



**FIGURE 1: The Great / Greater Reset (s)... standing on the shoulders of giants**

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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 Beacon for the programmable money / economy Minimum essential requirements for Trade Federations on the cryptocurrency DLT Distributed Ledger Technology blockchain described in an Adaptive Procedural Template (checklist)

Documents / Description / Sources: Github: <http://github.com/Beacon-Heart>

Eco sustainable Economic Heartbeat / Adaptive Procedural Template (checklist)

USPTO 13/573,002 Checklists (adaptive procedural template in patent application speak) are visually boring and do not capture attention so this graphic is a picture of a checklist of useful

tools, procedures, processes, algorithms, ideas that for example, a trade federation would agree to use to achieve, maintain their goals of the federation.

Many use cases, one method fits many, not one size fits all.

USPTO 13,573,002: The Heart Beacon Cycle Time - Space Meter Adaptive Procedural Template (checklist): A checklist of ideas, processes, protocols, algorithms, best practices used to form a trade federation on the cryptocurrency blockchain helping code programmable money for the programmable economy with a focus on a unit of value based on a statistical mean of GDP index pacing items (Gross Domestic Product) e.g., crops, precious, industrial metals commodities, and crypto currencies to valuate a FEDCOIN, WORLDCOIN programmable money for the programmable economy in light of the currency, global economic reset of 2025.

SOURCE: Github: <http://github.com/Beacon-Heart>

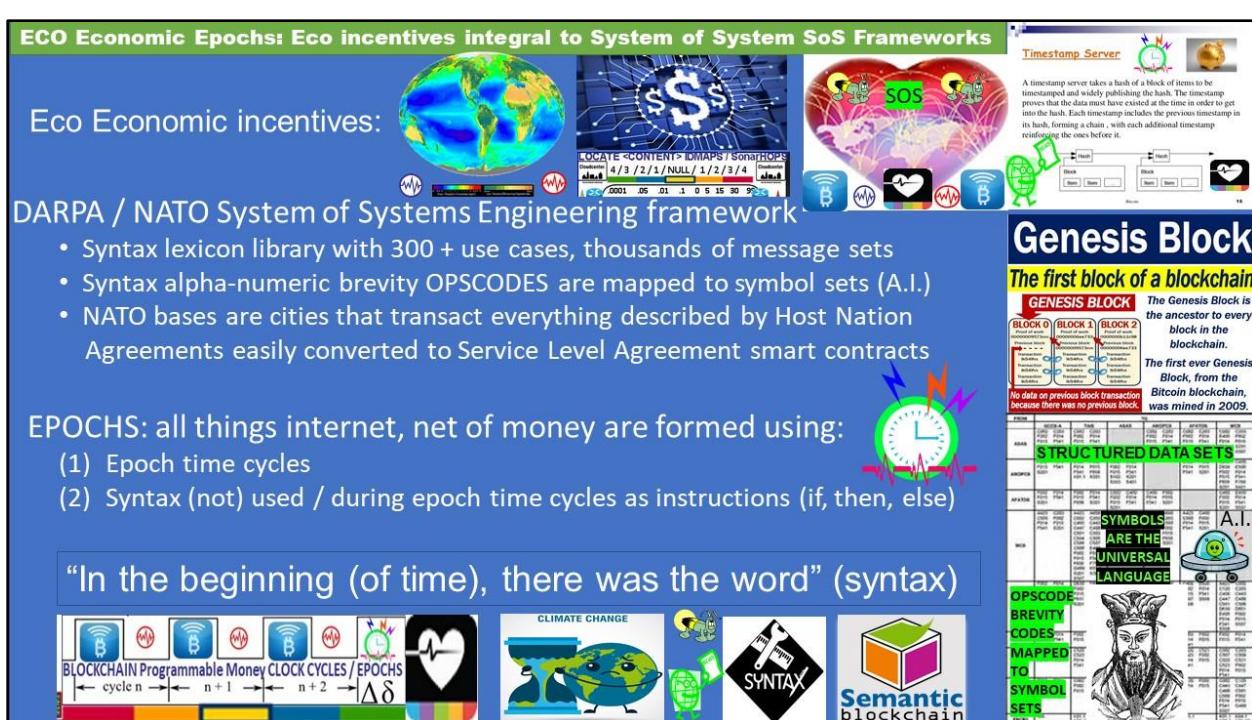


Figure 2: Checklist of ideas, processes, procedures to achieve common goals

We need an Eco sustainable Economic Heartbeat with incentives systemically coded into the programmable economy applying consistent time - space metrics, meters and a syntax lexicon library. The German military made a suggestion circa 2003 namely OOTW Operations Other Than War of use of Battlefield Digitization for humanitarian relief, digital dashboards displaying updates to an EIN Earth Intelligence Network drawn from a system of distributed systems etc.



Figure 3: Eco sustainable Economic Heartbeat / Adaptive Procedural Template (checklist)

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#### USPTO 13/573,002 HEART BEACON CYCLE ADAPTIVE PROCEDURAL TEMPLATE USE CASES:

1. Eco sustainable Economic Heartbeat / Programmable Economy Namespace
2. Distributed Autonomous Organization DAO support. The term DAO was coined by military think tank RAND Corporation circa 2001. Military's always operate as organizations. NATO operations are usually distributed across many time zones and involve language translations.

3. Common signaling, telemetry, symbol, and data element sets help DAO's stay synchronized. Joining autonomous trade federations using agile, adhoc [NetOps](#) is an option to formal merger.
4. A key goal is to support federations: from Latin: foedus, gen.: foederis, covenant characterized by a union of partially self-governing states or regions under a central (federal) government.
5. Spatial econometrics. Geo-spatial, temporal metrics and meters will be universally consistent and synchronized across time zones. Micro to macro-cycle updates maintain system of systems
6. Universal Time Zone UTZ proposal using via improvement to the University of Bologna / Hungary's firefly inspired heartbeat synchronization algorithm by matching the firefly synchronization pulse to the closest OPTEMPO Heart Beacon Cycle.
7. The "Grail" A sync'd shared situational awareness view among a system of systems showing statistical mean value indexes can be achieved by reuse of improved net centric warfare methods joined with establishing a universal event bus using firefly-inspired heartbeat synchronization
8. Supreme Court Alice Corp Vs CLS Bank compliant universal memes describe sync delta cyclic changes: describes linear sequential, geo-spatial temporal intensity radius hop count econometric metrics and meters where closer is shorter and closer is faster – eco sustainable
9. Algorithmic regulation: firefly inspired heartbeat synchronization algorithm in stocks, currency exchanges is a segue to 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 establish consensus among disparate trade protocols, optimal trade speed / frequency as a statistical mean. Define time intervals with discrete start, stop, TTL Time To Live trade windows using commands embedded within </108> heartbeats, heartbeat messages organic to all systems.
10. Supporting economist Milton Friedman's K% rule where a "FEDCOIN / WORLDCOIN currency could be derived from sampling lead economic indicators across a global, universal event bus applying the firefly-heartbeat algorithm tracking changes, updating statistical means
11. Big Data as the "Next Oil": Establishing a consistent <tag> context library / lexicon and time stamping data by organization <Org\_ID> and by data class type and by resource type to form a universal syntax, code, date element, tag Rosetta Stone and reference for coders, programmers
12. Universal meme metaphor for coders, programmers given all things internet are formed using time cycles / syntax as instructions i.e., universal Bitcoin blockchain meme mediation



Figure 4: German Army's 2003 recommendation to reuse Battlefield Digitization for OOTW



Figure 5: Nobel Prize Winning Economist's K% rule / USPTO 13/573,002 fusion

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The K-Percent Rule proposes to set the money supply growth at a rate equal to the growth of gross domestic product (GDP) each year. In the United States, this would typically be in the range of 2-4%, based on historical averages. The K-percent rule, proposed by economist and Nobel Prize winner Milton Friedman Milton Friedman Milton Friedman was an American economist who advocated for free-market capitalism. Friedman's free-market theories influenced economic, is a monetary policy rule that requires central banks to increase the money supply irrespective of the condition of the economy. Supporting economist Milton Friedman's K% rule where a "FEDCOIN / WORLDCOIN currency could be derived from sampling lead economic indicators across a global, universal event bus applying the firefly-heartbeat algorithm tracking changes, updating a statistical mean of a GDP commodity index



Figure 6: UTZ Universal Time Zone stochastic harmonization, synchronization

The world's system of 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. NIST's QRNB intent is to be interoperable with other QRNB's, therefore, this Max Planck Institute / Announcement is germane to a discussion of a one world government / one world economic system of systems: distributed quantum computers – will need (UTZ Universal Time Zone) stochastic harmonization.

Universal Time Zone UTZ proposal using via improvement to the University of Bologna / Hungary's firefly inspired heartbeat synchronization algorithm by matching the firefly synchronization pulse to the closest OPTEMPO Heart Beacon Cycle.



Fig 7: NIST Quantum Random Number Beacon / USPTO 13/573,002 fusion

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. Non-repudiation of events / transactions at any time, space, place in the future will be expected and required by end users and governments.

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>

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 8: USPTO 13/573,002 Checklist of ideas, processes, tools... to help save the world

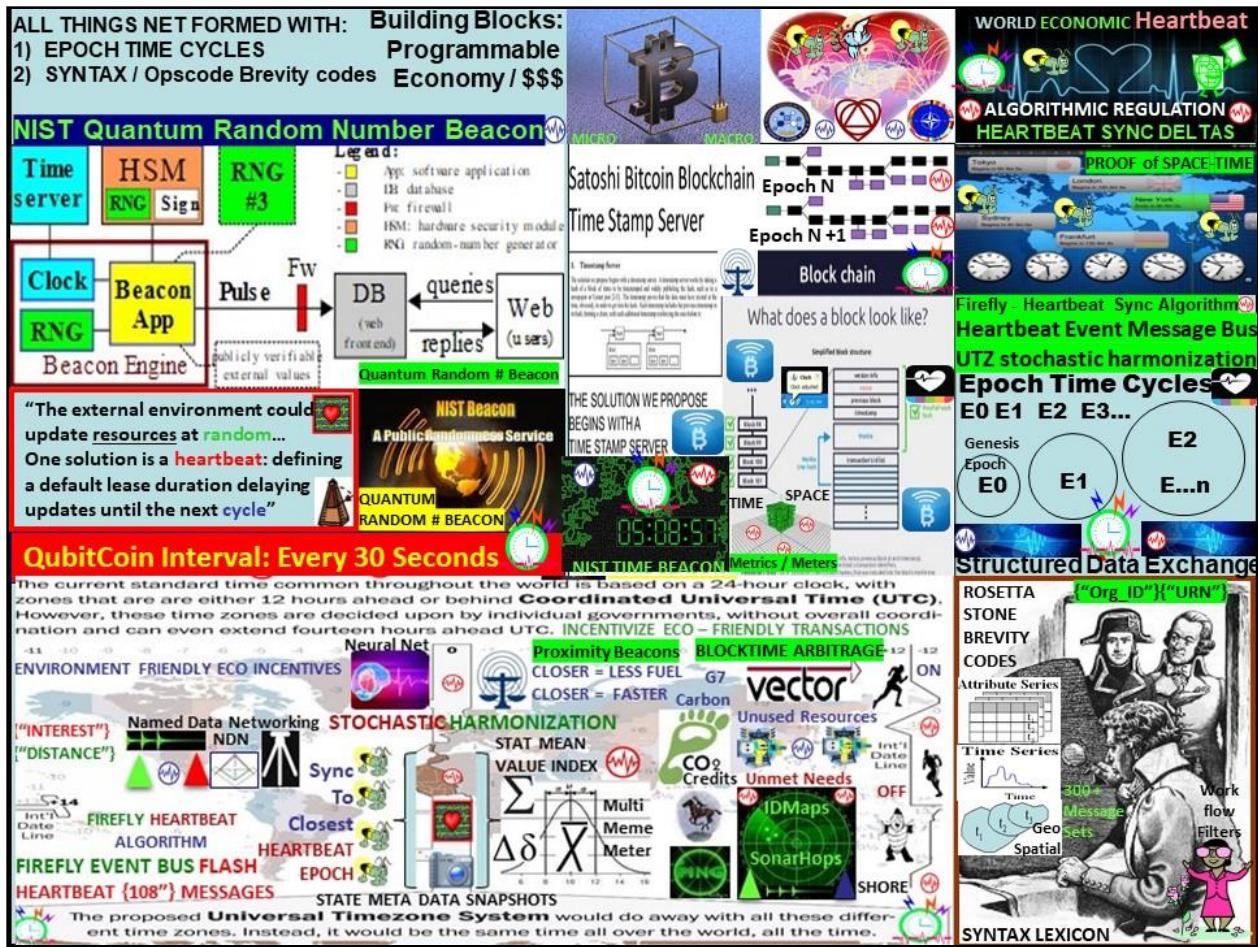
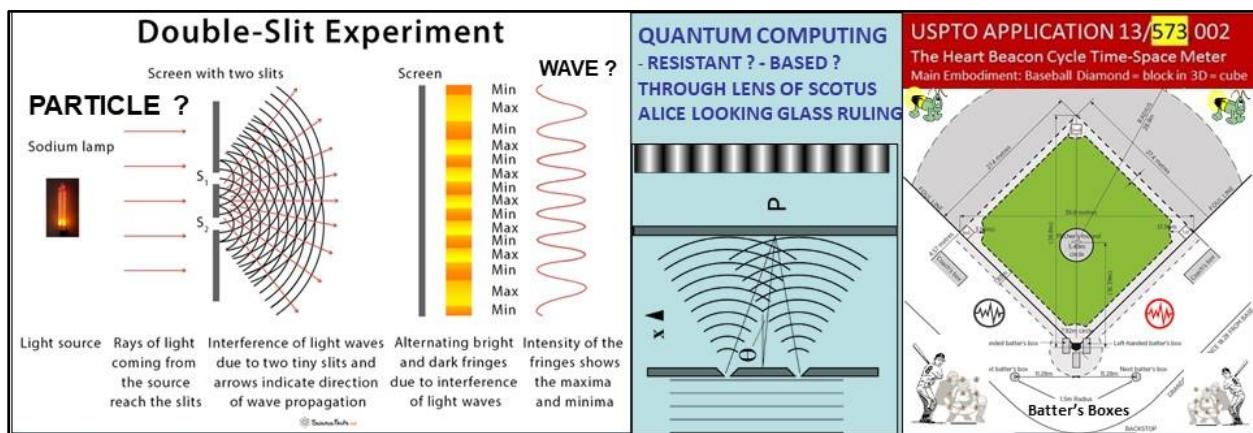


Figure 9: NIST Quantum Random # Beacon / Heart Beacon Time-Space meter

Use cryptocurrencies based on quantum computing (Quantum Random Number Generator) rather than being “quantum computing resistant” or designed in the blind of quantum computing: “Shor’s algorithm could be deployed to render Bitcoin insecure with just a few thousand error-corrected logical qubits.” LINK: <https://spectrum.ieee.org/tech-talk/computing/hardware/quantum-computer-error-correction-is-getting-practical>

The Department of Commerce funding NIST QRNB Quantum Random Number Beacon in Boulder Colorado’s purpose: provide a non-repudiation service of events / transactions at any place, time in the future. This is an absolute must have for any digital currency in my opinion.

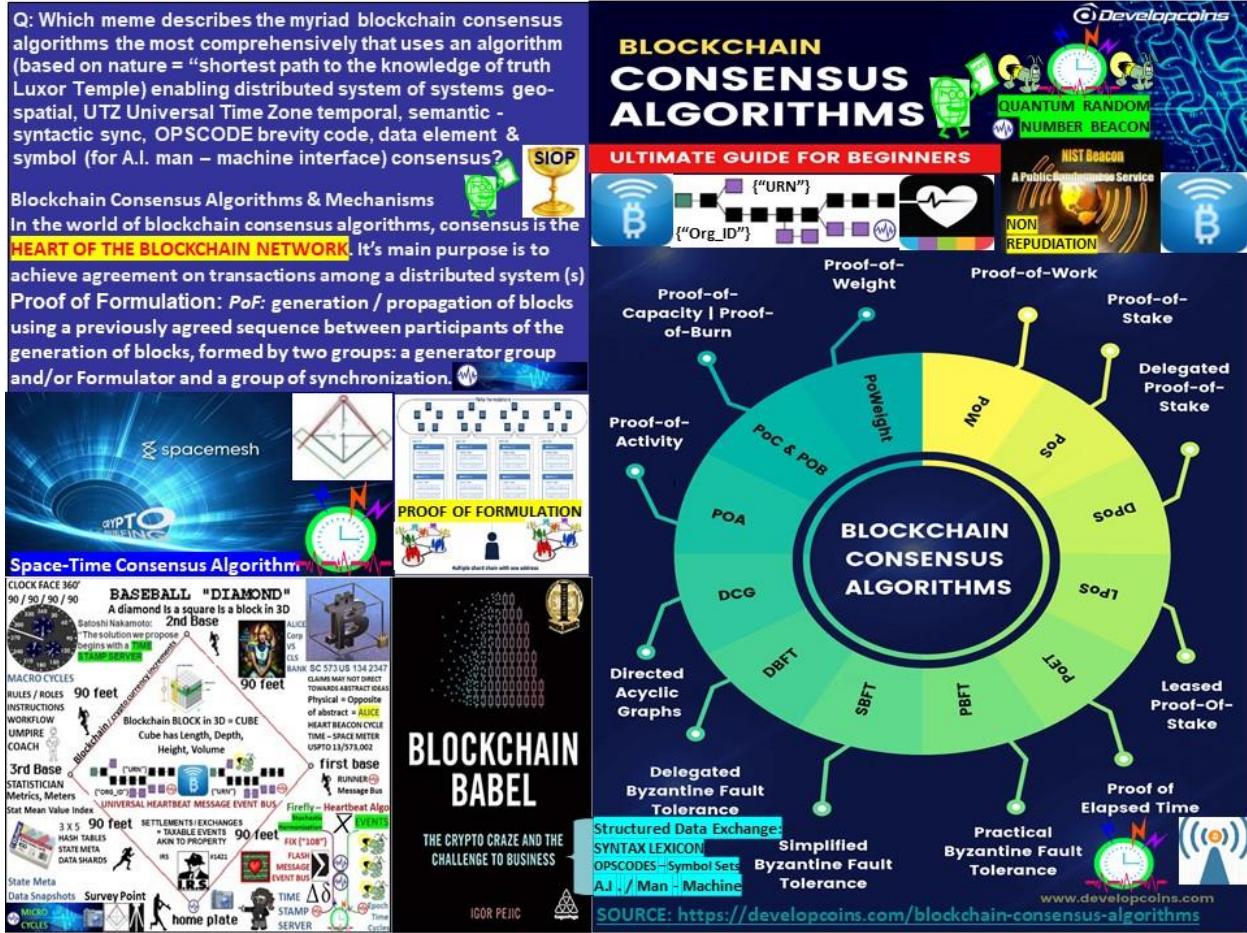


**SCOTUS ALICE RULING:** “Claims may not direct towards abstract ideas” / Physical = opposite of abstract



Fig 10: Quantum Physics / Computing; Quantum resistant or Quantum Computing based – both

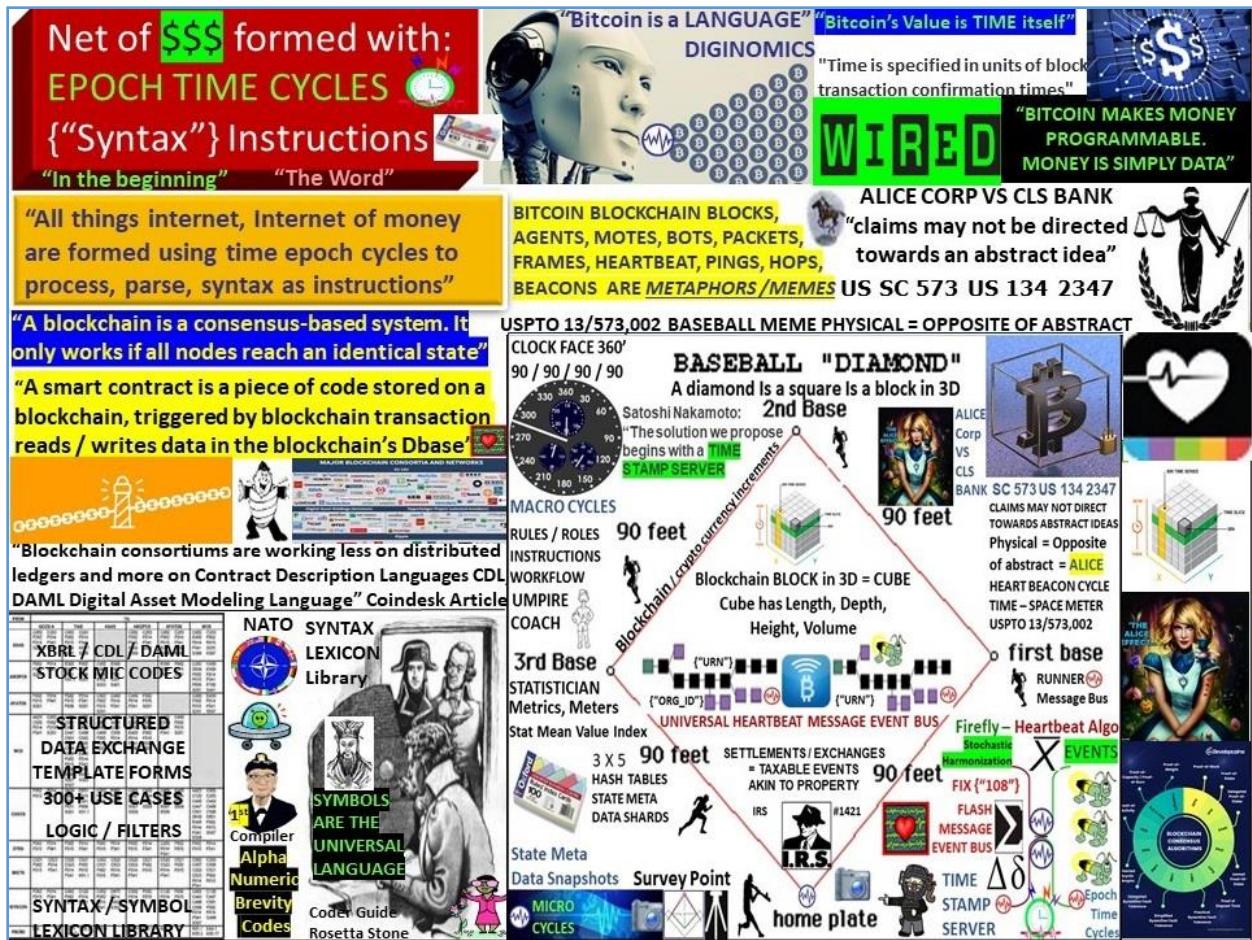
**QUANTUM COMPUTING:** the use of quantum-mechanical phenomena such as superposition and entanglement to perform computation. Quantum computers are believed to be able to solve certain computational problems, such as integer factorization. In a quantum Turing machine, the difference is that the tape 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. 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. Given the dual slot phenomenon, why not use waves and wave diffusion upon interacting on an object within the field synonymous with an event at room temperature for power, synchronization efficiencies?



**FIG 11: universal meme / metaphor for myriad blockchain algorithm memes / metaphors**

**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? SOURCE:



**FIGURE 12: SCOTUS Alice Corp Vs CLS Bank “claims may not direct towards abstract ideas”**

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.

**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

[LINK](#) WIKIPEDIA: [https://en.wikipedia.org/wiki/Alice\\_Corp.\\_v.\\_CLS\\_Bank\\_International](https://en.wikipedia.org/wiki/Alice_Corp._v._CLS_Bank_International)



FIGURE 13: FIREFLY HEARTBEAT SYNCHRONIZATION / World Economic Heartbeat

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.”

**Use Case:** 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 handling charge. Closer is cheaper, less fuel, < C02 carbon emission in smart contract Service Level Agreements.



**FIGURE 14: TERRA Trade Reference Currency / Crypto micro payment 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 / DOD system of systems engineering framework standing on the shoulders of giants (Edison, Lietaer, Friedman) swords to plowshares?

**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



**FIG 15: ECONOMIST MILTON FRIEDMAN's K % RULE / Algorithmic 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/](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): <https://investopedia.com/terms/k/k-percent-rule.asp>

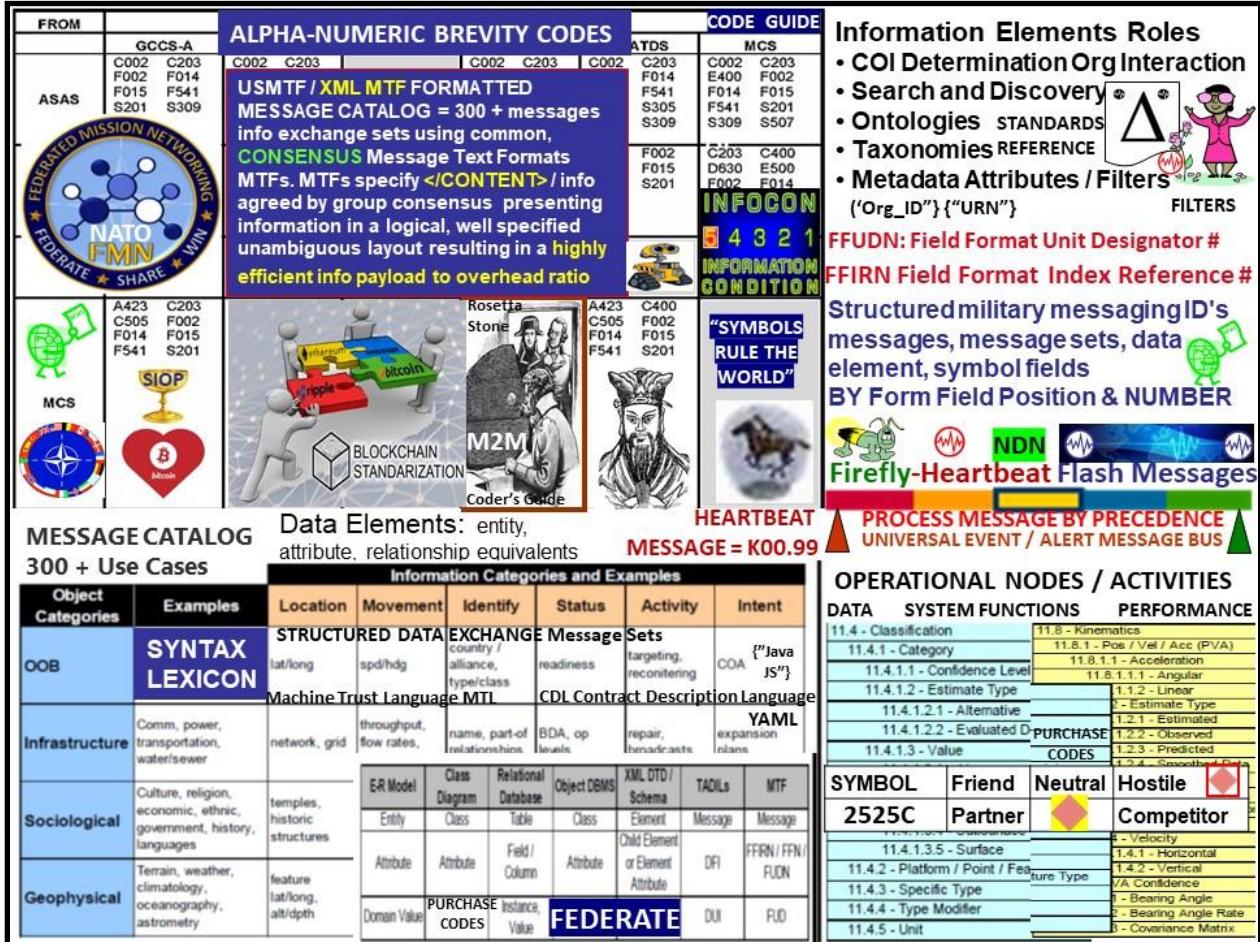


Figure 16: Syntax Lexicon Library Rosetta Stone adapted swords to plowshare from NATO

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 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, Syntax Lexicon Library**



Fig 17: 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 implement a simple SLA Service Level Agreement: closer is cheaper given closer = less fuel, carbon consumed promoting produce and consume locally. / Heart Beacon Cycle Ecologically Sustainable Economic Epochs for trade equity, ecologic sustainability, economic stability.



Figure 18: UTZ TIME ZONE STOCHASTIC HARMONIZATION / SYNCHRONIZATION

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 dot Org



**Figure 19: FEDCOIN / WORLD COIN Synchronization / stochastic harmonization**

One world currency for the one world government will require financial events stochastically synchronized, harmonized across the world's time zones and will need to represent a value index of the world's GDP Gross Domestic Product METHOD: 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 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, < fuel, less C02 carbon emissions.

**Github:** <http://github.com/Beacon-Heart>

**Angel List:** [https://angel.co/heart\\_beacon](https://angel.co/heart_beacon)

**Maven:** <http://app.maven.co/profile/SHfEKnA9>

**LINKEDIN:** <https://www.linkedin.com/in/ecoeconepochs/>

**FLOTE:** [https://folute.app/user/Heart\\_Beacon](https://folute.app/user/Heart_Beacon)

**Proton Email (secure)** [ecoeconomicepochs@protonmail.com](mailto:ecoeconomicepochs@protonmail.com)