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

June 2004 - Simple Always Wins Concepts LLC incorporated – a woman owned micro-business. Owner's father is Blackfoot Indian. Web Page LINK http://sawconcepts.com/index

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

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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

WEB: LINK http://sawconcepts.com/index LINKEDIN: http://linkedin.com/in/sawconcepts LINK

Slideshare / LINK http://slideshare.net/StevenMcGee2 /

GITHUB: LINK: https://github.com/Beacon-Heart/Heart_Beacon

SCRIBD Documents, Slides https://scribd.com/user/11781571/Steven-McGee LINK

TWITTER: http://twitter.com/Heart_Beacon   LINK   OneDrive Document Folder

WordPress Page: LINK / PATREON LINK: https://patreon.com/beacon_heart

Climate tipping point, economic collapse… What is the plan? The Heart Beacon Cycle Time — Space Meter USPTO 13/573,002 is built standing on the shoulders of giants. Milton Friedman and his K% rule, Admiral "Amazing Grace" Hopper and the world's first computer compiler and the alpha-numeric brevity codes ideal for today's Internet of Things, Artificial Intelligence A.I.

"A day will come when there will be no battlefields, but markets opening to commerce and minds opening to ideas". Victor Hugo
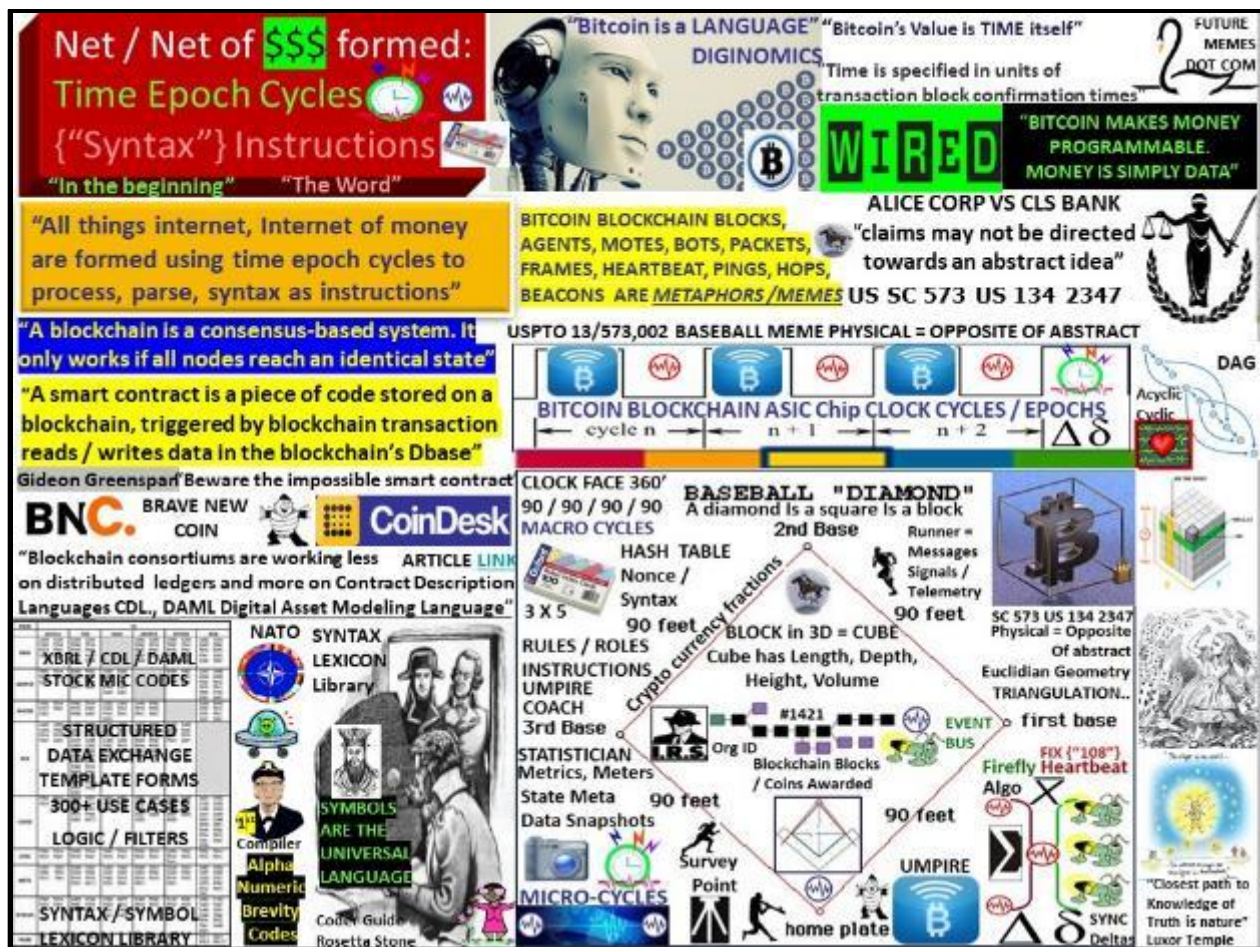
FIGURE 1: Supreme Court Alice Corp Vs CLS Bank "claims may not direct towards Abstract ideas" LINK

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

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. USPTO applications leading up to 13/573,002 establish these facts. 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 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. Although the Alice opinion did not mention software as such, the case was widely considered as a decision on software patents or patents on software for business methods. SOURCE 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. SOURCE LINK: http://www.sawconcepts.com/index/id9.html

Building blocks:

- Firefly-Heartbeat Time – Space Sync neural network emulation 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

- ECONOMIST MILTON FRIEDMAN"S K% RULE

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

FIGURE 4: FIREFLY INSPIRED HEARTBEAT SYNCHRONIZATION / World Economic Heartbeat

Firefly - Heartbeat Algorithm:

1) Consensus 2) Neural Network emulation

3) Stochastic Harmonization 4) Universal Event / Alert Bus

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.

FIGURE 5: TERRA TRADE REFERENCE CURRENCY TRC / BITCOIN MICRO PAYMENTS LINK

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. Few know that Edison and Henry Ford recommended a national currency based on a commodity index. Edison thought that crops held their values best over time. Economist Bernard Lietaer's TERRA Trade Reference Currency is ideal given the rise of Bitcoin and the Blockchain's micro-payment capability in concert with the TERRA TRC's demurrage parking, shipping and handling fees. 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, based on a similar proposal from the 1930s. 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 key internationally traded

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. The computerized function of the bitcoin system boasts intrinsic value which will continue to grow as more users join the fold and the network becomes more valuable for every participant. No money system we have seen to date can claim it is chronologically regulated. The universal construct of time is the backing of the bitcoin digital economy. Satoshi Nakomoto's Bitcoin key building block is a time stamp server.

Satoshi Nakamoto: "#Bitcoin is intended to be paired with a 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. Thomas Edison and Henry Ford proposed a currency based on a commodity basket index circa 1921. Now there is Bitcoin programmable money and the internet's heartbeat, heartbeat messages. All things internet are formed by code formed by time cycles used / not used to process, parse {"syntax"}. Therefore, time cycles and a Rosetta Stone syntax lexicon library are the two main building blocks for Governance 2.0. LINK: https://supermoney.com/2014/06/thomas-edisons-view-money/

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

Figure 8: Federate and Graduate LINK 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.
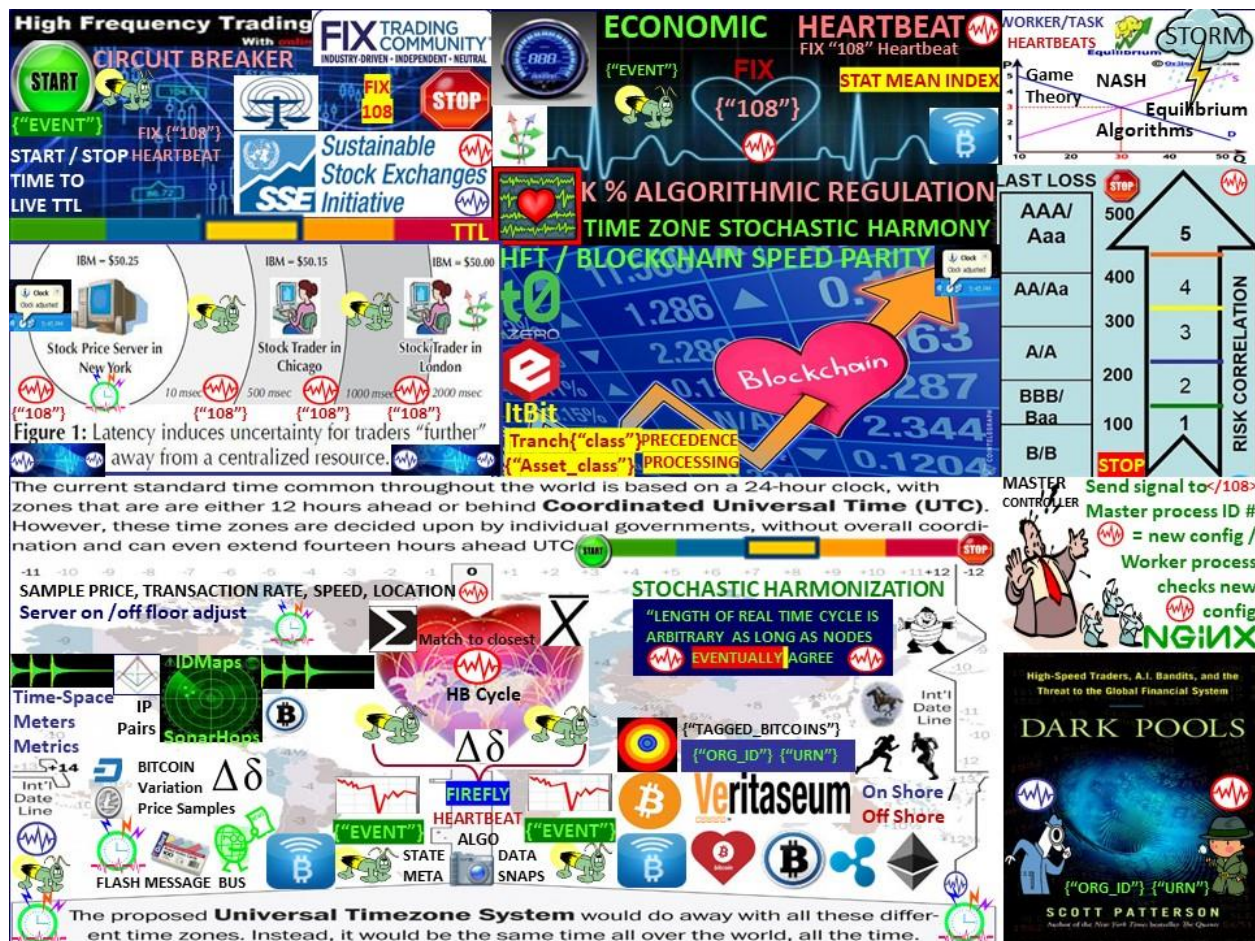
FIGURE 10: HFT CIRCUIT BREAKER / Blockchain transaction speed algorithmic regulation LINK

A use case of the firefly inspired heartbeat synchronization algorithm in stock, currency , commodity exchanges is 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.

Traditional supercomputer HFT Trading velocity far exceeds Bitcoin's current transaction rates estimated to be between 3 - 7 transactions per second and far exceed non-HFT trading capacity. A method is needed to establish temporal trade parity and account for on floor / off floor trading disparity. A novel method using a novel stochastic harmonization algorithm based on the mating behavior of certain species of fireflies that strive to sync during mating activity matched to the closest OPTEMPO heartbeat cycle addresses this need.

Keywords: High Frequency Trade #HFT - #Blockchain transaction speed parity / 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
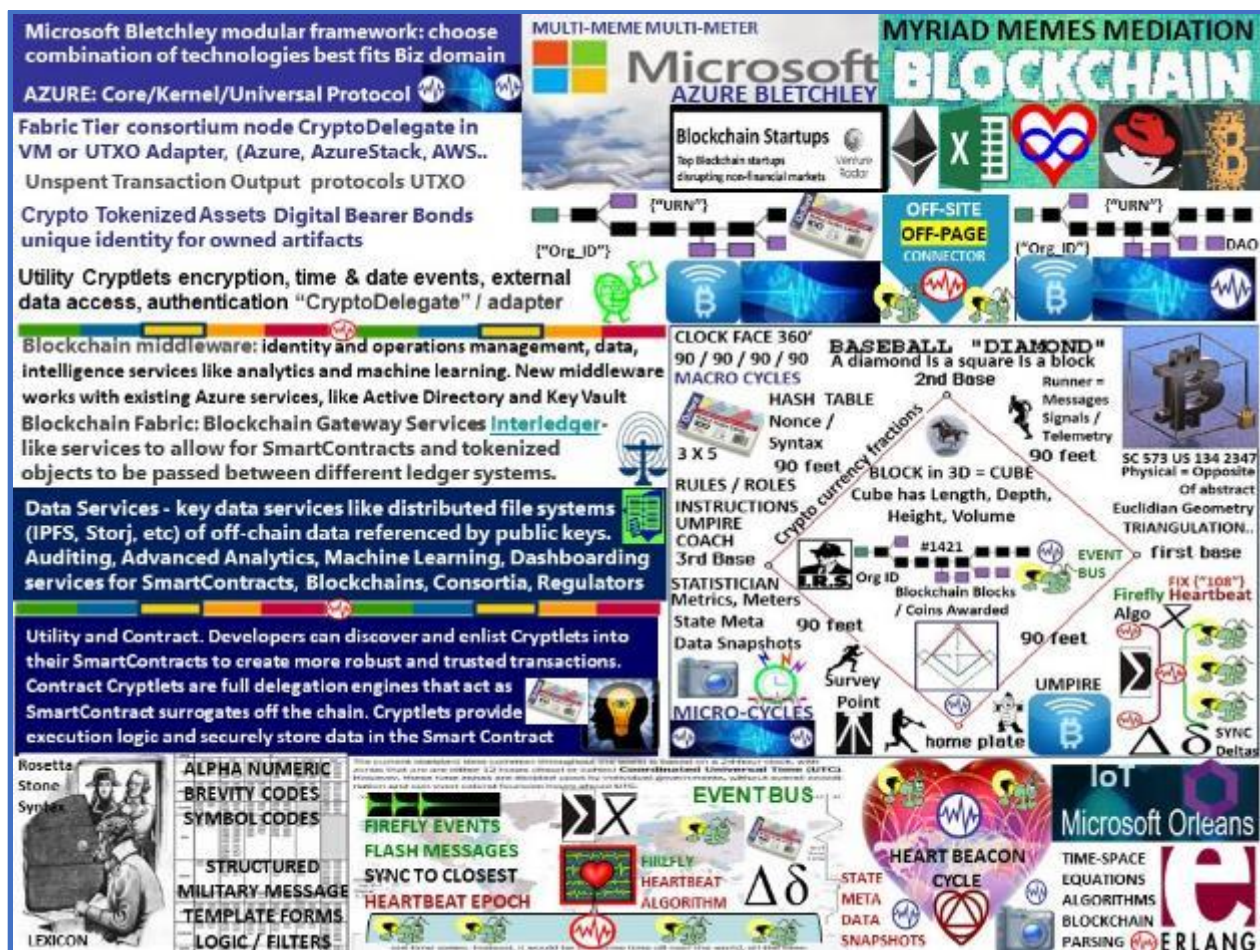
FIG 11: MICROSOFT BLETCHLEY BLOCKCHAIN AS A SERVICE BAAS / HEART BEACON CYCLE LINK

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

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 Swirlds 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 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)

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 <u>vertices</u> and <u>edges</u>, 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 <u>topological ordering</u>, 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*

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 <u>LINK</u>

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 15: Veritaseum / Heart Beacon Cycle Time – Space Meter synergy

New York: Brooklyn-based technology outfit, Veritaseum, has enabled a hedge fund to be the first to trade actual traditional capital markets value peer-to-peer through the blockchain, completely circumventing Wall Street banks and brokers and the fees that they entail. According to Veritaseum founder, Reggie Middleton, "We were the first to create a fully functional smart contract application for capital markets. We were the first to clear such a product through the blockchain, and we're confident that we were the first to identify distinct intellectual property surrounding this space - over two years ago. We are now quite proud to be the first to announce actual trading of value using blockchain smart contracts by hedge funds, one of the most profitable clients of Wall Street banks, sans the Wall Street banks!"

The Financial Nostradamus's patent pending Veritaseum involves "tagged Bitcoins" Everyone and their third cousin has a Bitcoin offering, sidechain, Altcoin, Dogecoin variation on the Bitcoin theme now. Only one involves "tagged Bitcoins" and is a patent application. Veritaseum's Ultracoin helps prepare Smart Contracts. The Heart Beacon Cycle provides a cyclic, iterative procedure that improves consistency and reliable of novel geo-spatial temporal metrics and meters among a systems of systems that the Ultracoin thick client draws state meta data displayed to chart views -- appliqué overlays in Heart Beacon Cycle speak. A smart contract may involve purchase of a widget from a retail store where the widget must be delivered to person or organization B on TIME X and in Y condition (state). LINK