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June 2004 – March 2018 Simple Always Wins Concepts LLC SAW Concepts LLC (deactivated)

Defense Contractor for Validity Systems, SAIC International, MITRE, BAE Systems 1996 – 2002

Masters of Science Information Systems Western International University 3.85 GPA 93 - 96

United States Army Signal Corps Officer 11 years 82 – 93 / ROTC Full Scholarship Recipient

June 2003 – Present: Patent applicant USPTO 13/573,002: The Heart Beacon Cycle Time – Space Meter Adaptive Procedural Template (checklist of tools, processes, platforms, protocols… useful to form Distributed Autonomous Groups DAGS synchronized in time – space

Presented International Conference Complex Systems ICCS New England chapter 2006

Ecologically sustainable Economic Heartbeat for the Programmable Economy - LINK

Use Case: distributed systems engineering signaling, telemetry OPORD Annex X for the programmable economy & syntax lexicon, engineering system of systems framework

Universal event flash heartbeat message bus supporting geo-spatial, temporal, semantic – syntactic distributed systems synchronization LINK https://bit.ly/2s6Fnav

Alice Corp. **v**. **CLS Bank** International, 573 U.S. 208 (2014) compliant ruling "claims may not direct towards abstract ideas". Physical (baseball meme) is the opposite of abstract

Digital Nations need an Eco sustainable Economic Heartbeat with incentives systemically encoded into the programmable economy applying consistent time - space metrics, meters and syntax lexicon library. The German military made this suggestion circa 2003
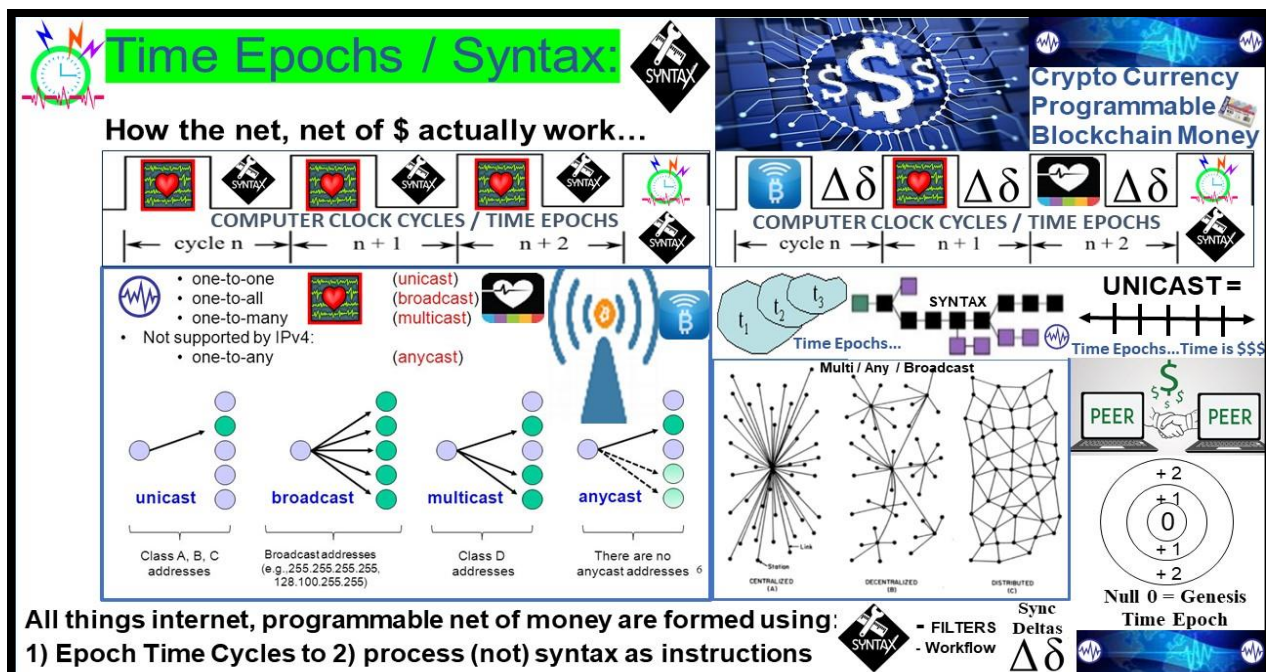

Figure 1: Eco sustainable Economic Heartbeat / Adaptive Procedural Template (checklist)

The Heart Beacon Cycle Time — Space Meter USPTO 13/573,002 Adaptive Procedural Template: Use Case: Eco Economic Epoch Heartbeats for the programmable economy / money.

PROJECT: Code Eco sustainable incentives into the world's programmable economic system of systems engineering framework reusing / leveraging NATO systems of systems engineering

best practice. Reuse OPSCODE brevity codes mapped to message symbol sets essential to Artificial Intelligence / human interaction (i.e., man — machine interface).
Reuse of DARPA - NATO's structured data exchange that maps data element OPSCODES to symbol sets is key to Artificial Intelligence #AI man - machine interface, consensus, consistency among myriad #blockchain programmable #money memes, metaphors...

Given space travel risks, navigation based on consciousness / telepathy (use of symbols not words), a consistent syntax lexicon to communicate with #UFO EBO's that are likely Artificial Intelligence AI powered drones is reuse of DARPA - NATO's structured data exchange that maps data element OPSCODES to symbols with over 300 message sets

FIGURE 2: The Great and Greater Reset (s)… standing on the shoulders of giants

What is your solution framework based on EXISTING systems, code, best practice? Adaptive Procedural Template (checklist): Use case: GDP Index based Economy: Eco Economic Epochs Time-Space Meter Eco incentives, consensus, interoperability for the programmable economy, Earth Intelligence Network EIN / System of systems engineering framework from NATO Battlefield Digitization based on a German military idea to reuse Battlefield Digitization for OOTW Operations Other Than War circa 1993 / USPTO 13/573,002 / Github: http://github.com/Beacon-Heart

Figure 3: How the programmable internet and internet of money work

The Internet, net of programmable money is formed using 1) Time Cycle epochs used to parse (not) syntax as instructions for workflow and (routing) filters.

This is key to cross meme interoperability and consensus among myriad cryptocurrency, blockchain memes and artificial intelligence systems.

FUNDAMENTAL TRUTH: All things internet, net of money blockchains are formed by unicast, multicast, anycast. Programmable money's improvements are in cryptography.

All things #internet, net of #money #blockchain #cryptocurrencies rely on unicast, multicast—like DoD / NATO's #DAO Distributed Autonomous Organization system of systems—a term coined by the RAND Corporation circa 2000. Programmable money's improvements are in cryptography. The net works the same way for all & everything.

INTERNET BUILDING BLOCKS: Time epochs / syntax are the two main internet, internet of money building blocks in coding the Artificial Intelligence A.I. powered economic system of systems / Earth Intelligence Network EIN / Web 3.0 and the programmable economy in terms of temporal consistency, interoperability, and consensus.

Figure 4: NIST's Quantum Random Number / Time Beacons for programmable $$

Programmable #money / #economy… gold, #Bitcoin as "digital gold" — fool's #gold? How will programmable money for the programmable economy be coded? A one world #currency needs a stochastically harmonized, synchronized Universal Time Zone UTZ / event bus

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

Fig 5: NIST Quantum Random Number Beacon / USPTO 13/573,002

The programmable #economy will be anchored by quantum computing NIST's Quantum Random Number Beacon combined with the Heart Beacon Cycle Time – Space Meter Adaptive Procedural Template checklist

FUNDAMENTAL TRUTH: All things internet, net of money blockchains are formed by unicast, multicast, anycast. Programmable money's improvements are in cryptography.

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

Figure 6: NIST Quantum Random # Beacon / USPTO 13/573,002 Heart Beacon Time-Space meter

Quantum Random Number Generator: The NIST method generates digital bits (1s and 0s) with photons, or particles of light, using data generated in an improved version of a landmark 2015 NIST physics experiment. That experiment showed conclusively that what Einstein described as "spooky action at a distance" is real. Researchers process the spooky output to certify and quantify the randomness available in the data and generate a string of more random bits. USPTO 13/573,002 describes a universal firefly inspired heartbeat message event bus that captures, reports events (firefly meme)

USPTO 13/573,002 holds that time filtered and spatially metered reports are comprised of state meta-data snapshot / heartbeat message / heartbeat (K00.99) sync delta messages where state meta data is harvested during micro-cycles then posted / displayed during longer macro-cycle epoch time cycles. US SCOTUS Alice ruling is complied with by novel description of water drop in pond / Paul Revere memes referential to several internet TCP/IP treatises related to hop by hop counts, geo spatial-temporal conventions comprising universal metrics and meters for all things internet
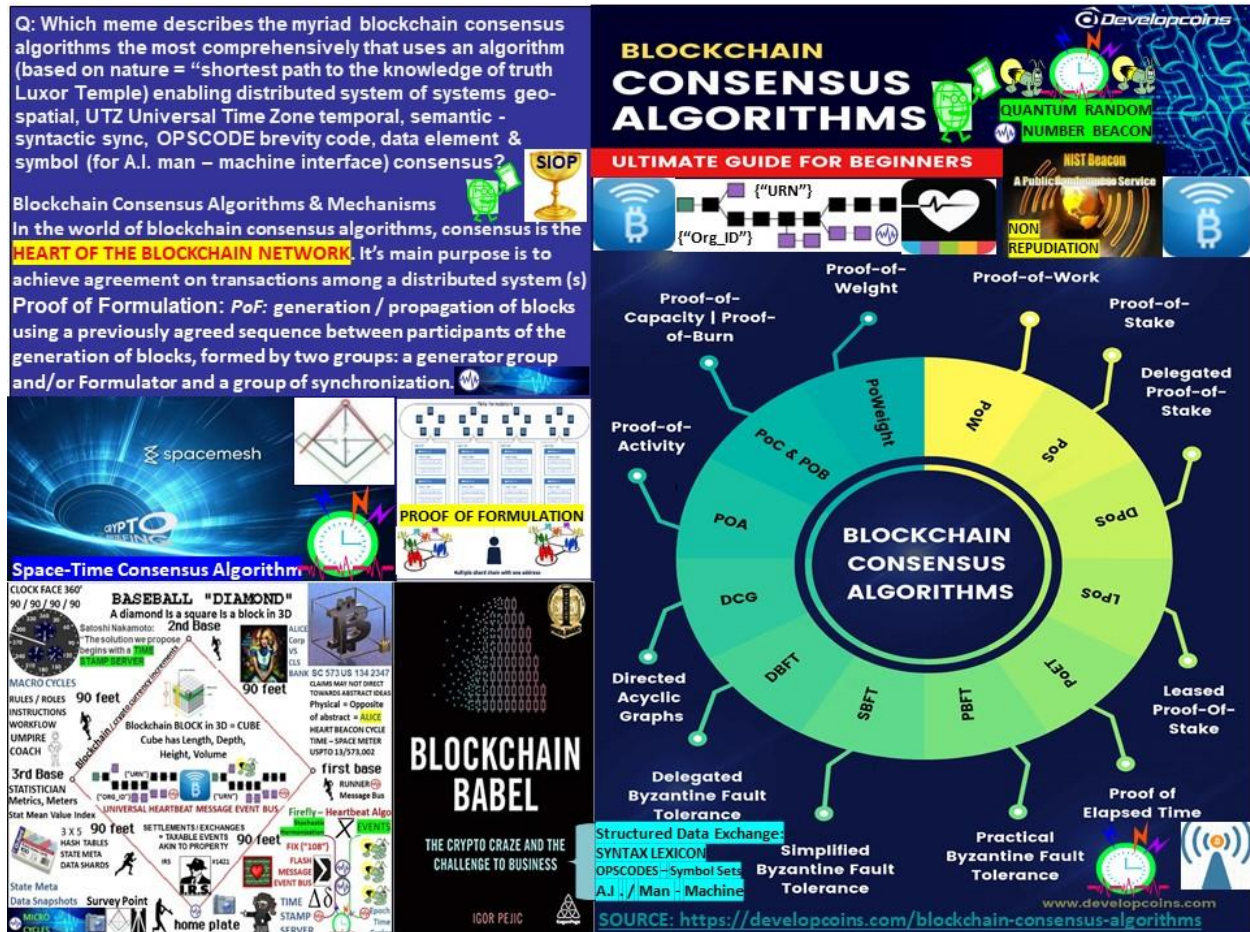
FIG 7: Which meme / metaphor addresses the myriad blockchain algorithm memes / metaphors?

Source: https://www.developcoins.com/blockchain-consensus-algorithms

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 parsed as instructions.

Given crypto #blockchain myriad memes, metaphors "hashgraph" "Ether gas", we are creating new data elements in new syntax lexicons. DoD / NATO's structured data exchange (mapped to symbol sets for A.I - man - machine interface) took decades to achieve consensus -why reinvent the wheel? http://en.wikipedia.org/wiki/SIMPLE_(military_communications_protocol)
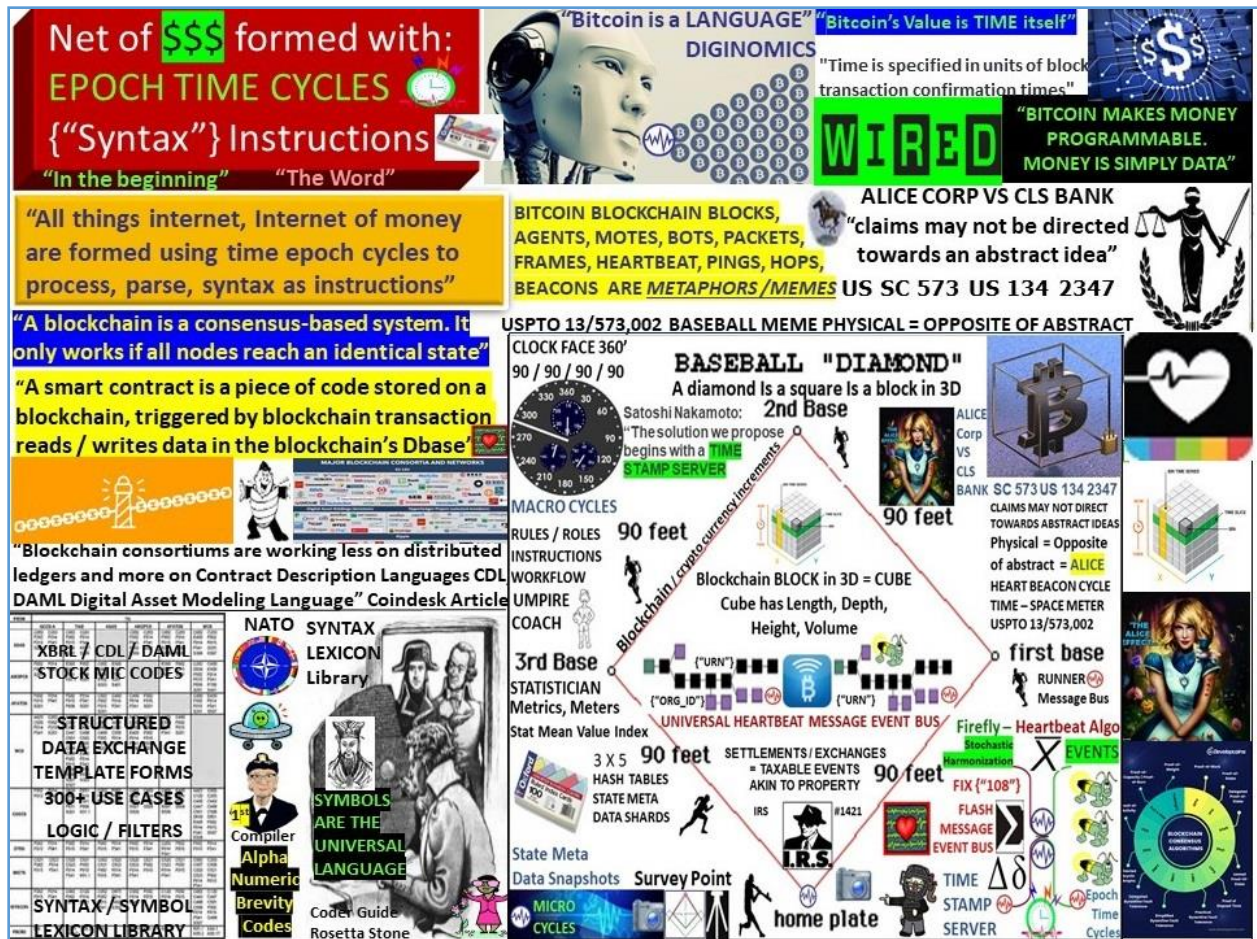
FIGURE 8: Supreme Court Alice Corp Vs CLS Bank "claims may not direct towards Abstract ideas" LINK

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. 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

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, < CO_2 carbon emission in smart contract Service Level Agreements

FIGURE 9: 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**

FIGURE 10: TERRA Trade Reference Currency / Crypto Micropayments – Demurrage fees

Nobel Prize winning Economist Milton Friedman's K% rule is what I call an "economic heartbeat" K-Percent Rule. DEFINITION of 'K-Percent Rule'. The K-Percent Rule was a proposal by economist Milton Friedman that the central bank should increase the money supply by a constant percentage every year. The K-Percent Rule proposes to set the money supply growth at a rate equal to the growth of real GDP each year. K-Percent Rule—Investopedia http://www.investopedia.com/terms/k/k-percent-rule.asp

#Economic #RESET is a mathematical certainty. Do we #RESET the global system of systems as is or do we re-engineer our world using NATO / DARPA / DOD system of systems engineering framework standing on the shoulders of giants to convert swords to plowshares? #blockchain #econometrics

IF climate change causes a drop in crop commodity by 20–25 % while population grows, THEN this condition will become a matter of national security. THEN this will require revisiting Belgian Economist Bernard Lietaer's TRC Trade Reference Currency ELSE face chaos by not leveraging proven system of systems & tactics

FIGURE 11: ECONOMIST MILTON FRIEDMAN's K % RULE / Algorithmic Economic Regulation

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"**

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

Thomas Edison's Monetary Option: LINK:
https://www.supermoney.com/2014/06/thomas-edisons-view-money/

Economist Milton Friedman predicted the rise of a computer capable of automatically adjusting the inflation rate of money. 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**
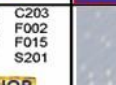
Figure 12: Syntax Lexicon Library Rosetta Stone adapted swords to plowshare from NATO
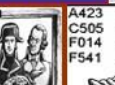
Common syntax library of various Message Text Formats MTF to enable universal signaling / telemetry among a system of systems is ESSENTIAL. Decades of research at the taxpayer's expense into structured messaging / structured data exchange where the location, type of data identified by table number will 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 Identify Syntax Lexicon Library

Fig 13: Heart Beacon Cycle Time — Space Meter USPTO 13/573,002 is an Adaptive Procedural Template: Use Case: Eco Economic Epoch Heartbeats for the programmable economy.

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 which is a clear and present opportunity to realize the purpose of Economist Milton Friedman's K% rule / Heart Beacon Cycle Ecologically Sustainable Economic Epochs for trade equity, ecologic sustainability, economic stability.

Figure 14: UTZ TIME ZONE STOCHASTIC HARMONIZATION / SYNCHRONIZATION

Universal Time Zone (UTZ) Proposed Clock: At the United Nations on May 20, 2003, President, George W. Bush, announced a proposal to unify all the world's time zones into a single Universal Time Zone (UTZ)

We can synchronize ourselves, our cities, towns, cyber-communities in time — space for a common purpose: shared, common, ecologically sound, equitable... econometrics.

UNIVERSAL TIME - SPACE SYNCHRONIZATION: The Heart Beacon Cycle Time - Space Meter is intended to bridge humanity from our present condition to a higher consciousness described by Extra Terrestrial Groups and organizations like the Law of Time dot org with the Noosphere concept

"One people, one Earth, one Time": "The times we are living in require higher thinking. There has never in the history of the Earth been a time like this. We are now participating in what is called the biosphere-noosphere transition: When life on Earth evolves into an awakened planetary mind (noosphere)". See The Law of Time . Org

Figure 15: FEDCOIN / WORLD COIN

One world currency for the one world government will require financial events stochastic-ally synchronized, harmonized across the world's time zones and will need to represent a value index of the world's GDP Gross Domestic Product

Course of Action: Use Thomas Edison's commodity backed index recommendation 1921, Milton Friedman's K % rule, Economist Bernard Lietaer's TERRA TRC Trade Reference Currency concepts in concert with the firefly-heartbeat algorithm developed by the University of Bologna, University of Hungary = ECONOMIC HEARTBEAT FEDCOIN / WORLDCOIN

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 C02 carbon emissions. **Main building blocks: WAVES: TOKENIZES NATIONAL CURRENCIES**

TITLE: Adaptive Procedural Template: Use Case: GDP Index Economy / Eco Economic Epoch Heartbeats for the programmable economy

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

We have a clear and present opportunity to improve temporal, geo-spatial, syntactic - semantic consistency, interoperability among myriad programmable money memes among a federated, distributed system of systems supporting a distributed, equitable, Eco-sustainable, and programmable global Economic framework.

We can synchronize ourselves in time-space for common goals e.g., code an equitable, distributed programmable economy among trade federations (attributed to Law of Time . Org)

Use Cases: Eco #Economic Epochs Time-Space Meter #ecology Eco incentives, consensus, interoperability, sync, stochastic UTZ harmonization for programmable money, economy

Use Case: Ecologically sustainable economic incentives coded into the programmable economy based on a tokenized economy - It's about Time - Space, syntax symbol set lexicon library supporting the Earth Intelligence Network / Noosphere. Main use case: GDP Gross Domestic Product Index based Economy / National - Global currency

THESIS: All things internet, internet of programmable money are formed using:

1. Time epochs created by oscillating quartz crystal based silicon chips
2. Syntax used / not used as programming instructions during epoch time cycles

FUNDAMENTAL TRUTH: blockchains are formed by unicast, multicast,anycast and workflow filters. Programmable money's improvements are in cryptography. Internet 3.0 and the new web will be based on the original structure described by Stanford University. There are no packets, frames, blocks, Satoshi's traversing the net, stored in a blockchain cube.

INTERNET BUILDING BLOCKS: Time epochs / syntax are the two main internet, internet of money building blocks in coding the Artificial Intelligence A.I. powered economic system of systems / Earth Intelligence Network EIN / Web 3.0 and the programmable economy in terms of temporal consistency, interoperability, and consensus.

A timely solution for the "Great RESET" of 2021: Given: "Great #Economic RESET" of 2021 looming, consider a tangible, commodity backed currency unit of value, trade

where closer = cheaper given less fuel is consumed: GDP Index Economy powered by #Ericsson #Erlang time algorithms / time equations / NIST QRNB Quantum Random Number Beacon

Nobel Prize winning economist Milton Friedman's K% rule is a GDP Gross Domestic Product economic heartbeat, a GDP pulse. Add a crypto coin index to commodity index and QRNB for non repudiation at any location / time in the future = basis for a one world economic system of systems unit of value
WorldCoin https://twitter.com/i/status/1315621638579388418

SUMMARY: GDP INDEX ECONOMY: Thomas Edison and Henry Ford proposed a currency based on a basket of crop commodities because Edison felt that crops held their value over time - enter climate change reality and the merits of this view are self evident. Later in the 1990's, Belgian Economist Bernard Lietaer proposed a commodity based TRC Trade Reference Currency based on demurrage charges to support logistics of goods moved from supplier to consumer called the TERRA TRC. Prior to his passing, Nobel Prize winning economist Milton Friedman described an "economic heartbeat" in his K% rule where the Treasury increases the money supply increases and decreases pegged to the GDP index. Nations / the world's economy would be managed as a composite value index similar to for example, Vanguard's index funds, commodity index funds. A snapshot or sync delta value taken at a predetermined time interval (micro-cycle to macro cycle) to determine the statistical mean value of the goods, commodities that comprise a GDP index is performed and used as the value of the organization's / nation's / world's unit of value as the basis for currency exchange. This process reuses DARPA / NATO's Battlefield Digitization, Net Enabled Operations NEO procedures that have supported the Pentagon's / NATO's digital dashboards since the 1990's.

PROJECT BEACON: Reuse NATO's system of systems syntax lexicon OPSCODE brevity code structured data exchange, heartbeat micro to macro cycle Universal Time Zone UTZ sync to support an EIN Earth Intelligence Network neural net emulation. We have a clear and present opportunity and responsibility to improve temporal, geo-spatial, syntactic - semantic consistency, interoperability among myriad programmable money memes among a federated, distributed system of systems. Beacon Communities supported by an open source Earth Intelligence Network EIN powered by a quantum random number beacon blockchain - it's about time (space, syntax lexicon, econometrics..)

Code Eco sustainable incentives into the programmable economic system of systems engineering framework reusing / leveraging NATO systems of systems engineering best practice. Reuse OPSCODE brevity codes mapped to message symbol sets essential to Artificial Intelligence / human interaction (i.e., man — machine interface). The Heart

Beacon Cycle Time - Space Meter USPTO 13/573,002 is an Adaptive Procedural Template: Use Case: Eco Economic Epoch Heartbeats for the programmable economy.

USE CASE: Code Eco sustainable incentives into programmable economic framework reusing / leveraging NATO systems of systems engineering best practice. Form federations of Distributed, Autonomous Organizations DAO communities, states, sovereign nations using an adaptive procedural template checklist promoting synchronization among geo-spatially and temporally dispersed groups using a common syntax – symbol set lexicon. Federated groups activities are synchronized geo-spatially across time - space to achieve synergy, synchronicity of events orchestrated from micro to macro cycles from grassroots to capitals.

1. Reuse OPSCODE brevity codes mapped to message symbol sets enabling Artificial Intelligence / human interaction (i.e., man — machine interface).

2. Apply lessons learned (bandwidth discipline, interoperability, OPTEMPO sync cycles... intrinsic to NATO SOP swords to plowshares following German military proposal use cases circa 2003.

SYSTEM OF SYSTEMS ENGINEERING: NATO has invested 30 years of mapping OPSCODE brevity codes to symbology / symbols / symbol sets contained in 300 plus message set / use cases as part of Battlefield digitization, Net Centric Warfare NET Enabled Operations NEO NETOPS. Blockchain, crypto currency developers are recreating, reinventing this decades old, tedious, time intensive, labor intensive, expensive structured data exchange... wheel. It may be stated that this project is a swords to plowshares initiative

PATENT APPLICATION USPTO 13/573,002 The Heart Beacon Cycle Time - Space Meter USPTO 13/573,002 is an adaptive procedural template / checklist of ideas, methods, processes, procedures, algorithms, tools... used to organize diverse peoples speaking many different languages through the universal language of symbols into Distributed Autonomous groups organized in time - space to achieve common goals among individuals organized into federeated groups in DAO (s) Distributed Autonomous Organizations - a RAND Corporation term (DoD funded Think Tank) circa 2001. Each item in the procedural template checklist links to detailed treatise (s)

The Heart Beacon Cycle Time - Space meter is a signaling, telemetry distributed systems engineering framework improving temporal, geo-spatial, semantic - syntactic sync & consensus among DAAE Distributed Autonomous Automated Economy system of systems reusing Battlefield Digitization, Net Enabled Operations engineering swords to plowshares . Eco sustainable incentives integral to an Economic system of systems SoS engineering framework used by NATO for decades. Digital Nations need an (Eco sustainable) Economic Heartbeat & a consistent syntax lexicon library. Crypto economics

needs a universal syntax lexicon digital base Artificial Intelligence A.I., quantum blockchain heartbeat beacon to synchronize, sample tokenized commodities across a stochastically harmonized UTZ Universal Time Zone using the firefly-heartbeat algorithm

SWORDS TO PLOWSHARES: The Heart Beacon Cycle Time - Space meter is a swords to plowshares DAO Distributed Autonomous Organization project using NATO's Situational Awareness system of systems engineering framework, processes, procedures and internet building blocks to establish an Ecologically sustainable Economic Heartbeat, neural network emulation for the EIN Earth Intelligence Network and heartbeat sync pulse for a Universal Time Zone UTZ supporting a one world currency. It's syntax lexicon library of OPSCODE brevity codes used in programmable money, the programmable economy is descriptive of all things internet, internet of money down to the quantum computing, quantum blockchain level. We can synchronize ourselves, our cities, towns, cyber-communities in time — space for a common purpose: shared, common, ecologically sound, responsible econometrics.

COA Course of Action: reuse of over 300 NATO cases supported by hundreds of message sets described in spread sheet row - column format populated by thousands of brevity OPSCODES mapped to symbols essential to artificial intelligence man - machine interface. NATO bases are small cities that transact most goods, commodities with it's host nation. Why reinvent the syntax lexicon Rosetta Stone wheel? This is a system of systems tool to accelerate an EIN Earth Intelligence Net – see Project #UNRIG

DECISION POINT: Economic #RESET is a mathematical certainty. Do we RESET the global system of systems as is or will we re-engineer using NATO system of systems engineering standing on the shoulders of giants

1. CLIMATE CHANGE: IF / WHEN: Climate Change causes a drop in crop commodity food production by 20–25 % while population continues to grow, THEN it follows that this condition will become a matter of national security. It's TIME to implement an Ecologically Sustainable Economic Heartbeat ELSE face > greater chaos by not leveraging proven system of system structured data exchange methods. An ecologically sustainable economic heartbeat is needed. Why wait until crisis, DEFCON 2 stage?

2. CLIMATE CHANGE: IF climate change causes a drop in crop commodity by 20–25 % while population grows, THEN this condition will become a matter of national security. THEN this will require revisiting Belgian Economist Bernard Lietaer's TRC Trade Reference Currency ELSE face >socio economic chaos TERRA Trade Reference Currency by Economist Bernard Lietaer
LINK http://lietaer.com/2010/01/terra/

ECO INCENTIVES: Ecologically sustainable economic transactions need to be incentivized among the world's Ecological and Economic system of systems. The world's systems need to be time-space synchronized, stochastically harmonized across the one world, global UTZ Universal Time Zone via heartbeat messages using universally shared, standards based OPSCODE brevity codes drawn from a universal structured data exchange syntax lexicon with over 300 use case templates e.g., NATO's lexicon library

SPACE THE FINAL FRONTIER: Reuse of DARPA - NATO's structured data exchange that maps data element OPSCODES to symbol sets is key to Artificial Intelligence #AI man - machine interface, consensus, consistency among myriad #blockchain programmable #money memes, metaphors... Given space travel risks, navigation based on consciousness / telepathy (use of symbols not words), a consistent syntax lexicon to communicate with #UFO EBO's that are likely Artificial Intelligence AI drones is reuse of DARPA - NATO's structured data exchange that maps data element OPSCODES to symbol sets. Trade with E.T. / EBO's (will) requires a consistent supply chain lexicon

NOBLE PRIZE WINNING ECONOMIST: Milton Friedman's K% rule is an "economic heartbeat". K-Percent Rule DEFINITION: The K-Percent Rule proposal by economist Milton Friedman was the central bank should increase the money supply by a constant percentage every year. The K-Percent Rule proposes to set the money supply growth / reduction at a rate equal to the growth of real GDP each year. K-Percent Rule — Investopedia http://www.investopedia.com/terms/k/k-percent-rule.asp

INTERNET BUILDING BLOCK: HEARTBEAT ADMINISTRATIVE INTERFACE: SCOP Administrative Interface as an Internet, net of Money configuration tool. SCOP is a tool that exemplifies how the internet really works. SCOP is a web application, PHP based, that is a front-end to heartbeat. . SCOP can start/stop services, view/edit configuration files, make backups, take a server online/offline, add/remove virtual/real servers, etc.

WEB 3.0 MEMES / METAPHORES: There are no levels, layers, packets, frames, bits, ether gas, hashgraphs, bytes motes, block chain blocks, pings, packets... There are only 1) epoch time intervals, 2) syntax used as if, then, else instructions. Time epoch time cycles used / not used to parse, process syntax as instructions are the only building blocks available to scale the blockchain. Blockchain scaling usually involves a discussion of "layers" when the reality is that parsing, processing syntax (OPSCODE brevity codes, shards, hashes) is passed from the genesis Epoch Time Cycle 1 to a temporal follow on epoch time cycle often involving geo-spatial, temporal separation. See Alice ruling.

QUANTUM COMPUTING: the use of quantum-mechanical phenomena such as superposition and entanglement to perform computation. Quantum computers are believed to be able to solve certain computational problems, such as integer

factorization. in a quantum Turing machine, the difference is that the tape exists in a quantum state, as does the read-write head. This means that the symbols on the tape can be either 0 or 1 or a superposition of 0 and 1; in other words the symbols are both 0 and 1 (and all points in between) at the same time. While a normal Turing machine can only perform one calculation at a time, a quantum Turing machine can perform many calculations at once. The programmable economy will be anchored by quantum computing -for example, NIST's Quantum Random Number Beacon

1. Quantum Random Number Generator: The NIST method generates digital bits (1s and 0s) with photons, or particles of light, using data generated in an improved version of a landmark 2015 NIST physics experiment. That experiment showed conclusively that what Einstein described as "spooky action at a distance" is real. Researchers process the spooky output to certify and quantify the randomness available in the data and generate a string of more random bits.

2. The NIST Randomness Beacon Broadcasts a randomness pulse every 60 seconds Each pulse commits to a fresh 512-bit random string Each pulse is time-stamped and signed. Beacon periodically outputs a pulse containing 512 fresh random bits, time-stamped, signed and hash-chained. For example, each pulse also pre-commits to the randomness to be released in the next pulse. The latter enables users to securely combine randomness from different beacons. The Beacon protocol also specifies the interface for users to interact with the Beacon, in order to obtain information about past pulses. A randomness beacon produces timed outputs of fresh public randomness. Each output, called a pulse, includes metadata / cryptographic elements. The main goal of the NIST Random # Beacon is to serve as a baseline for deployment of many interoperable beacons NIST: https://csrc.nist.gov/CSRC/media/Presentations/The-NIST-Randomness-Beacon-2-0/images-media/SciDay18-poster-beacon-v20181022.pdf

Quantum Random Number Beacon ! " NIST BOULDER | The BIG Bell Test: In 2015, NIST was one of the first groups to carry out a complete test of Bell theorem using quantum states of light, and conclusively show the presence of this "spooky action." However, in that experiment the decisions about how to carry out the measurements were made by random numbers generated from different physical processes. https://thebigbelltest.org/team/nist-boulder/

NIST Quantum Random Number Beacon "generated from different physical processes" Relevance: USPTO 13/573,002 The Heart Beacon Cycle Time - Space Meter describes a physical, US SCOTUS ALice compliant meme. Quantum Random Number Beacon ! " NIST BOULDER | The BIG Bell Test: In 2015, NIST was one of the first groups to carry out a complete test of Bell theorem using quantum states of light, and conclusively show

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FUNDAMENTAL TRUTH: All things internet, net of money blockchains are formed by unicast, multicast, anycast. Programmable money's improvements are in cryptography.

INTERNET TREATISES: Time filtered and spatially metered reports are comprised of state meta-data snapshot / heartbeat message / sync delta messages where state meta data is harvested during micro-cycles then posted / displayed during longer macro-cycles See hop count treatise referential to internet / TCP/IP treatises

1. IEEE 802.11AG is used for hop by hop detection and control for epoch assignment and hop counts management and for hop by hop detection function to determine hop by hop count corresponding to machine readable and executable null / 0 and steps from null representing hop counts e.g., +1, +2, +3, +4 and / or -1, -2, -3, -4 Paul Revere linear, sequential metaphor indicating distance traveled in context with router / server / switch / node traversal

2. IEEE 802.11 HbH hop by hop control described, represented by USPTO 13/573,002 Paul Revere, rain drop in pond meme - metaphor metrics denoting increases / decreases in thresholds intensity, duration and hop count sums

Github: http://github.com/Beacon-Heart