



RESUME: SAW Simple Wins Concepts LLC / Steven J. McGee Consultant, patent applicant

June 2004 - Simple Always Wins Concepts LLC Web Page [LINK http://sawconcepts.com/index](http://sawconcepts.com/index)

United States Army Signal Corps Officer ROTC Full Scholarship Recipient 1982-1993

Masters of Science Information Systems Western International University Phoenix AZ 93 - 96

Defense Contractor for Validity Systems, SAIC International, MITRE, BAE Systems 1993 – 2002

United States Patent and Trademark patent application #13,573,002 2004-17 [LINK](#)

LINKEDIN: <http://linkedin.com/in/sawconcepts> [LINK](#)

GITHUB: [LINK: https://github.com/Beacon-Heart/Heart_Beacon](https://github.com/Beacon-Heart/Heart_Beacon)

PATREON: [LINK https://patreon.com/beacon_heart](https://patreon.com/beacon_heart) OneDrive Document Folder

SCRIBD <https://scribd.com/user/11781571/Steven-McGee> [LINK](#)

TWITTER: http://twitter.com/Heart_Beacon Medium: <https://medium.com/@heart.beacon.cycle>

SAW Concepts LLC | CAGE code 3UDK2 / DUNS Number 144502817

Ecologically sustainable Economic Heartbeat [LINK](#)

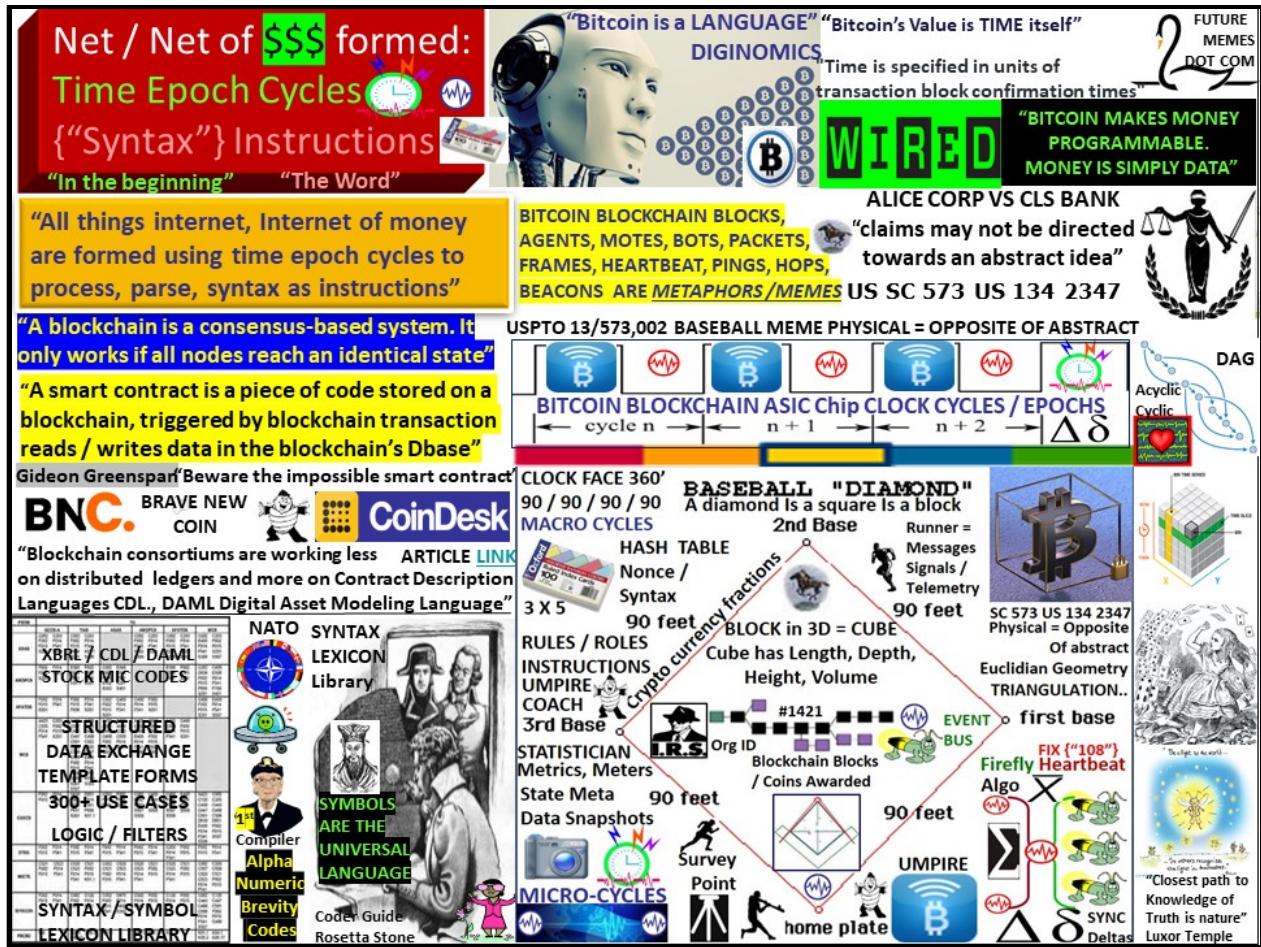


FIGURE 1: Supreme Court Alice Corp Vs CLS Bank “claims may not direct towards Abstract ideas” [LINK](#)

Speaking of Alice through the looking glass and Wonderland... “It’s a new world order in the aftermath of Alice,” says Dale S. Lazar, a partner in DLA Piper’s Reston, Virginia, office. [LINK](#)

“In the US, Crypto Is considered property by the Internal Revenue Service, Money by the Treasury Department, Commodities by the CFTC, and securities by the #SEC”

Bitcoin blockchain blocks, agents, motes, bots, heartbeat, beacon are metaphors for intervals, time cycles available to process / not process SYNTAX. The internet is coded, programmed using time cycles to process instructions, commands etc. It follows that the key to achieving consistency, interoperability among myriad memes and establishing a consistent, systemic one world economic system of systems is to focus on two main common building blocks -- time cycles and syntax. Alice Corp. v. CLS Bank International, 573 U.S. 134 S. Ct. 2347 (2014), United States Supreme Court decision about patentable subject matter (patent eligibility). 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. In our opinion, physical is the opposite of abstract. [LINK](#) [WIKIPEDIA](#): https://en.wikipedia.org/wiki/Alice_Corp._v._CLS_Bank_International



FIGURE 2: FEDCOIN / WORLDCOIN ECONOMIC HEARTBEAT

Economic Reset solution: form economic trade federations incentivizing environment friendly business practices leveraging Bitcoin's micro-payment capabilities supporting the TERRA Trade Reference Currency TRC demurrage resource handling charge. Closer is cheaper, less fuel, less CO₂ carbon emissions

- Firefly Heartbeat algorithm Time – Space Sync algorithm improved by matching firefly async / sync process to closest Operational Tempo OPTEMPO heartbeat time epoch cycle
- TERRA TRC TRADE REFERENCE CURRENCY Commodity (crops etc., backed)
- WAVES: TOKENIZES NATIONAL CURRENCIES / I.R.S. Bitcoin transactions as taxable events
- ECONOMIST MILTON FRIEDMAN'S K% RULE Lead Economic Indicator economic pulse

SOURCE [LINK](http://www.sawconcepts.com/index/id9.html): <http://www.sawconcepts.com/index/id9.html>



FIGURE 3: Mediation Gateway: Federations practicing sustainable economics / Off Pagers [LINK](#)

MEDIATION GATEWAYS are needed among entities, organizations, trade federations adhering to rules, laws, consensus metrics, meters and non-conforming entities, organizations, corporations

Building a “new” internet will involve building 2 nets: one net is being built that tends to be centralized and is a private mesh among large government and / or large corporations featuring controlled access permission for example, Ripple that becomes more decentralized the more hubs installed.

The second net is a more decentralized, shared internet, internet of money based on the concept of Distributed Autonomous Organization DAO infrastructure keeping in mind that the DAO term was coined by a military funded think tank — the RAND corporation circa 2001.

Mediation gateways between centralized and decentralized blockchain implementations are needed to match transaction speeds between the centralized architectures that tend to be faster than the decentralized architectures. Work flow logic, business rules, metrics, meters will differ among the centralized, decentralized systems as well as among the myriad blockchain memes in general.

REFERENCE ARTICLE: #ConsenSys How to Build a New Internet

[LINK](https://media.consensys.net/lets-build-a-new-internet-4d897def3f66) <https://media.consensys.net/lets-build-a-new-internet-4d897def3f66>



FIGURE 4: FIREFLY INSPIRED HEARTBEAT SYNCHRONIZATION / World Economic Heartbeat

Firefly Inspired Heartbeat Synchronization Algorithm:

- 1) Consensus
- 2) Neural Network emulation
- 3) Event Bus for Bitcoin transactions as taxable events
- 4) Stochastic Harmonization
- 4) Collect stock exchange events for MMID Dark pool limits

Firefly inspired Heartbeat Synchronization: in a paper entitled **Firefly-inspired Heartbeat Synchronization in Overlay Networks** by the University of Bologna Trento Italy along with the University of Szeged, Hungary: “Heartbeat synchronization strives to have nodes in a distributed system generate periodic, local “heartbeat” events approximately at the same time. The heartbeat synchronization protocol for overlay networks is inspired by mathematical models of flash synchronization in certain species of fire flies. Nodes send flash messages to their neighbors when a local heartbeat triggers. Fireflies adjust the phase of their next heartbeat based on incoming flash messages using an algorithm inspired by mathematical models of fire-fly synchronization. Heartbeat synchronization strives to have nodes in a distributed system generate periodic, local “heartbeat” events approximately at the same time. It differs from classical clock synchronization in that nodes are not interested in counting cycles and agreeing on a ID of a current cycle. There is no requirement regarding the length of a cycle with respect to real time as long as a length is bounded and all nodes agree on it eventually.”

[LINK](http://sawconcepts.com/index/id22.html) <http://sawconcepts.com/index/id22.html>



FIG 11: TERRA Trade Reference Currency / Crypto Micropayments – Demurrage fees

Satoshi Nakamoto: "#Bitcoin is intended to be paired with the market place" "the blockchain stores references to market indexes"

Demurrage: term used in currency trading to denote cost of currency ownership and/or storage. cost of carrying money... considered superior to interest payments, as it stimulates currency circulation and economic growth. "In a physical sense, demurrage represents a delay that occurs during the transportation of goods via truck. When this happens, the trucking firm delivering the product can opt to pay a flat fee to the receiver to cover any loss incurred as a result of the delay. This fee can be assessed on an hourly basis. Or in the case of gold, demurrage is simply the costs associated with storage of bouillon.

[LINK https://investopedia.com/terms/d/demurrage.asp](https://investopedia.com/terms/d/demurrage.asp)

Thomas Edison's Monetary Option: [LINK](#):

<https://www.supermoney.com/2014/06/thomas-edisons-view-money/>

Simple Wins Concepts LLC [LINK](#) <http://sawconcepts.com/index/id39.html>



FIGURE 6: ECONOMIST MILTON FRIEDMAN's K % RULE / Algorithmic Economic Regulation

Economist Milton Friedman predicted the rise of a computer capable of automatically adjusting the inflation rate of money, and this is precisely what we see in the case of bitcoin, as a regulatory algorithm intelligently adjusts the mining difficulty to make the issuance of blocks more or less easy depending on the demand for network hashing power. No money system we have seen to date can claim it is chronologically regulated. The universal construct of time is the backbone of the cryptocurrency digital economy. Investopedia K % Rule [Source:](https://investopedia.com/terms/k/k-percent-rule.asp) <https://investopedia.com/terms/k/k-percent-rule.asp>

Satoshi Nakamoto's Bitcoin key building block is a time stamp server. Satoshi Nakamoto: "Bitcoin is intended to be paired with the market place" "the blockchain stores references to market indexes" Globalization involves multi-national corporate entities vying for control of regional resources. It follows that a proven strategy to identify, track, and monitor resources regionally within the global economic matrix is needed. Bitcoin cryptocurrencies as programmable money and the internet's heartbeat, heartbeat messages timed to harvest data during micro economic cycles then aggregated into a composite economic heartbeat pulse as Economist Milton Friedman's K% rule is a clear and present opportunity for trade equity and economic system of systems stability. [Source:](http://sawconcepts.com/index/id43.html) <http://sawconcepts.com/index/id43.html>



FIGURE 7: Swords to plowshares: Battlefield digitization Distributed Autonomous Organization process to form Trade Federations for equitable, eco-sustainable economics, econometrics

The term DAO Distributed Autonomous Organization was coined by military think tank RAND in 2001. German military advocated using Battlefield Digitization for OOTW Operations Other Than War in 2004

In 1921, Edison / Ford proposed a crop index based currency. Now there's the internet, the internet of money #Bitcoin Blockchain & Spatial Econometrics. The Terra is a global complementary currency designed to provide an inflation-resistant international standard of value; to stabilize the business cycle on a global level; and to realign stockholder's interests with long-term sustainability. From a legal viewpoint, the Terra is standardized "countertrade" (international barter), which is routinely used for over one trillion dollars worth of transactions per year. Legislation on countertrade exists in about two hundred countries, including all the major trading nations. Introducing the Terra would therefore not require new international governmental agreements. Bitcoin blockchain micro payments pair perfectly with the TERRA TRC's demurrage charges to offset costs for temporary storage and transfer of goods. The TERRA Trade Reference Currency: complementary, privately issued, demurrage-charged, backed by inflation-resistant, standardized basket of the dozen most important commodities, services and operates in parallel with national currencies. Terra The Trade Reference Currency, TRC "world currency". Proposed by Belgian economist and expert on monetary systems Bernard A. Lietaer in 2001, the currency is meant to be based on a basket of the 9-12 most important commodities (according to their importance in world wide trade). Terra = reference unit defined as standardized basket of lead economic indicators / commodities SOURCE [LINK](http://sawconcepts.com/index/id36.html) <http://sawconcepts.com/index/id36.html>



Figure 8: Federate and Graduate [LINK](http://sawconcepts.com/index/id5.html) <http://sawconcepts.com/index/id5.html>

SWORDS TO PLOWSHARE PROJECT: FEDERATION Net Centric Warfare trade federations

FEDERATION: from Latin: *foedus*, gen.: *foederis*, covenant characterized by a union of partially self-governing states or regions under a central (federal) government. In a federation, the self-governing status of the component states, as well as the division of power between them and the central government, are typically constitutionally entrenched and may not be altered by a unilateral decision of either party, the states or the federal political body. Individuals, organizations retain AUTONOMY to act on their own behalf.

Reuse of military funded System of Systems **research**, best practice as a procedural template framework is key to forming and maintaining sustainable Trade Federations as Distributed Autonomous Organizations DAO's / DAC's Corporation. Military's do one thing very well -- organize individuals into organizations <OrgID> and Organizational Units <OU><OU><OU>as widely dispersed autonomous groups working towards collective, synchronized goals following cyclical, iterative procedures. Federation involves fusion between #Bitcoin / military net centric operations both use term DAO Distributed Autonomous Organization DAO term first used by RAND military think tank in 2001 - now used by blockchain community [LINK](#)

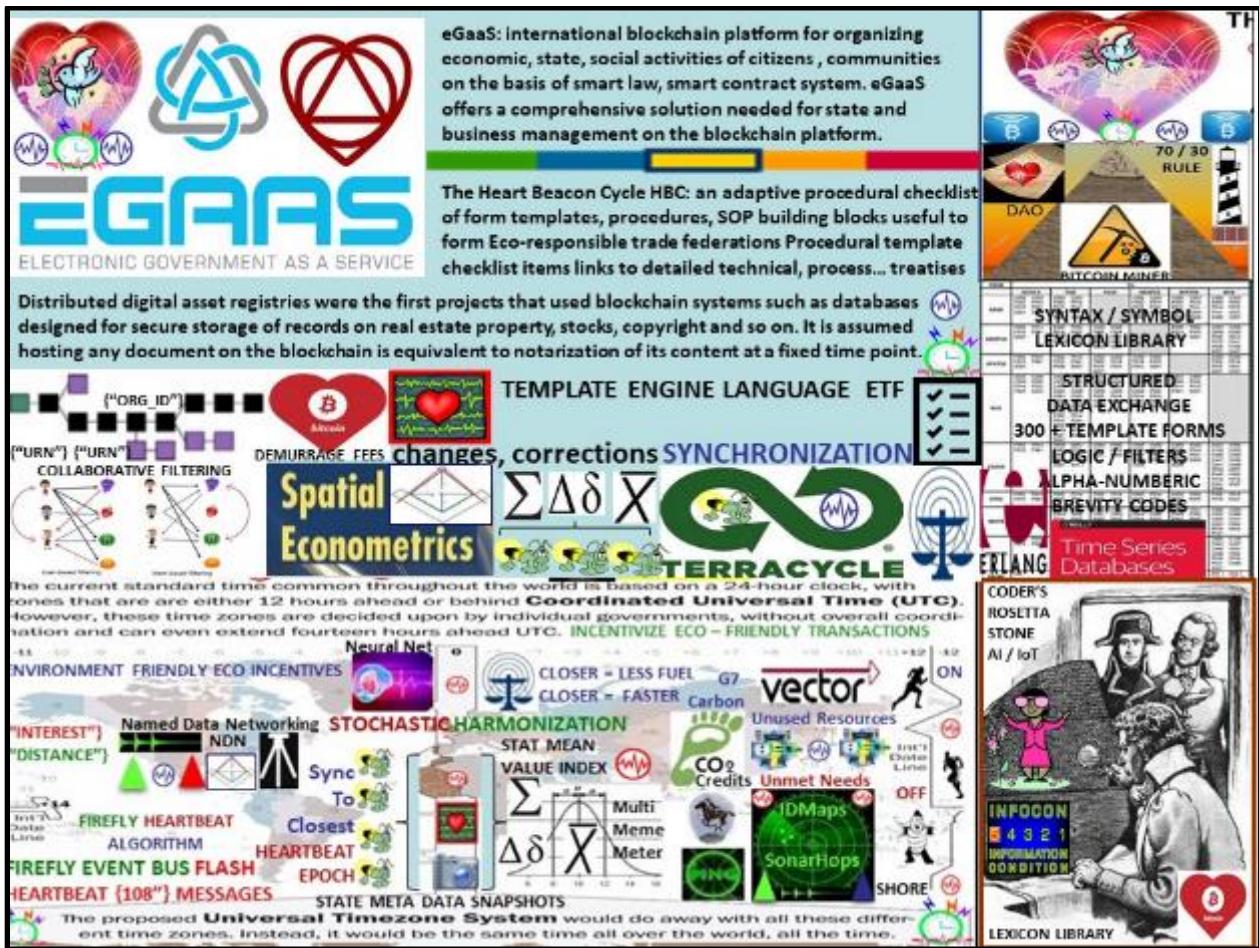


FIGURE 9: Electronic Government as a Service / Heart Beacon Cycle synergy

Cyclic updates of state meta data snapshots / heartbeat messages from micro-to macro (economic) cycles distributed among a system of systems is simply powerful. The Internet is based on time cycles and (computer) syntax parsed / processed or not during finite time cycles. It requires a syntax library lexicon -- a Rosetta Stone if you will. The firefly inspired heartbeat algorithm includes flash heartbeat messages that act as a universal event / alert message bus.

eGaaS, an international Blockchain platform for organizing the economic, state and social activities of citizens and their communities on the basis of smart law and smart contract system Electronic Government as a Service.

eGaaS implements four basic functions needed for efficient transfer of most types of government, legislative bodies and business activities into Blockchain technology:

- financial system
- registry structure
- smart contract algorithm
- smart law formation and execution mechanism

In eGaaS a mechanism is implemented for formation and execution of smart laws. Smart laws are algorithms describing the rules and conditions regulating the execution of state laws.

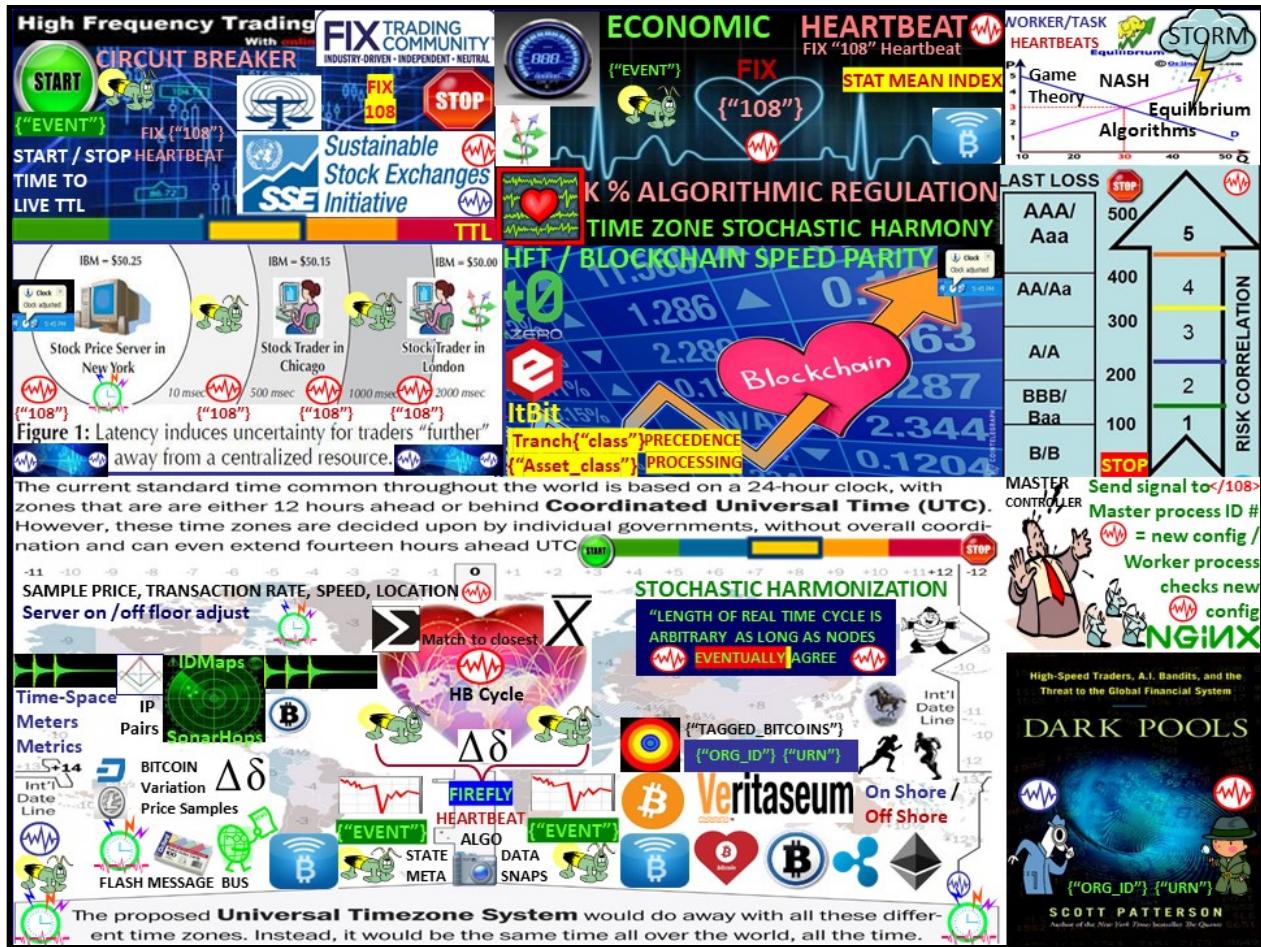


FIGURE 10: HFT CIRCUIT BREAKER / Blockchain transaction speed algorithmic regulation [LINK](#)

Algorithms drive markets but do not regulate them = Napoleon @ Waterloo Groundhog's Day

#MFID #DARKPOOL #HFT High Frequency Trade Limits: #Sustainable #Stock #Exchange Initiative

Use the "Great John Nash's" Equilibrium algorithms to address trade parity among "whales"

US Sct #573 Alice Corp Vs CLS Bank "claims may not direct towards abstract ideas" = physical sonar water drop in pond meme for radius distance from stock, commodity exchange trade floors

Firefly inspired heartbeat synchronization algorithm use cases in stock, currency , commodity exchanges: algorithmic regulation. Improving temporal trade parity between Bitcoin Blockchain & conventional stock exchanges by using the firefly-heartbeat algorithm to take trade speed samples among trade populations across time zones to determine an optimal trade speed / frequency as a statistical mean value index pulse. On off trade floor parity = sonar water drop in pond meme radius distance / Dark Pool circuit breaker #UTZ universal time zone stochastic harmonization #Bitcoin World #Economic #Heartbeat <http://sawconcepts.com/index/id18.html> [LINK](#) See USPTO 13/573,002



FIG 11: MICROSOFT BLETCHLEY BLOCKCHAIN AS A SERVICE BAAS / HEART BEACON CYCLE [LINK](#)

Quote from @DCCCertified @InsideBitcoins "Build mental models that help people wrap their heads around Bitcoin w/o having to understand it". A baseball diamond is a square, is a block. A baseball tournament is played on baseball diamonds are physical and tangible -- in every town in America. The opposite of abstract is physical.

US Supreme Court Alice Corp V CLS Bank: "claims ineligible for patent protection under 35 U. S. C. §101 "directed to an abstract idea" ALICE CORP v CLS BANK <http://1.usa.gov/1V91pQe> [LINK](#) Patent application 13,573,002 is described using a baseball league tournament. [LINK](#) <http://slideshare.net/StevenMcGee2/13573002-the-heart-beacon-cycle-patent-application>

NATO's #interoperability system of systems framework i.e., sync delta's, structured data exchange alpha numeric brevity codes, symbol sets... is the best starting point - in my opinion. #Coindesk: The Opportunity for Interoperable Chains of Chains [LINK](#)



Figure 12: Hashgraph" / Heart Beacon Cycle Time – Space Meter Synergy

Web Page: <http://www.sawconcepts.com/index/id91.html>

Hashgraph: Abstract. A new system, the Swirls hashgraph consensus algorithm, is proposed for replicated state machines with guaranteed Byzantine fault tolerance. It achieves fairness, in the sense that it is difficult for an attacker to manipulate which of two transactions will be chosen to be first in the consensus order. It has complete asynchrony, no leaders, no round robin, no proof-of-work, eventual consensus with probability one, and high speed in the absence of faults. It is based on a gossip protocol, in which the participants don't just gossip about transactions. They gossip about gossip. They jointly build a hashgraph reflecting all of the gossip events. This allows Byzantine agreement to be achieved through virtual voting. Alice does not send Bob a vote overthe Internet. Instead, Bob calculates what vote Alice would have sent, basedon his knowledge of what Alice knows. This yields fair Byzantine agreement on a total order for all transactions, with very littlecommunication overheadbeyond the transactions themselves. Hashgraph is event based and involves calculating consensus based on activity snapshots in a given moment in time (HBC)

SOURCE: THE SWIRLDS HASHGRAPH CONSENSUS ALGORITHM: FAIR, FAST, BYZANTINE
FAULT TOLERANCE AUTHOR: LEEMON BAIRD BAIRD@SWIRLDS.COM
MAY 31, 2016 SWIRLDS TECH REPORT SWIRLDS-TR-2016-01

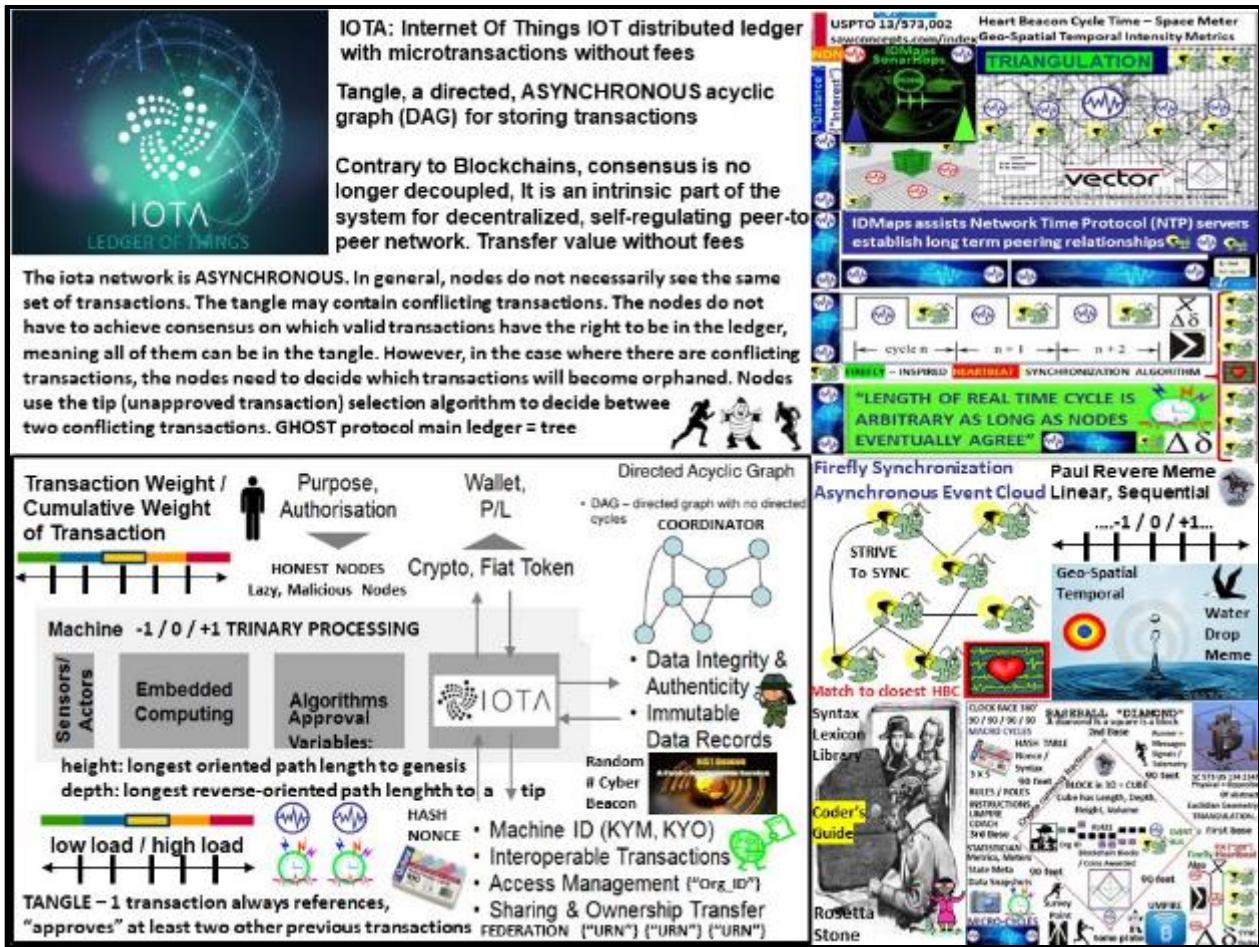


FIGURE 13: IOTA TANGLE / DAG Directed Acyclic Graph / Heart Beacon Cycle Time – Space Meter synergy

The Tangle is based on the concept of a Directed acyclic graph DAG. A directed acyclic graph (DAG!) is a directed graph that contains no cycles. A rooted tree is a special kind of DAG and a DAG is a special kind of directed graph. The DAG **consists of finitely many vertices and edges**, with each edge directed from one vertex to another, such that there is no way to start at any vertex V and follow a consistently-directed sequence of edges that eventually loops back to V again. Equivalently, a DAG is a directed graph that has a topological ordering, a sequence of the vertices such that every edge is directed from earlier to later in the sequence. IOTA TANGLE SOURCE: [IOTA - Next Generation Blockchain](https://iota.org) <https://iota.org>

The Heart Beacon Cycle Time - Space meter describes an improvement to an acyclic algorithm based on firefly synchronization that uses the median / mean of the firefly heartbeat synchronization algorithm to strive to sync to the closest OPTEMPO Heart Beacon Cycle.

Firefly inspired heartbeat synchronization theory / algorithm See slide #22 [LINK](#)

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	S305 S309	F014 F015 F541 S201	C002 C203 E400 F002 F014 F015 F541 S201 S309 S507
INFOCON  INFORMATION CONDITION					
SYMBOLS RULE THE WORLD  HEARTBEAT MESSAGE = K00.99					
MESSAGE CATALOG 300 + Use Cases					
Data Elements: entity, attribute, relationship equivalents					
Information Categories and Examples					
Object Categories	Examples	Location	Movement	Identify	Status
OOB	SYNTAX LEXICON 	STRUCTURED DATA lat/long	EXCHANGE country / alliance, type/class	Message Sets readiness	Activity targeting, reconstituting
Infrastructure	Comm, power, transportation, water/sewer	spd/hdg network, grid	Machine Trust Language MTI throughput, flow rates,	CDL Contract Description Language name, part-of relationships	YAML BDA, op levels
Sociological	Culture, religion, economic, ethnic, government, history, languages	ER Model temples, historic structures	Class Diagram Table	Relational Database Object DBMS	XML DTD / Schema TADILS Intent
Geophysical	Terrain, weather, climatology, oceanography, astrometry	feature lat/long, alt/dpth	Attribute Domain Value	Attribute Instance, Value	MTF FFRN / FFN / RUDN FUD
FEDERATE					
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 - Angular
11.4.1.1 - Alternative	11.1.2 - Linear	11.4.1.2 - Evaluate	11.2.1 - Estimated	11.4.1.2.1 - Alternative	11.2.2 - Observed
11.4.1.2 - Value	11.4.1.3 - Codes	11.4.1.3 - Value	11.2.3 - Predicted	PURCHASE CODES	11.2.4 - Smoothness
SYMBOL	Friend	Neutral	Hostile		
2525C	Partner				Competitor
11.4.1.3.5 - Surface	11.4.1.3.5 - Surface	11.4.1.3.5 - Surface	11.4.1.3.5 - Surface	11.4.1.3.5 - Surface	11.4.1.3.5 - Surface
11.4.2 - Platform / Point / Feature Type	11.4.2 - Platform / Point / Feature Type	11.4.2 - Platform / Point / Feature Type	11.4.2 - Platform / Point / Feature Type	11.4.2 - Platform / Point / Feature Type	11.4.2 - Platform / Point / Feature Type
11.4.3 - Specific Type	11.4.3 - Specific Type	11.4.3 - Specific Type	11.4.3 - Specific Type	11.4.3 - Specific Type	11.4.3 - Specific Type
11.4.4 - Type Modifier	11.4.4 - Type Modifier	11.4.4 - Type Modifier	11.4.4 - Type Modifier	11.4.4 - Type Modifier	11.4.4 - Type Modifier
11.4.5 - Unit	11.4.5 - Unit	11.4.5 - Unit	11.4.5 - Unit	11.4.5 - Unit	11.4.5 - Unit

Figure 14: The Next Web based on Syntax Lexicon Library Rosetta Stone adapted swords to plowshare from [NATO](#)

The Next Web TNW: a common syntax library of various Message Text Formats MTF to enable universal signaling / telemetry among a system of systems is ESSENTIAL. Decades of research at the taxpayer's expense into structured messaging / structured data exchange where the location, type of data identified by table number will help accelerate the process of organizing syntax into categories from disparate systems into data set reference repositories. Many semantic, syntax tags will be reusable. The rules, roles and logic developed by years of research involving of thousands of subject matter experts solving real world issues is the value to be extracted from the 300+ message sets. NATO stays synchronized across many languages and cultures so why reinvent the wheel?

MESSAGE CATALOG: The USMTF message library has over 300 messages to choose from to facilitate information exchange requirements. MTFs presenting data in a logical, well specified and unambiguous layout. MTFs are transmission medium neutral. The content of the Message Catalogue has been developed by military operators over the last 20 years. Messages are regularly maintained to keep pace with the latest tactics and doctrine.

Military brevity codes and stock exchange codes are similar. security Identifier used in financial markets are: SYMBOL, CUSIP, ISIN, SEDOL, RIC Code, Security Identifiers

LINK: <http://sawconcepts.com/index/id44.html> Syntax Lexicon Library Rosetta Stone

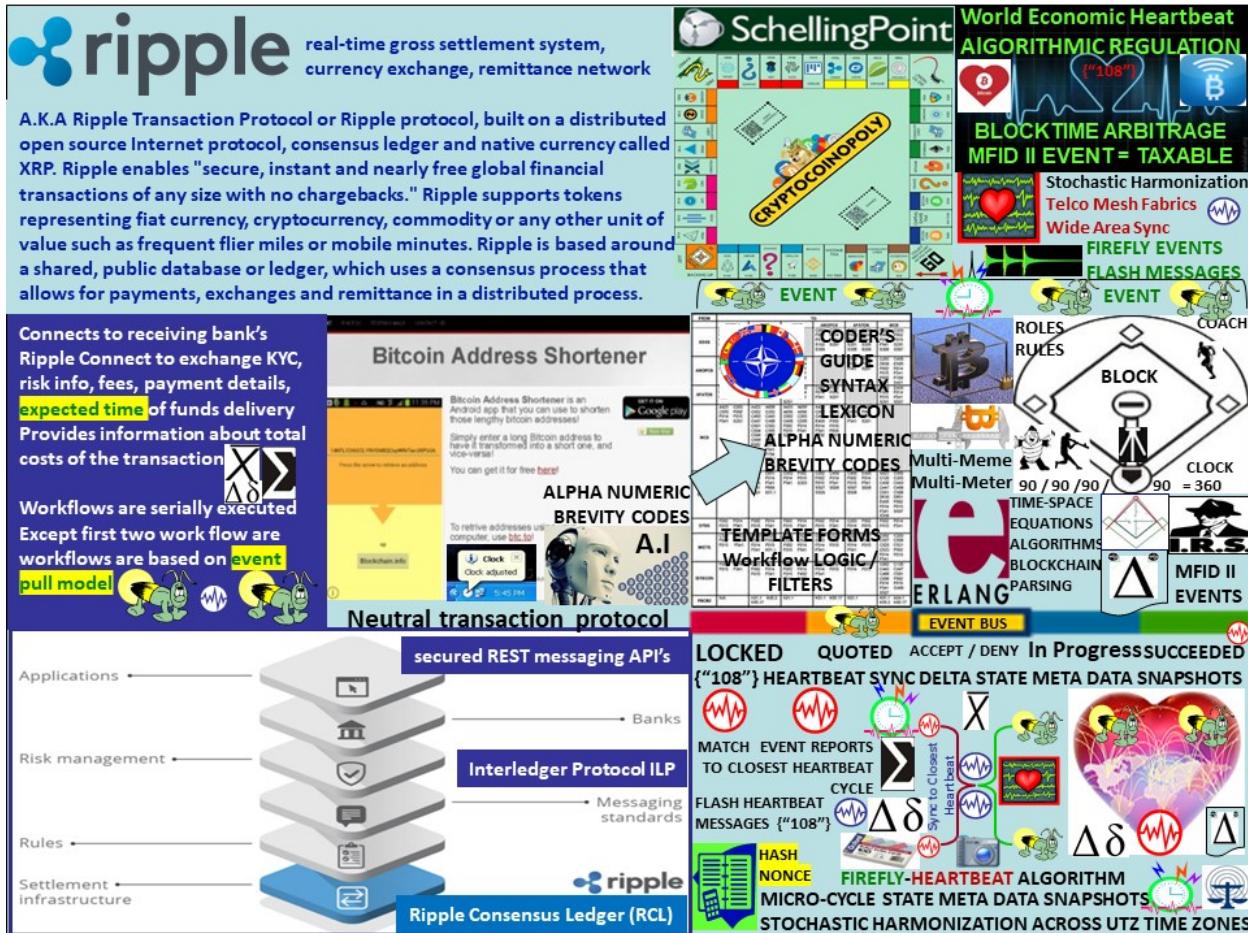


FIGURE 16: RIPPLE RTP / Heart Beacon Cycle Time – Space Meter synergy

Quote from @DCCCertified @InsideBitcoins "Build mental models that help people wrap their heads around Bitcoin w/o having to understand it". A baseball diamond is a square, is a block. A block is awarded using age (time) or vectors (time / direction / velocity) or voting (tournament league board). A baseball tournament is played on baseball diamonds that are as physical and tangible as it gets -- in every town in America.

SEE MFID II TAX CODE RULING: Bitcoin A to B to C to N Bitcoin transactions are taxable events

US Supreme Court Ruling Alice Corp V CLS Bank: "claims ineligible for patent protection under 35 U. S. C. §101 "directed to an abstract idea" ALICE CORP v CLS BANK [LINK](http://1.usa.gov/1V91pQe)

The Heart Beacon Cycle patent application 13,573,002 is described using a baseball league tournament. A land use meme and internet survey techniques to define geo-spatial temporal areas in time – space will be helpful in determining the percentage of a coin bought or sold and who, where, when, how much, of a Bitcoin was transacted in context with I.R.S memo 1421 on Bitcoin that deems it property when purchased by a client.

Reference: Patent application # 13,573,002 Heart Beacon Cycle Time - Space Meter

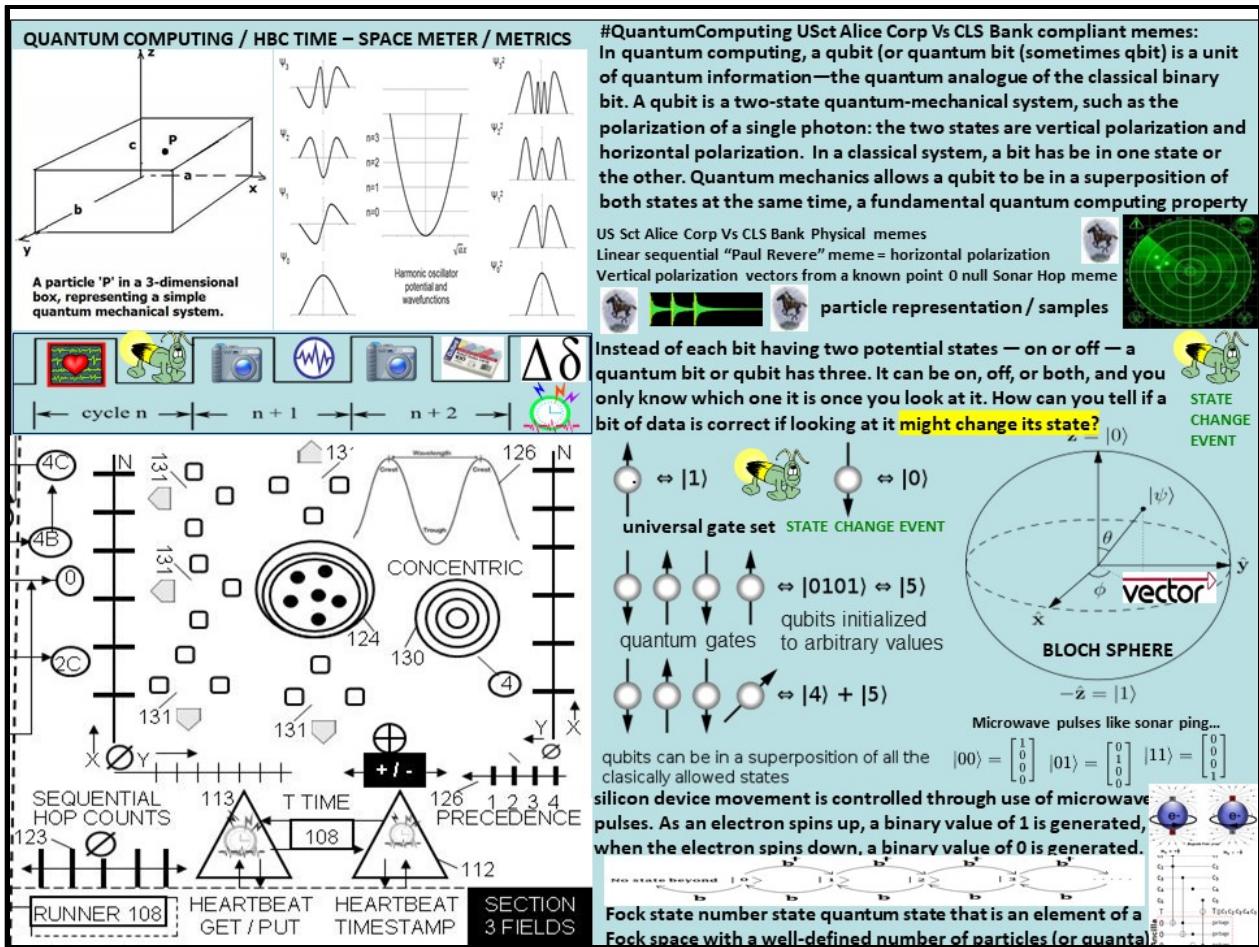


FIGURE 17: QUANTUM COMPUTING / Heart Beacon Cycle Time – Space Meter US Sct Alice V CLS Bank meme

Quantum computing studies theoretical computation systems (quantum computers) that make direct use of quantum-mechanical phenomena, such as superposition and entanglement, to perform operations on data. Quantum computers are different from digital electronic computers based on transistors. Quantum computer: a computer which makes use of the quantum states of subatomic particles to store information.

In quantum computing, a **qubit** or **quantum bit** (sometimes **qbit**) is a unit of **quantum information**—the quantum analogue of the classical binary **bit**. A qubit is a **two-state quantum-mechanical system**, such as the **polarization** of a single **photon**: here the two states are vertical polarization and horizontal polarization. In a classical system, a bit would have to be in one state or the other. However, quantum mechanics allows the qubit to be in a **superposition** of both states at the same time, a property that is fundamental to quantum computing. QUBIT: <https://en.wikipedia.org/wiki/Qubit>

The Heart Beacon Cycle Time – Space Meter USPTO 13/573,002 is a universal method and means to provide geo-spatial temporal intensity metrics in meters for example with an telecommunications mesh fabric using Euclidian geometry and Japanese paper folding Origami techniques to represent unusual geo-spatial sampling areas. The firefly inspired heartbeat synchronization algorithm provides asynchronous method to report observed events that are reported via a universal heartbeat synchronous time cycle event bus that is both product and protocol neutral.