

[illegible]

June 2003 – Present: Patent applicant USPTO 13/573,002: The Heart Beacon Cycle Time – Space Meter Adaptive Procedural Template (checklist of tools, processes, algorithms, protocols... useful



to form Distributed Autonomous Groups DAGS synchronized in time – space Checklist: ideas, algorithms, processes, procedures, metrics, meters, signal & telemetry structured data for consistent Eco sustainable economic time cycle epochs for programmable \$ / economy / Net, Net of money foundation technology for DeFi, programmable internet, internet of money.

USPTO 13/573,002: Adaptive Procedural Template foundation tech list for net, net of \$, economy. System of systems structured data exchange brevity codes - message sets telemetry syntax lexicon mapped to A.I., IoT symbols for human man-machine interface. Foundation technology for programmable \$\$\$ money is being asserted by Banks / tech firms which are forming teams to assert establishment of foundation technology pursuant to securing IP intellectual property patent claims in DeFi / programmable money.

SCOTUS “Alice in Wonderland” ruling "claims may not direct towards abstract ideas".

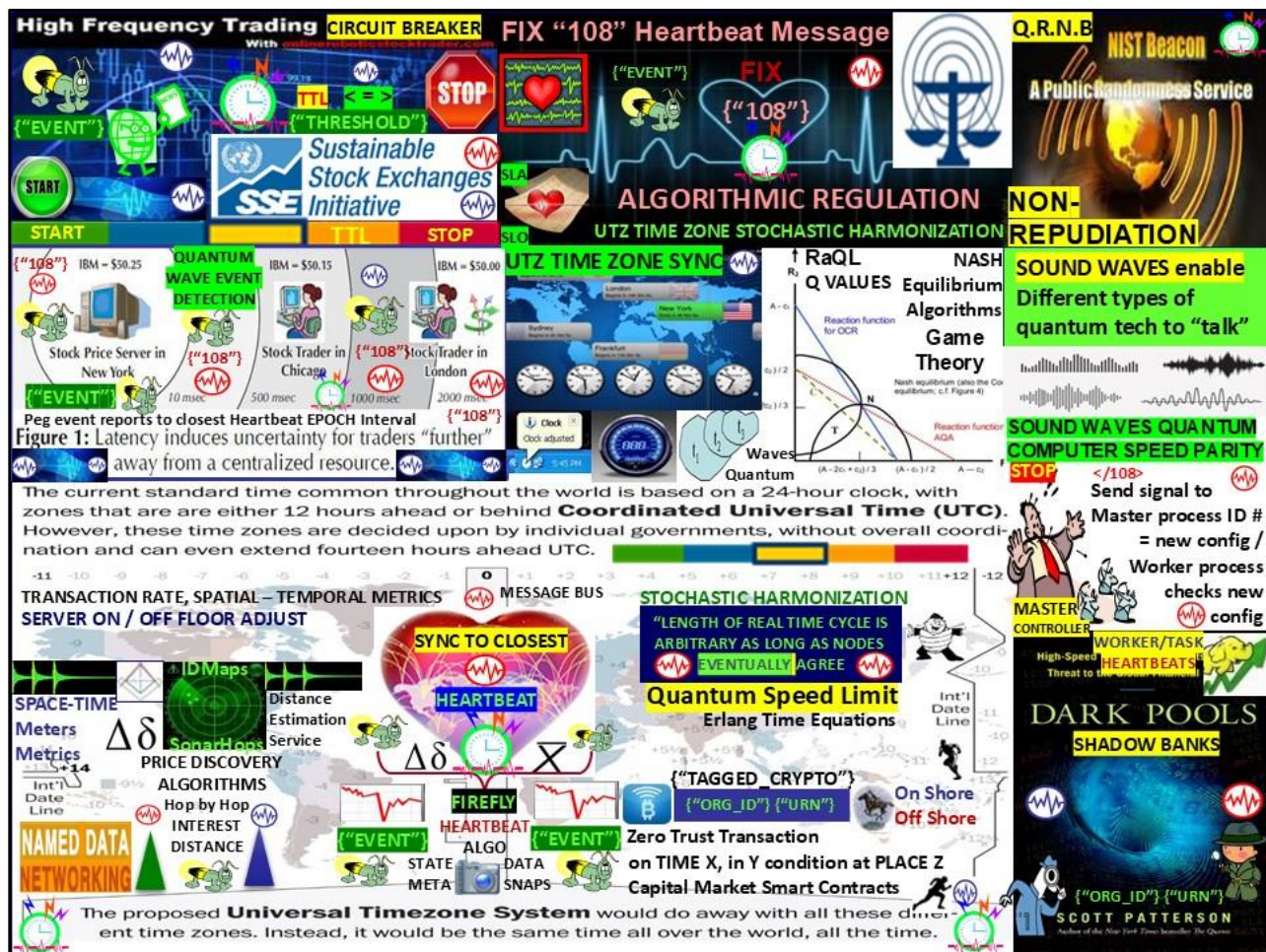


Figure 2: USPTO 13/573,002 / SSEI Sustainable Stock Exchange Initiative

The United Nations Sustainable Stock Exchanges (UN SSE) initiative has officially joined the Global Capacity Building Coalition (GCBC) template framework for Stock Exchanges

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

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

THESIS SUMMARY: All things internet, net of money blockchains are formed by unicast, multicast, anycast protocols. Programmable money's improvements are in cryptography. 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, layers, blocks, shards, graphs, hash graphs "bots", "motes", ... or Satoshi's traversing the net, stored in a blockchain cube. Transactions are unicast, multicast, or anycast (workflow). The afore mention terms are non-existent fabrication.

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 Autonomous Systems DAO. (RAND term circa 2001)

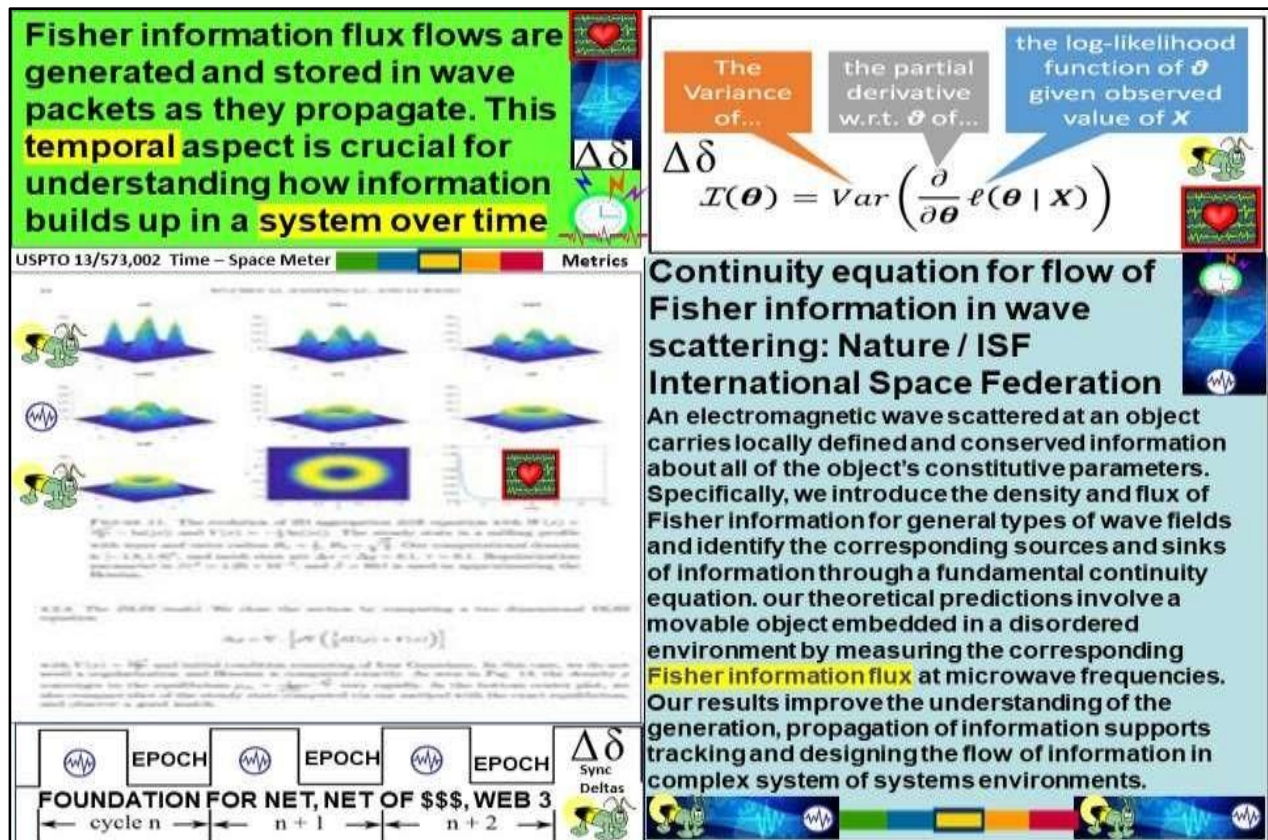


Figure 3: Fisher wave info flux flows / USPTO 13/573,002 quantum Time - Space Meter



Fisher information flux flows are generated and stored in wave packets as they propagate. This temporal aspect is crucial for understanding how information builds up in a system over time. USPTO 13/573,002's wave water drop in pond meme = description



Figure 4: Inventor Thomas Edison's Monetary Option circa 1921 / Algorithmic stable coin

Fix money = fix world // Foundation Technology for Programmable \$\$\$, Economy, complementary currencies supporting distributed trade organizations Thomas Edison's Monetary option: Thomas Edison and Henry Ford proposed a currency based on the value of a basket of crop commodities in 1922. Inventor Thomas Edison believed that crops held their value over time. "I want to cast the variable out of money. This gold money is not good enough. It's a fiction" (New York Times 1922). 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/)

*REFERENCES* Beale, W. T. M. Jr., Kennedy, M. T., and Winn, W. J. (1942) *Commodity Reserve Currency: A Critique*, *Journal of Political Economy*, 50 (4), pp. 579–94.

Boyle, David (Ed) (2002) *The Money Changers: Currency Reform from Aristotle to Ecash* (London: Earthscan).Google Scholar





FIGURE 5: Foundation technology framework formed by Battlefield Digitization OOTW

Battlefield Digitization for OOTW Operations Other Than War: i.e., Eco Economic Epoch Heartbeat / USPTO 13/573,002 The Heart Beacon Cycle Time - Space Meter Adaptive Procedural Template paper, use cases, claims, graphics, metrics, meters, syntax lexicon #A.I. Battlefield Digitization consists of structured data where OPSCODE brevity codes are mapped to symbology, symbol sets organized into 300 + Use Case messages . Brevity code mapping to symbols is essential to A.I. Artificial Intelligence man – machine interface

Improvements as the basis of invention to U.S. Army CECOM Communication Electronics Command's "greatest invention" distributed systems dashboard structured data exchange framework as swords to plowshare use cases for economic reset, climate change sustainable development incentives, stable coin Fed-World Coin.

Teams are forming to win the DeFi Distributed Finance / programmable \$\$\$ money IP Intellectual Property wars. The winning team will prove that their IP intellectual property filings established. Foundation tech described through the lens of SCOTUS 2014 "Alice in Wonderland" ruling? "Claims may not direct towards abstract ideas"

## USE CASES

1. Supreme Court **US SC 573 US 134 2347** Alice Corp Vs CLS Bank compliant physical meme i.e., cryptocurrency blockchain DLT programmable money meme

2. Foundation technology for programmable money / economy i.e., Syntax Lexicon Namespace derived from NATO / DoD brevity OPSCODE FFIRN, FFUDNS structured data exchange mapped to symbols for A.I. Big Data. Establishes a consistent, universal syntax structured data exchange library – lexicon using UTZ time stamping data by organization <Org\_ID>. data class type, resource type to form a universal syntax, code, date element </tag> Rosetta Stone given all things internet are formed using 1. time epoch cycles 2. syntax as instructions. Physical is the opposite of abstract. See SCOTUS Alice ruling 2014

3. Distributed Autonomous Organization DAO Trade Federation common signaling, telemetry, symbol, and data element sets forming a foundation technology framework including structured data exchange to assist DAO's stay synchronized, stochastically harmonized across UTZ zones.

4. Tether, untether to autonomous trade federations using agile, adhoc NetOps as an option to formal merger, acquisition. Support federations: from Latin: foedus, gen.: foederis, covenant characterized by a union of partially self-governing states or regions under a central government.

5. Micro to macro-cycle system of systems data updates at agreed upon times observing agreed durations i.e., stock, commodity, currency trade epochs. Discrete time interval start, stop, TTL Time To Live trade windows commands embedded in </108> heartbeats, heartbeat messages.

6. 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 sample events among trader populations across time zones to establish consensus among disparate trade protocols, trade speed / frequency.

7. The "Grail" A sync'd shared situational awareness view derived from filtering, prioritizing events drawn from a system of systems universal heartbeat message event bus sync delta epoch updates Universal Time Zone UTZ proposal using via improvement to the University of Bologna / Hungary's firefly inspired heartbeat synchronization algorithm by matching firefly synchronization pulse to closest OPTEMPO cycle.



8. Support economist Milton Friedman's K% rule where a CBDC, federal, world currency is derived from sampling lead GDP economic indicators across a global event message bus sync delta changes updating a RWA Real World Asset based commodity index currency.
9. Ecologically sustainable economic epoch time cycles to measure, meter sync delta cyclic changes describes linear sequential, geo-spatial temporal intensity radius hop count econometric metrics, meters where closer is shorter, closer is cheaper, less CO2
10. Data over wired, wireless power lines SLA service level agreement where closer = cheaper given closer involves maintenance of electrical, data equipment infrastructure



Figure 7: Nobel Prize Winning Economist's K% rule / USPTO 13/573,002

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 was a proposal by economist Milton Friedman that the central bank should increase



Net of \$\$\$ formed with:  
 1 EPOCH TIME CYCLES  
 2 {"Syntax"} "The Word"  
 "In the Beginning" Genesis Block

"All things Internet, Internet of money  
 are formed using time epoch cycles to  
 process, parse, syntax as instructions"

"A blockchain is a consensus-based system. It  
 only works if all nodes reach an identical state"

"A smart contract is a piece of code stored on a  
 blockchain, triggered by blockchain transaction  
 reads / writes data in the blockchain's Dbase"

**NAMED DATA NETWORKING**  
 Time Series  
 "Blockchain consortiums are working less on distributed  
 ledgers and more on Contract Description Languages CDL,  
 DAML Digital Asset Modeling Language" Coindesk Article

**SYNTAX LEXICON Library**  
 1st Compiler  
 Alpha Numeric Brevity Codes  
 Code Guide Rosetta Stone

**STOCK MIC CODES**  
 "/ORG\_ID"  
 "/URN"  
 Real World Assets  
 300+ USE CASES  
 LOGIC / FILTERS

**STRUCTURED DATA EXCHANGE TEMPLATE FORMS**  
 A.I.  
 SYNTAX / SYMBOL LEXICON LIBRARY

"Bitcoin is a LANGUAGE"  
 Digiinomics

BITCOIN BLOCKCHAIN BLOCKS,  
 AGENTS, MOTES, BOTS, PACKETS,  
 FRAMES, HEARTBEAT, PINGS, HOPS,  
 BEACONS ARE METAPHORS / MEMES

USPTO 13/573,002 BASEBALL MEME PHYSICAL = OPPOSITE OF ABSTRACT

BLOCKCHAIN Programmable Money CLOCK CYCLES / EPOCHS  
 cycle n n + 1 n + 2  $\Delta\delta$

CLOCK FACE 360°  
 90° / 90° / 90° / 90°  
 Satoshi Nakamoto:  
 "The solution we propose  
 begins with a TIME STAMP SERVER"

BASEBALL "DIAMOND"  
 A diamond is a square Is a block in 3D  
 2nd Base  
 Blockchain BLOCK in 3D = CUBE  
 Cube has Length, Depth, Height, Volume

3rd Base  
 STATISTICIAN Metrics, Meters  
 Stat Mean Value Index  
 3 X 5 HASH TABLES  
 STATE META DATA SHARDS

Settlements / Exchanges  
 TAXABLE EVENTS AKIN TO PROPERTY  
 IRS #1421  
 State Meta Data Snapshots  
 Survey Point  
 home plate

"BITCOIN MAKES MONEY PROGRAMMABLE."  
 MONEY IS SIMPLY DATA"  
 "Bitcoin's Value is TIME itself"  
 "Time is specified in units of block transaction confirmation times"

ALICE CORP VS CLS BANK  
 "claims may not be directed towards an abstract idea"  
 US SC 573 US 134 2347

SC 573 US 134 2347  
 CLAIMS MAY NOT DIRECT TOWARDS ABSTRACT IDEAS  
 Physical = Opposite of abstract = ALICE  
 HEART BEACON CYCLE TIME - SPACE METER  
 USPTO 13/573,002

Firefly - Heartbeat Algo  
 FLASH MESSAGE EVENT BUS  
 FIX ("108")  
 TIME STAMP SERVER  
 Epoch Time Cycles

Blockchain Arbitration  
 Blockchain Arbitration

Blockchain Arbitration

Blockchain Arbitration

Blockchain Arbitration

***Alice Corp. v. CLS Bank International***, 573 U.S. 208 (2014), was a 2014 [United States Supreme Court](#)<sup>[1]</sup> decision about [patent eligibility](#).<sup>[2]</sup> The issue in the case was whether certain patent claims for a computer-implemented, electronic [escrow](#) service covered [abstract ideas](#), which would make the claims 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 abstract idea into [patentable subject matter](#). Ruling “claims may not direct towards abstract ideas”. Physical (baseball meme) is the opposite of abstract”

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.<sup>[3][4]</sup> *Alice* and the 2010 Supreme Court decision of [Bilski v. Kappos](#), another case involving software for a business method (which also did not opine on software as such<sup>[5]</sup>), were the most recent Supreme Court cases on the patent eligibility of software related inventions since [Diamond v. Diehr](#) in 1981.<sup>[6]</sup>



**FIGURE 9: 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, < CO2 carbon emission in smart contract Service Level Agreements.



**FIGURE 10: 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>



Currency / Economic RESET is a mathematical certainty. Do we RESET the global system of systems as is or re-engineer our world using NATO / DOD system of systems engineering framework standing on the shoulders of giants 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, procedures, processes, tactics, etc..



Figure 11: Nobel Prize Winning Economist Milton Friedman's K % GDP based rule

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)



Satoshi Nakamoto's Bitcoin key building block is a time stamp server. "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)

**Structured Data Exchange**

**SYNTAX LEXICON ROSETTA STONE**

**lexicon**

**Coder's Guide**

**STRUCTURED <CONTENT> EXCHANGE TEMPLATES**

**MIL STD 2525ABC ASSET TOKENS**

**"SYMBOLS RULE THE WORLD"**

**STRATML**

**XBR**

**BINARY XM**

**UBL**

**DDL DATA DEFINITION LANGUAGE**

**TOSCA**

**YAML**

**COVARIANCE MATRIX**

**Signal operating instructions (SOI):** technical control coordination of signaling, telemetry Current situational awareness, data dictionary, network identification, channels, network directory, brevity code-words, signals. Units maintain 2 SOI copies: PEACE TIME version "Go-To-War" version = BIZ COA (s) <Org\_ID1><Org\_ID2><Org\_ID3>

**NATO MESSAGE TEMPLATES** USE DATA SETS FOR STRUCTURED DATA EXCHANGE // POSITION FIELD IN MESSAGE PROCESSED BY TABLE, FIELD # IN A CONSISTENT, PREDICTABLE ORDER = AI FRIENDLY M2M AI

**GOAL:** vide a common lexicon / syntax / term library used among FEDERATIONS identified by Federated ID

**GOAL:** Provide a common, consistent, reliable schedule to share signaling and telemetry within federations.

**MTL Machine Trust Language**

**MESSAGE TEXT FORMAT:**

SEG RPT OCC CLASSNAME SETID SEQ FIELD OCCURRENCE SET FORMAT NAME

O 11NUPRES EXER 1 /M /O // (NU) EXERCISE IDENTIFICATION

C 11NUPRES OPER 2 /M /O /O /O // (NU) OPERATION CODEWORD

M MIOPV1 1 MSGID 3 /M /M /O /O /O // (NU) MESSAGE IDENTIFIER

M MIP OUT ORDPLAN 4 /M /O /O /O // (NU) PLAN ORDER REFERENCE

SIOP >OUT MSGREF 5 /M /M /M // (NU) REFERENCED MESSAGE

JUPRES DTG 6 /M // (NU) DATE-TIME GROUP

O ORGID 7 /M /M /M /M /M /M /M /M /M /C // (NU) ORGANIZATION DESIGNATOR

M 11NUPRES GENTEXT 8 /M /M // (NU) 1.A ENEMY FORCES / COMPETITORS

M 11NUPRES GENTEXT 9 /M // (NU) 1.B FRIENDLY FORCES / TRADE FEDERATION

M 11NUPRES GENTEXT 10 /M /M // (NU) 1.C ATTACHMENT / DETACHMENT

O 11NUPRES GENTEXT 11 /M /M // (NU) 1.D COMMANDERS EVALUATION

O 11NUPRES GENTEXT 12 /M /M // (NU) 1.E ENVIRONMENTAL INFORMATION

M 11NUPRES GENTEXT 13 /M /M // (NU) 2. MISSION </108>K00.99 / FIX / SWIFT / E-911 Heartbeat Message

M 11NUPRES GENTEXT 14 /M /M // (NU) 3.A CONCEPT OF OPERATION

O 11NUPRES GENTEXT 17 /M /M // (NU) (3) RECONNAISSANCE SURVEILLANCE

O 11NUPRES GENTEXT 21 /M /M // (NU) (5) INFORMATION OPERATIONS

O 11NUPRES GENTEXT 28 /M /M // (NU) (5) COMMS INFORMATION SYSTEMS

O 11NUPRES GENTEXT 35 /M /M // (NU) 3.D COORDINATING INSTRUCTIONS

M 11NUPRES GENTEXT 36 /M // (NU) 4.A SUPPORT CONCEPT (Logistics)

M 11NUPRES GENTEXT 37 /M // (NU) 4.B MATERIEL AND SERVICES

**SYMBOLS**

Friend	Neutral	Hostile
Partner		Competitor

**TOKENIZED ECONOMY BREVITY CODE OPSCOE MAPPET TO SYMBOLS**

**PURCHASE CODES**

**FEDERATED PEGS**

**ISO 10383 - MIC**

**Market Identifier Codes**

**STOCK**

**NDN NAMED DATA**

**EXCHANGE**

**NETWORKING**

**MIC CODES**

**PRECEDENCE**

**PROCESSING**

**FILTERS**

**BLOCKTIME**

**ARBITRAGE**

**ERLANG**

**TIME**

**EQUATIONS**

Fig 12: Syntax Lexicon Library Rosetta Stone from DoD / NATO system of systems framework

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 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**



Figure 13: FEDCOIN / WORLD COIN Synchronization / stochastic harmonization

One world currency for the one world government requires financial events stochastically synchronized, harmonized across the world's time zones and will represent a value index of the world's GDP Gross Domestic Product RWA real world asset commodities.

"The economy of imaginary wealth is being inevitably replaced by the economy of real and hard assets" President Vladamir Putin **Closer is cheaper, < fuel, less C02 carbon**

The world's system of systems needs 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. 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 sync cycle.

## SOCIAL MEDIA / DOCUMENTS / GRAPHICS

Linked IN: <https://www.linkedin.com/in/ecoeconepochs/>

FACEBOOK: <https://www.facebook.com/beaconheart>

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

IPFS Interplanetary File System Web3 web page. <https://ecoeconomepochs.dao/>

SCRIBD Documents: <https://www.scribd.com/user/11781571/Steven-James-McGee>

Slideshare Files: <https://www.slideshare.net/EcoEconomicHeartbeat>

X / Twitter: [https://twitter.com/Heart\\_Beacon](https://twitter.com/Heart_Beacon)



Figure 14: Steven "FutureMan" McGee's Business Card / Contact Information









Pictures = thousands of words..  
 #currency #money #reset #economy #war #peace



The Heart Beacon Cycle Time – Space Meter Adaptive Procedural Template: It is TIME



