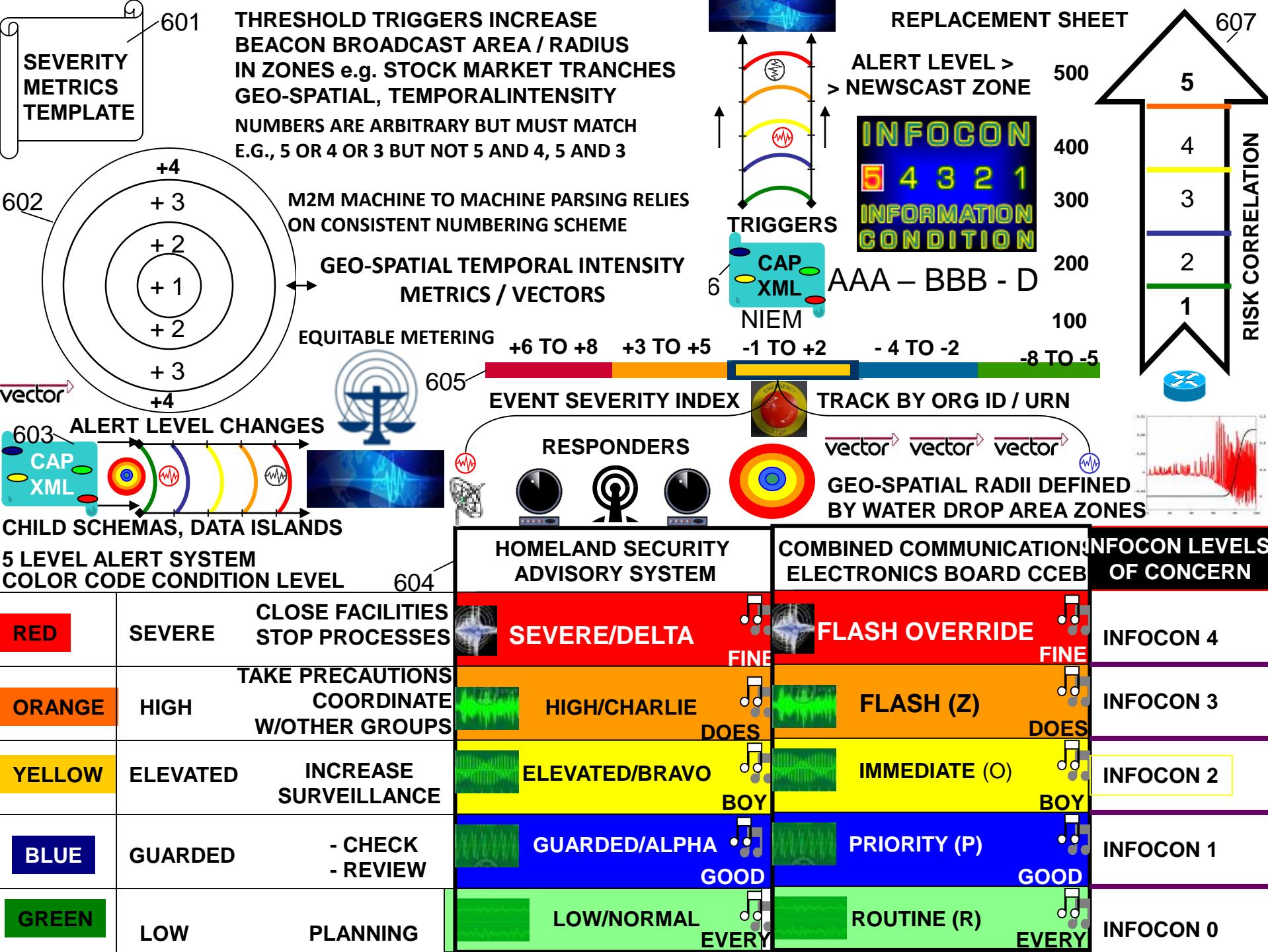
CLEAR GOALS AND RULES OF PLAY

A COMPELLING NARRATIVE

CHALLENGING BUT ACHIEVABLE TASKS



Interface Name	HEARTBEAT Administration Interface [SCOP]							
Documentation URL	http://scop.sourceforge.net/ http://linuxvirtualserver.org/software/index.html							
API Information  	Functionality Areas  	Cloud Interface Management , configuration, start, stop cloud services, edit configuration (heartbeat messages)						
	API Operation Count 	Web service access type Web application, front end to [network, device, system] heartbeat]						
	LANGUAGE / PLATFORM BINDINGS   							
	Interface Characteristics 							
	<p>SCOP is a web application, PHP based, that is a front-end to heartbeat, IP Virtual Server ipvs and Idirectord [check interval e.g., every 5 seconds] software. With SCOP you can start/stop services, view/ edit configuration files e.g., heartbeat message state management snapshots, make backups, take a server online/offline, add/ remove virtual/real servers, etc.</p>							
	<p>The external environment could update <u>resources</u> at random... One solution is a heartbeat: defining a default lease duration and delaying updates until the next cycle"</p>							
  								
QubitCoin Interval: Every 30 Seconds								



GEO-SPATIAL TEMPORAL INTENSITY METRICS, METERS, VECTORS



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



Geo-Spatial Temporal Intensity NOVEL METRICS / METERS:



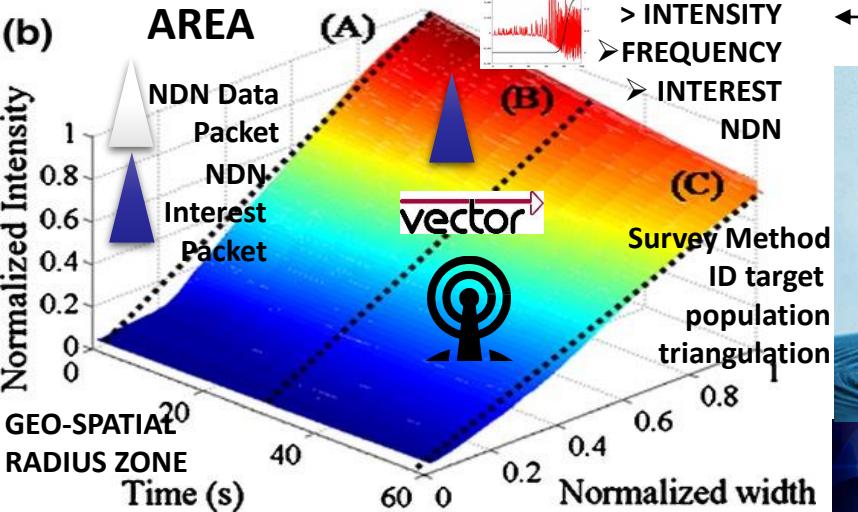
Paul Revere = linear, sequential



TCP/IP hop by hop counts, by hop controls



Water Drop = AREA / INTENSITY
Cyclic Frequency



NAMED DATA NETWORKING

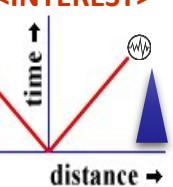
</IoT>
MQTT



NIST TIME BEACON

05:08:50

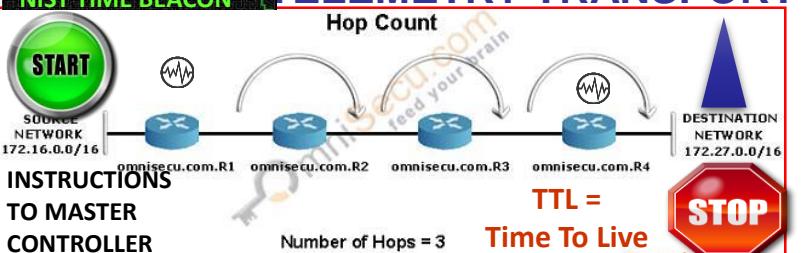
<INTEREST>



ARRESTED-D

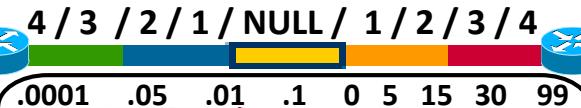
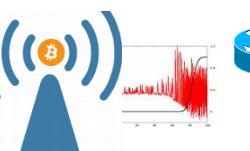
IEEE 802.15.4
OASIS MQTT

TELEMETRY TRANSPORT



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

IDMAPS
SONARHOPS
INTERNET
TRIANGULATION



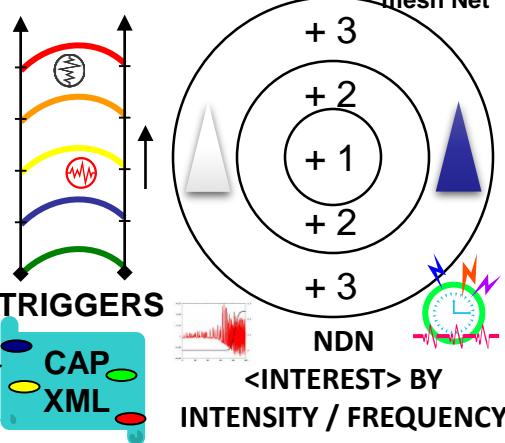
vector WirelessHART

time synchronized,
self-organizing,
mesh Net

ALERT LEVEL >
> NEWSCAST ZONE



SINE-WAVE

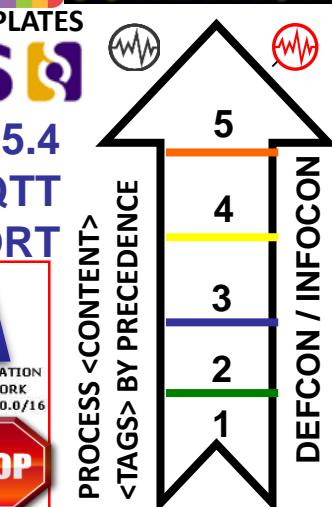


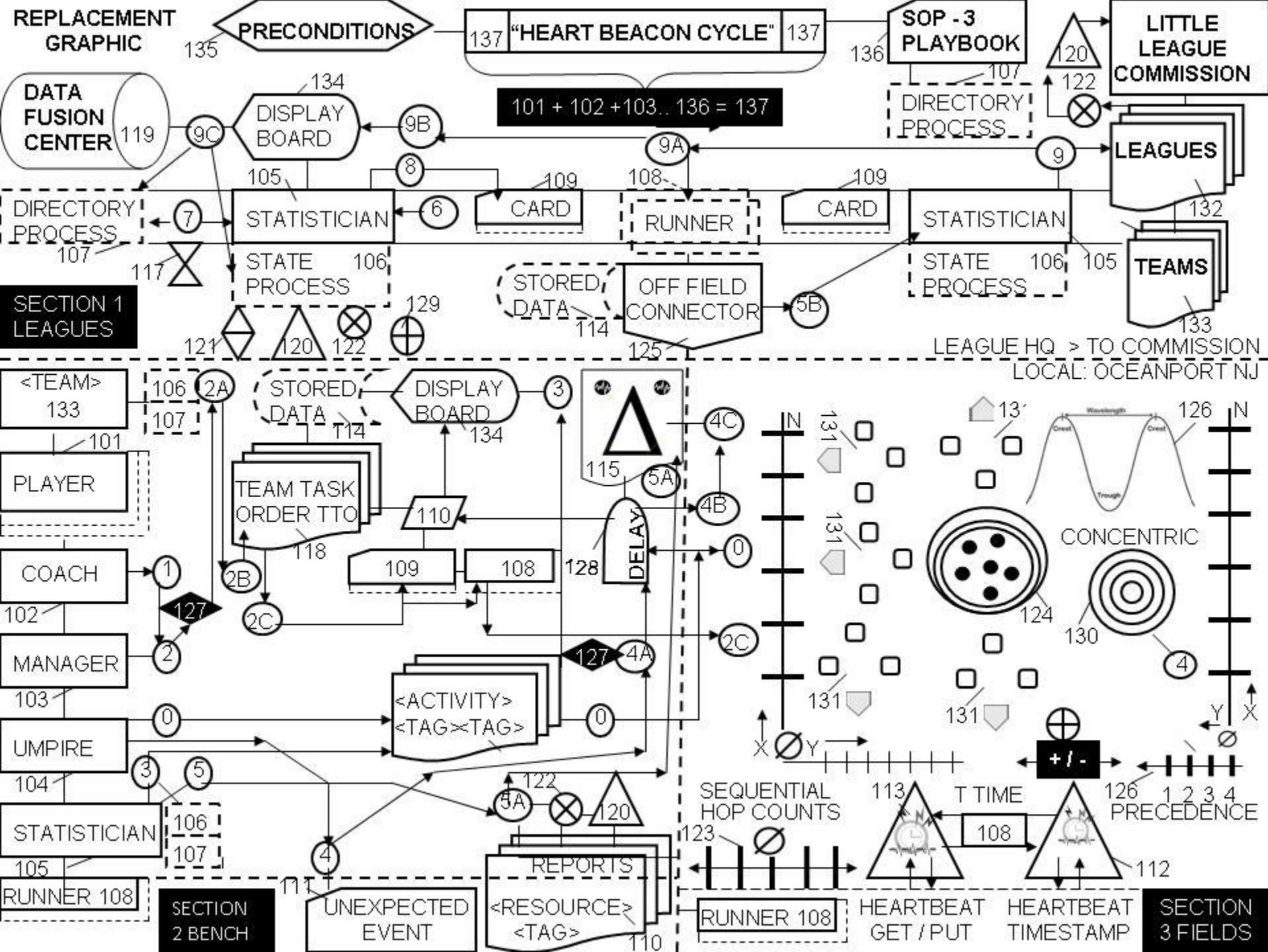
TRIGGERS
CAP XML

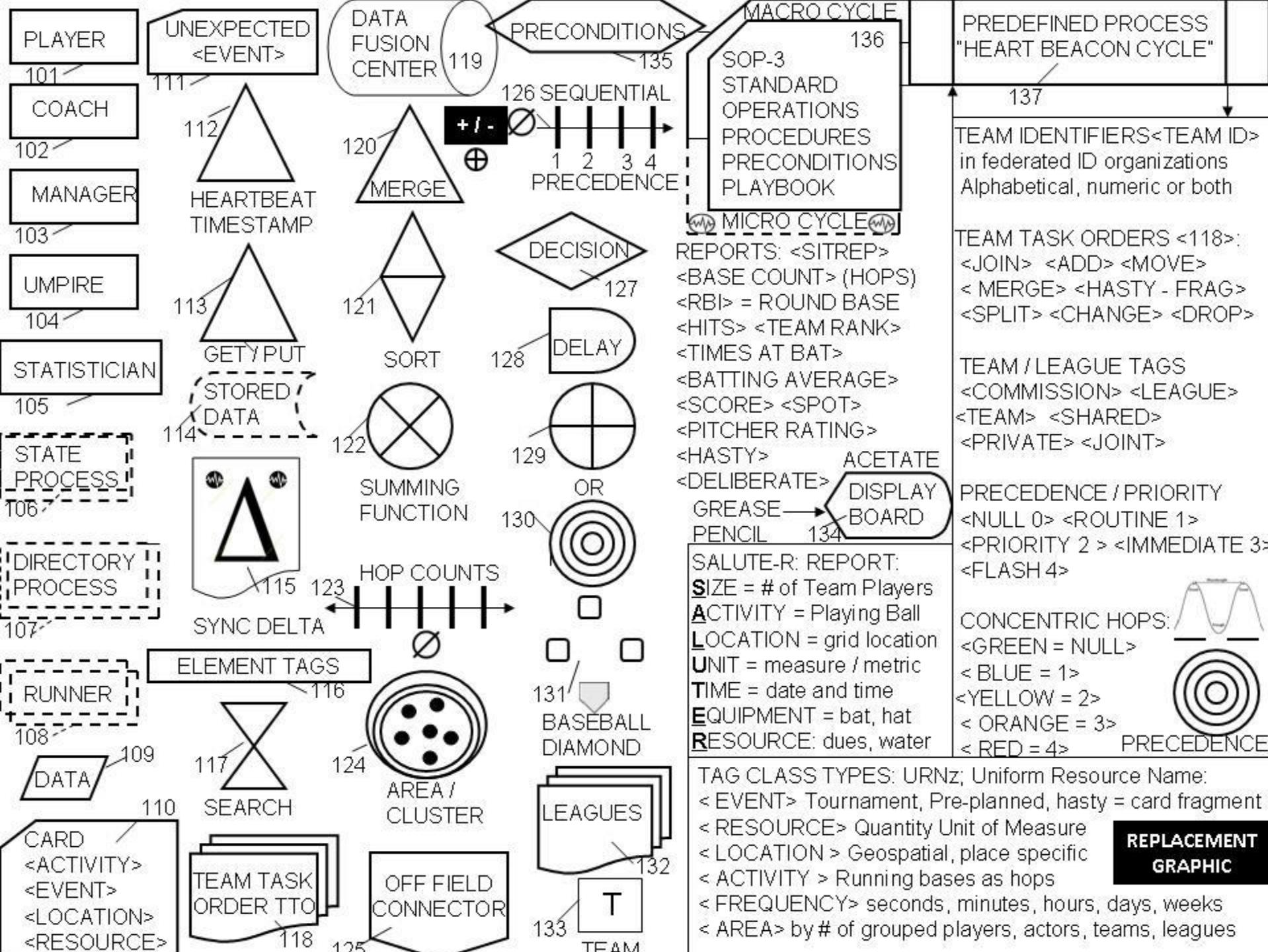
<INTEREST> BY
INTENSITY / FREQUENCY

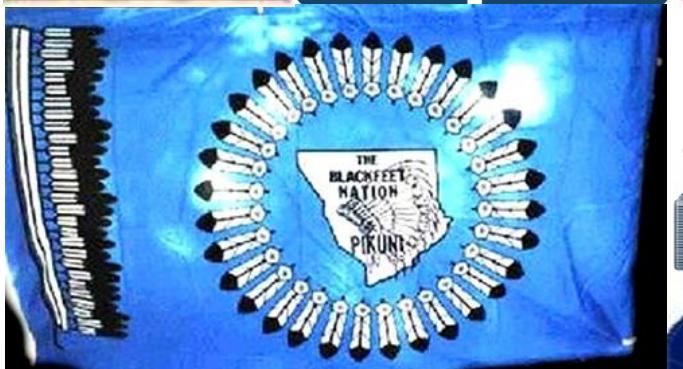
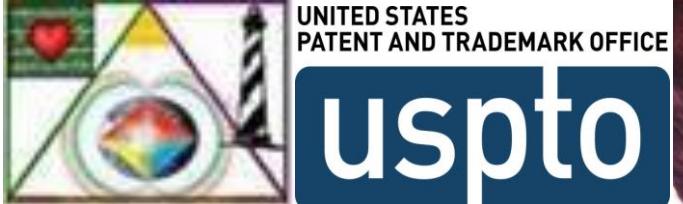
INFOCON
XML
MTF
300 +
MSG

5 4 3 2 1
INFORMATION CONDITION

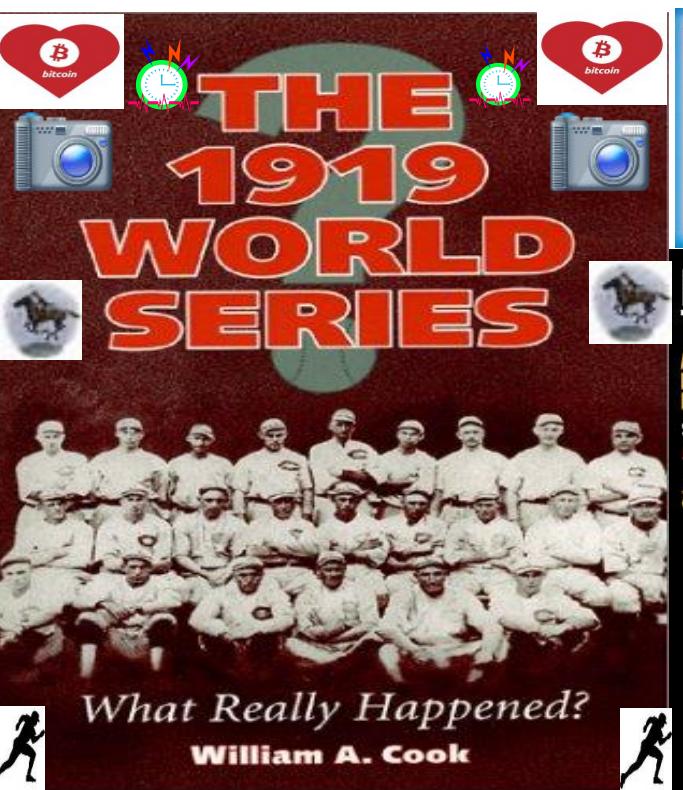








SAW Concepts LLC Owner's Father is from Blackfoot First Nation Native American Indian

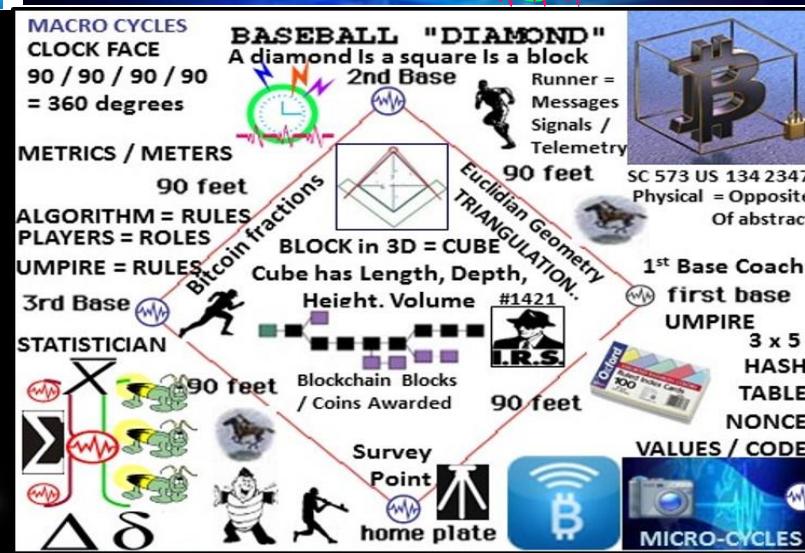


What Really Happened?
William A. Cook



USPTO SCREEN CAPTURES SUSPENDED PAIR RULES

- Moved Examination outside PAIR
- No need for forms, fees, amendments
- No Time Stamps = Temporal Ambiguity
- Screen captures before / after filing







Telemetry
ANNEX

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)"



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
The World Game



ECONOMIC HEARTBEAT



Algorithmic Regulation
Stat Mean Value Index



TERRACYCLE

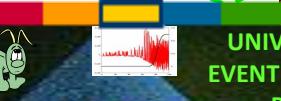


UNIVERSAL EVENT / ALERT BUS



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

HEART BEACON CYCLE: SIGNALING, TELEMETRY FRAMEWORK ANNEX
BUCKMINSTER FULLER'S OPERATING MANUAL for SPACESHIP EARTH



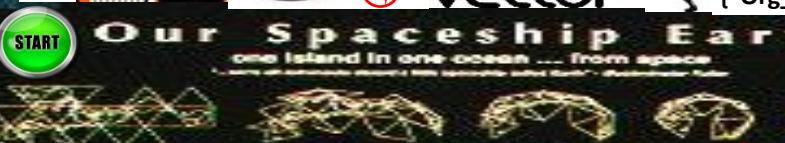
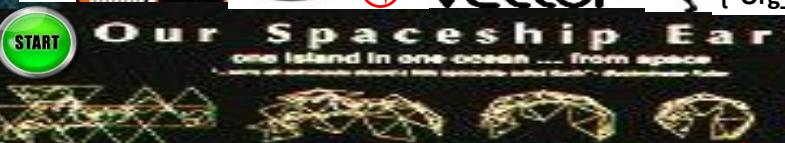
Spatial Econometrics

70 / 30 RULE

UNUSED RESOURCES

Firefly
Heartbeat
Algorithm

UNMET NEEDS





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

