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

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

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

Use Case: establish an Ecologically sustainable Economic Heartbeat [LINK](#)

Quantum Computing metaphor meme, metrics, meters (Supreme Court compliant) [LINK](#)

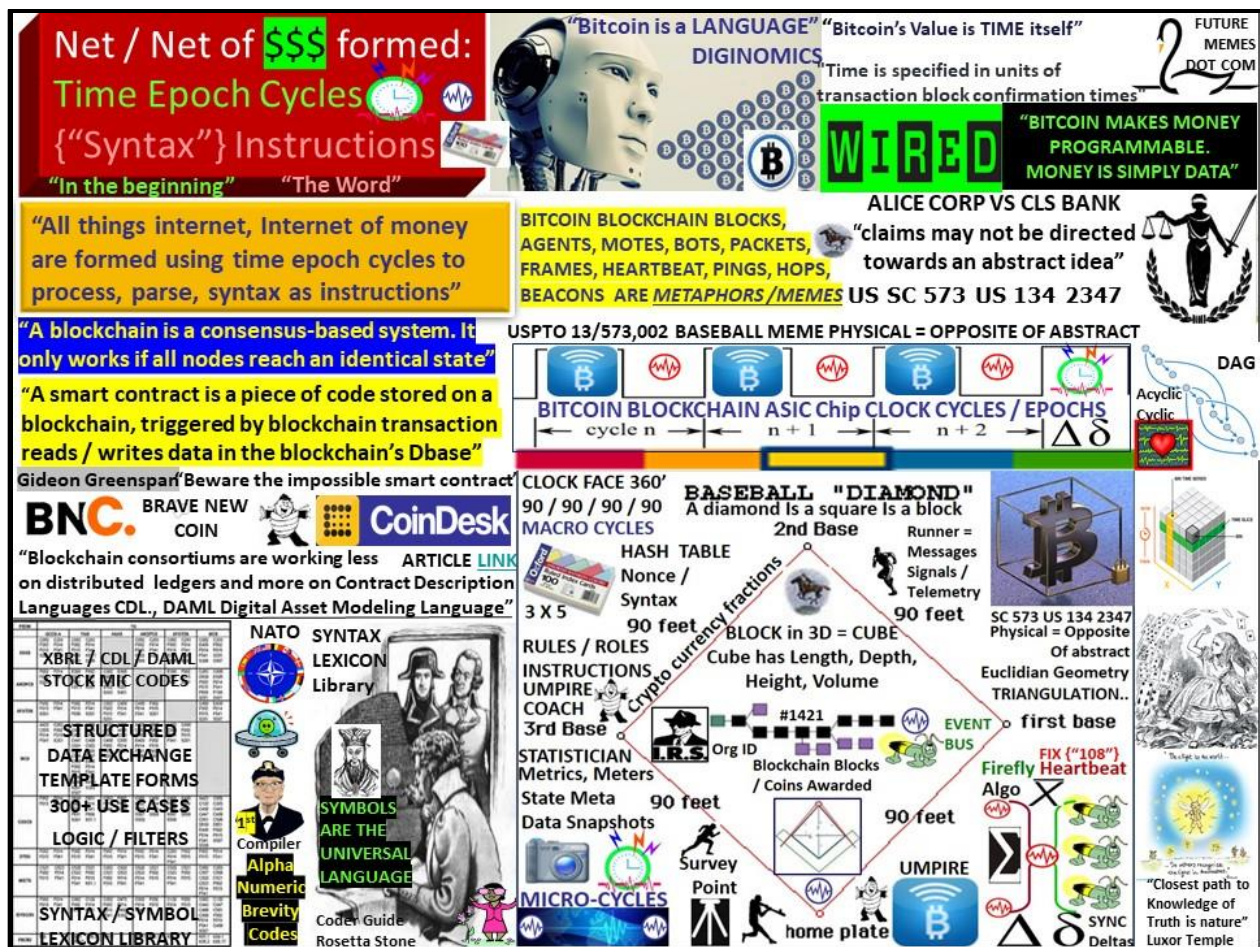


FIGURE 3: Supreme Court Alice Corp Vs CLS Bank “claims may not direct towards Abstract ideas” [LINK](#)

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 4: FEDCOIN / WORLD COIN 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 6: 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)



FIGURE 8: 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 10: 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](#)

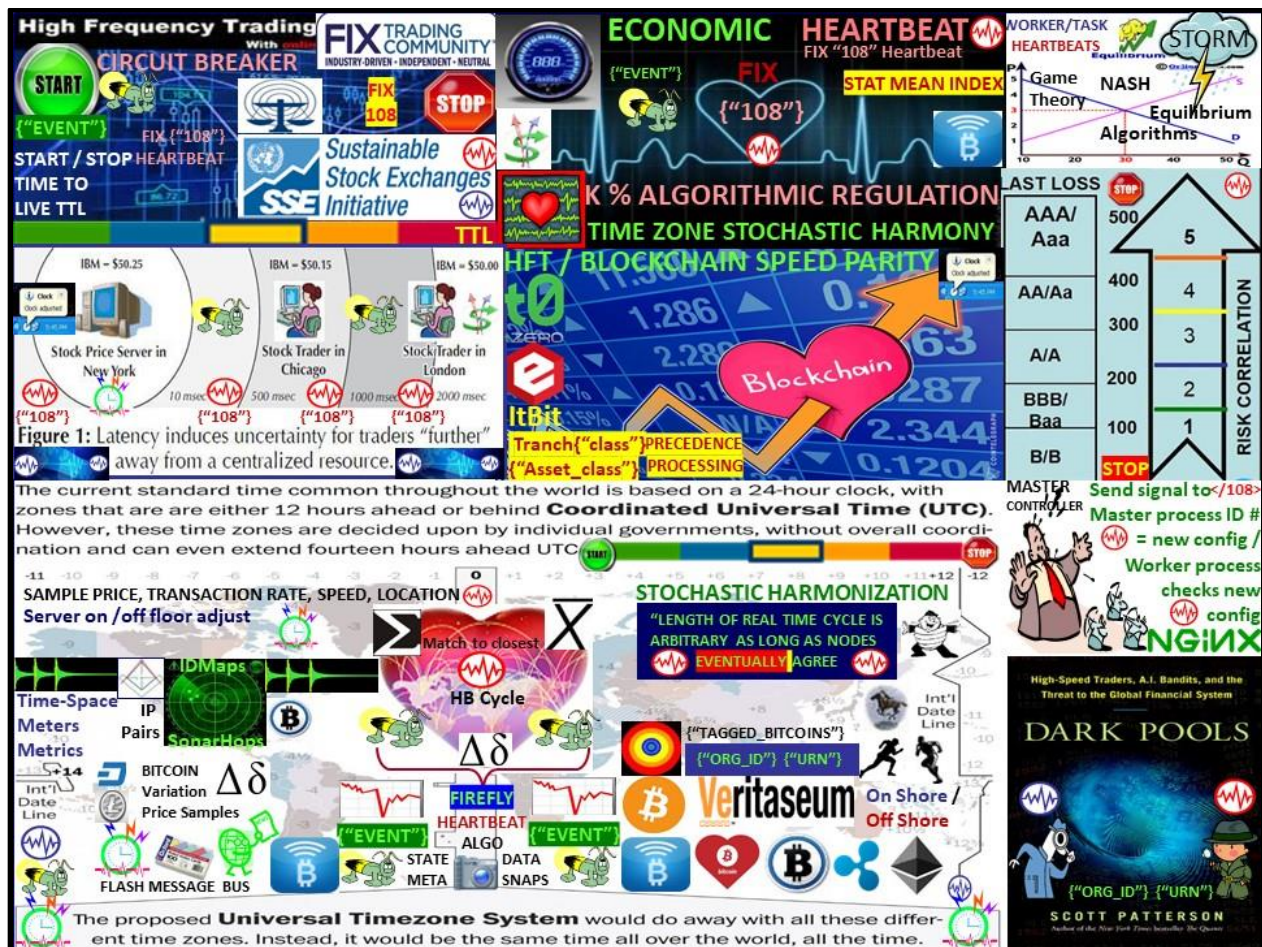


FIGURE 11: HFT CIRCUIT BREAKER / Blockchain transaction speed algorithmic regulation [LINK](#)

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

Use the "Great John Nash's" Equilibrium algorithms for trade parity among stock market "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

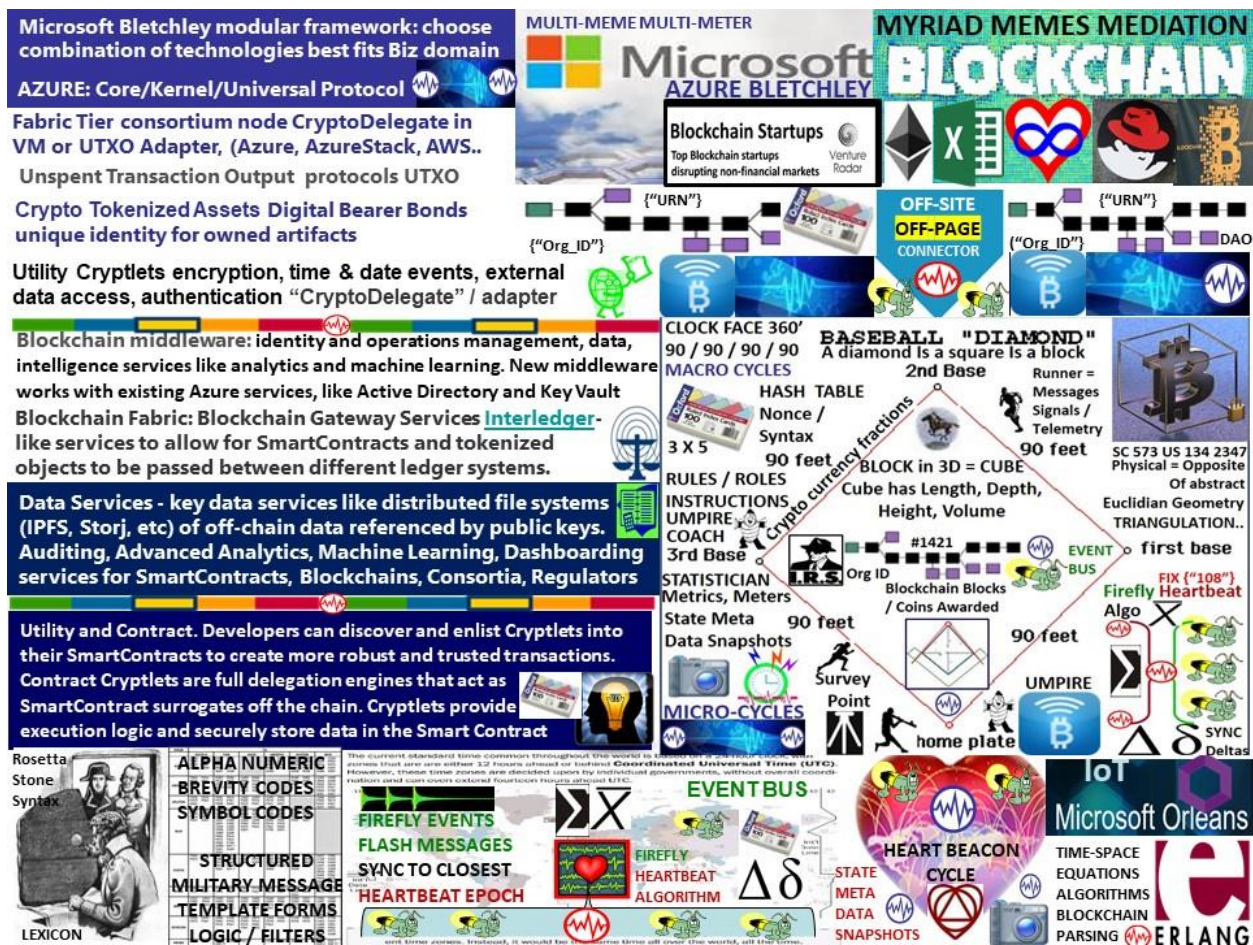


FIG 12: MICROSOFT BLETCHLEY BLOCKCHAIN AS A SERVICE BAAS / HEART BEACON CYCLE [LINK](#)

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 13: Hashgraph” / Heart Beacon Cycle Time – Space Meter Synergy

Web [Page](http://www.sawconcepts.com/index/id91.html): <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-ofwork, 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 over the Internet. Instead, Bob calculates what vote Alice would have sent, based on his knowledge of what Alice knows. This yields fair Byzantine agreement on a total order for all transactions, with very little communication overhead beyond 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 14: 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](#)

