

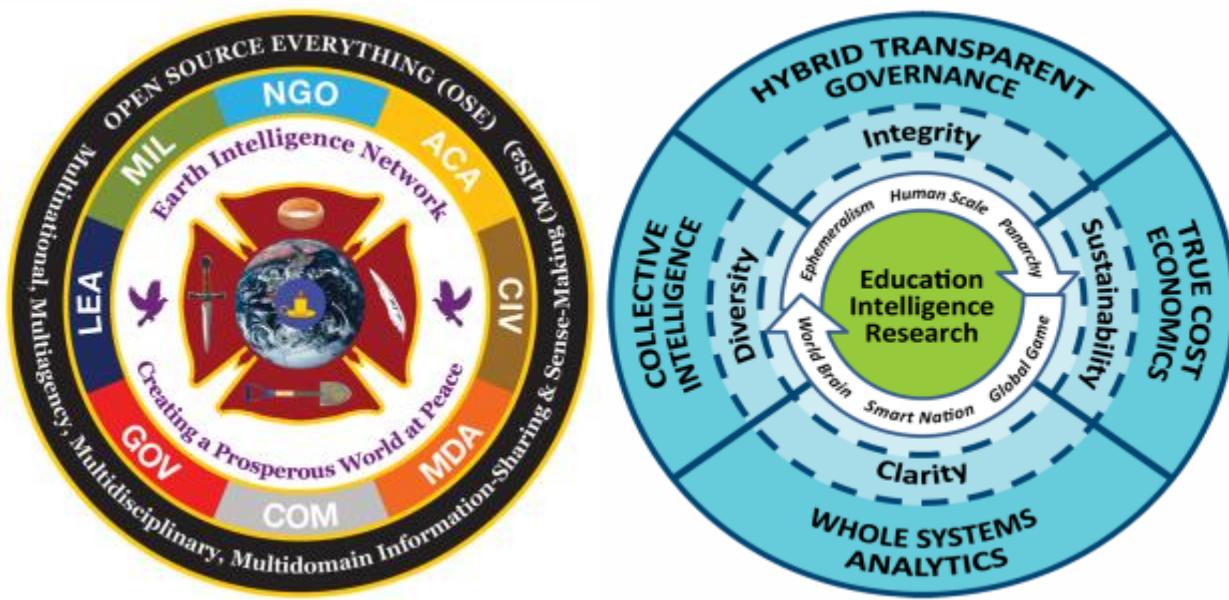
RIG #UNRIG Earth Intelligence Network with an algorithmic neural network emulation

Enhance EIN Earth Intelligence Network with swords to plowshare best practice

Improve EIN with concepts and best practice derived from mankind's luminaries

THEME: STANDING ON THE SHOULDERS OF GIANTS Economist Milton Friedman, Admiral Grace Hopper, Inventor Thomas Edison, Economist Bernard Lietaer, sustainable giant Buckminster Fuller, Doctor Martin Luther King Junior, are a few of the giants / luminaries that the author attributes useful additions forming an adaptive procedural template checklist of useful ideas, processes, procedures, concepts... that a trade federation would consider using to accomplish goals.

Battlefield Digitization was created by the United State's taxpayers dollars and is a key citation that I give credit to the Army and the Marine Corps... all building blocks, processes, people's work the author deems useful for inclusion into an adaptive procedural template checklist useful to form and maintain trade federations are cited and citing giants, or luminaries in the fields of economics, internet etc., is the point and purpose of this article. The author is proposing an improvement to #UNRIG's Earth Intelligence Network EIN in the form of an algorithm co-conceived by University's Bologna & Hungary SOURCE URL: SAW Concepts LLC web page <http://sawconcepts.com/index/id84.html>

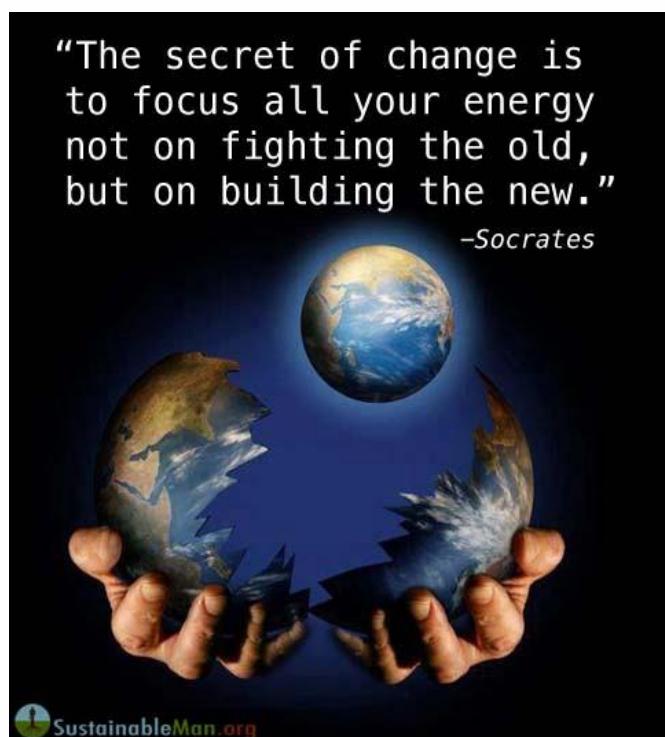
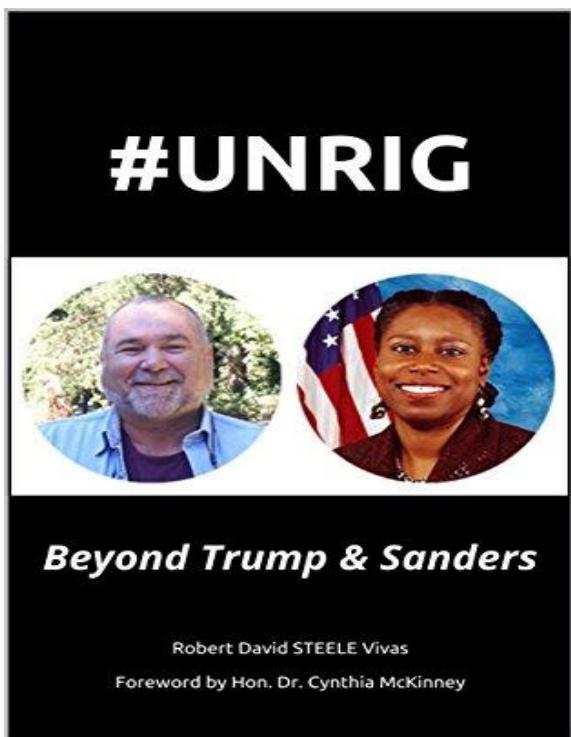


The above logo is attributed to Phi Beta Iota: LINK <https://phibetaiota.net/unrig/>

Phi Beta Iota's logo consists of the Whole Earth within a Rescue Cross, with four symbols: the bowl for food and water; the quill pen for education, communication; the shovel for construction and development; and the stiletto for the inevitable rogues that need "a time-out" – attributed to SAW Concepts LLC's author. On a white field are found the legal name of the non-profit, and our public purpose: creating a prosperous world at peace. Phi Beta Iota's Earth Intelligence Network is an accredited 501c3 chartered in the Commonwealth of Virginia. EIN has no employees. Its original and long-term focus is on teaching citizens the urgency of demanding holistic analytics, true cost economics, and Open Source Everything Engineering (OSEE) as the foundation for enlightened self - governance.

[\*\*#UNRIG\*\*](#) seeks to communicate to all citizens the possibility of an ethical, legal, non-violent restoration of integrity to the US Government. Background information

Phi Beta Iota "We do this, in an expansion of Buckminster Fuller's practice, by enabling hybrid governance through ethical evidence-based decision-support in the context of transparent, truthful networks of trust. The outermost border summarizes our two innovative methods for which we are the foremost proponents in the world: Open Source Everything (the only technical solution that is affordable, interoperable, and scalable) and Multinational, Multiagency, Multidisciplinary, Multi-domain Information-Sharing and Sense-Making (M4IS2, the only human solution that assures holistic analytics and a grasp of true cost economics)".



Phi Beta Iota "Our mind-set is deeply rooted in Ecological Economics as pioneered by Dr. Herman Daly and subsequently described in books by the titles of Ecology of Commerce and Natural Capitalism. We believe that the Earth is amply sufficient to provide every human now living with a life that is both prosperous and secure — where we have gone wrong is in allowing a select few to internalize profit and externalize cost" - attributed to Phi Beta Iota

Phi Beta Iota "Here is our “method” graphic. We consider education, intelligence (decision-support), and research to be part of a whole system that cannot be fragmented without devolving into idiocy across all major domains (political-military, socio-economic, ideo-cultural, techno-demographic, and natural-geographic)".

Quote attributed to Phi Beta Iota "Government — in isolation from the other seven tribes shown in the EIN logo — has failed. We must move to hybrid transparent governance, leveraging a combination of collective intelligence and true cost economics, to achieve whole systems understanding through holistic analytics"

PROJECT: RIG [#UNRIG](#)'s Earth Intelligence Network by supporting it, improving it, enhancing Phi Beta Iota's EIN Earth Intelligence Network with improved DARPA / NATO derived system of systems signaling, telemetry engineering research and NATO best practice a.k.a. The Heart Beacon Cycle Time – Space Meter and Applique Overlay (dashboard). SOURCE [LINK](#) Slides on Slideshare.com

Global dashboards are updated using an algorithm that emulates brain neural network activity - namely the firefly inspired heartbeat algorithm attributed to the Universities of Bologna Italy and Hungary - improved by matching the firefly synchronization activity to the nearest heartbeat OPTEMPO cycle -- attributed to patent application 13/573,002. <http://sawconcepts.com/index>

PROJECT: rig #UNRIG Earth Intelligence Network with a neural network emulation algorithm - the firefly inspired heartbeat synchronization algorithm co-designed by the University of Bologna, Italy / Hungary Source [LINK](#) <https://www.slideshare.net/StevenMcGee2/fireyinspired-heartbeat-synchronization>





FIGURE 1: OPERATION RIG [#UNRIG](#) Earth Intelligence Network with a Heart Beacon Signals, Telemetry Sync, Syntax Lexicon Library neural network emulation  
 SOURCE [LINK](http://www.sawconcepts.com/index/id84.html)

The Earth Intelligence Network will be a composite, system of systems comprised of many nations Telco mesh fabrics. Eventually, it will be formed from all nation states as a system of systems situational understanding type project that will arguably need a universal method and means to receive event and alert messages independent of protocol or programming language within the matrix if you will.

We propose a neural network emulation based on nature - fireflies - using an algorithm conceived by University of Hungary / Bologna Italy. Project Rig [#UNRIG](#): use an algorithm inspired by fireflies that emulates neural network activity for [#UNRIG](#)'s Earth Intelligence Network reusing tax payer paid for research and best practice into system of systems engineering Battlefield Digitization / Network Enabled Operations NEO swords to plowshares style



FIGURE 2: Project HBC\_net: support #UNRIG's Earth Intelligence Network EIN with The Heart Beacon Cycle's system of systems Signals & Telemetry mesh derived from NATO's Battlefield Digitization, Net Enabled Operations NEO

This project can support with shared common Signals and Telemetry through OOTW reuse of Battlefield Digitization / Network Enabled Operations NEO, the Earth Intelligence Network and proposes a neural network emulation using the firefly-heartbeat synchronization algorithm conceived by U Hungary / Bologna Italy.

Dogezer is a software development platform that allows team members to become product investors by investing their time and labor. Dogezer Solution Explained The Dogezer Platform is a SaaS solution which combines the functionality of Kickstarter, UpWork, GitHub, Slack, Jira, Google Docs, Dropbox and ICO analogues with a set of defined processes how these solutions relate to each other in a clear, transparent and predictable way. Dogezer will give an opportunity to start a project in a matter of minutes; organize a set of teams who will be working on the project; define how project contributions will be rewarded, and then drive the project to completion by utilizing skills of independent contributors all around the world. Dogezer will implement most of the key tools used in software development as integrated pieces.

Over time, the variety of services offered by Dogezer will grow, eventually resulting in a complete set of tools that are required to run a top-notch software development company. As a result, the Dogezer solution will become a single service, one-stop-shop that companies that operate in a traditional environment can replace their current fragmented landscape toolset. [LINK](https://dogezer.com/) <https://dogezer.com/>

The Heart Beacon Cycle is a procedural template framework that includes citations of required standards, processes, components / building blocks and conventions that are agreed upon as criteria required as a minimum to join trade federations.



FIGURE 3: The Heart Beacon Cycle HBC is an adaptive procedural template checklist of things, processes, tools, building blocks useful to form, maintain Eco-responsible trade federations. Source link: <http://sawconcepts.com/index/id3.html>

The Heart Beacon Cycle is a checklist., an adaptive, procedural template checklist for forming trade federations supporting ecologically friendly business transactions and Eco-friendly geo-spatial econometrics where closer is cheaper, closer is faster and most importantly, uses less environmentally polluting fuel. This strategy will significantly reduce the CO2 carbon footprint. Each item in the procedural template

checklist links to a detailed treatise. We can synchronize ourselves and our cities in time - space for a common purpose: ecologically sound econometrics.

- A process defines “what” needs to be done and which roles are involved.
  - A procedure defines “how” to do the task. Example: roles and responsibilities of the people (roles) assigned to do the work, tools and equipment to support individuals do their jobs, and procedures and methods defining how to do the tasks and relationships, work flows connecting steps between the tasks.



FIGURE 4: German Military H.A.N.D.S. O.O.T.W PROPOSAL H.A.N.D.S

The model template framework is the United States Army / Marine Corps Joint Battle Command JBC also known as Joint Blue Force Situation Awareness and it's associated Army Battle Command System ABCS referred to as Future Combat Systems FCS. The template system is part of a system of systems. It's interaction with many other intelligence, logistics, maneuver etc. systems participating in a system of systems. To achieve consensus, selecting the most widely implemented Situation Awareness System -- Joint Blue Force Situation Awareness or JBFSA US

Army Communication Electronic Command CECOM's greatest invention – Blue Force Tracker. co-developed Marine Corps is the path of least resistance.

The military has always done one thing very well—form individuals into groups working synchronized in time – space (use of geo-spatial map overlays) towards accomplishing a myriad of missions such as transacting in food, water, fuel services in host nation agreements already established in most countries. and reused in German military OOTW Operations Other than War. Deriving common building blocks from JBFSA common to stock exchange, First Response Systems (heartbeat / heartbeat messages) is key [LINK http://sawconcepts.com/index/id20.html](http://sawconcepts.com/index/id20.html)

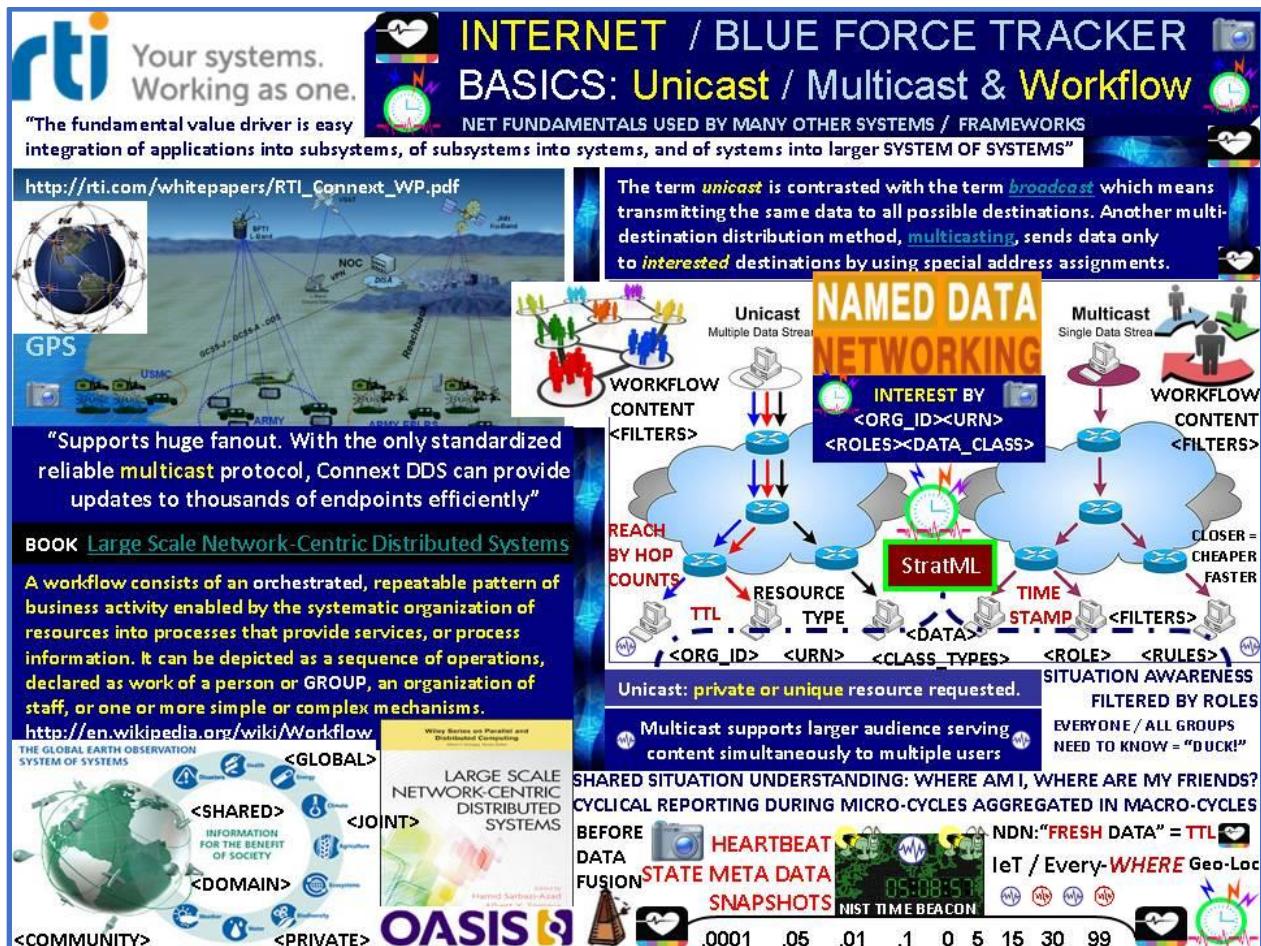


FIGURE 5: TEMPLATE SYSTEM OF SYSTEMS BLUE FORCE TRACKING / ABCS

The US Army was experimenting with using networks and router / router subnets to emulate orders and schemes of maneuver. To determine if a squad or platoon was mission capable or where it was supposed to be and equipped with the requisite resources: food, water, fuel, ammo etc,' data had to be sampled and forwarded using a minimum of network resources -- in other words TIME. The Internet Protocol was examined closely and it was re-discovered that time interval frame assignments

were unassigned / available to transport additional state meta data. Heretofore unassigned time intervals set aside for future use were used to carry data about the organization -- it's unit designation or Organizational Identifier Org\_ID, it's geo-location and resources URN Uniform Resource Name. SOURCE [LINK](#)  
<http://sawconcepts.com/index/id37.html>



FIGURE 6: Federate, Federations / Distributed Autonomous Organizations DAO

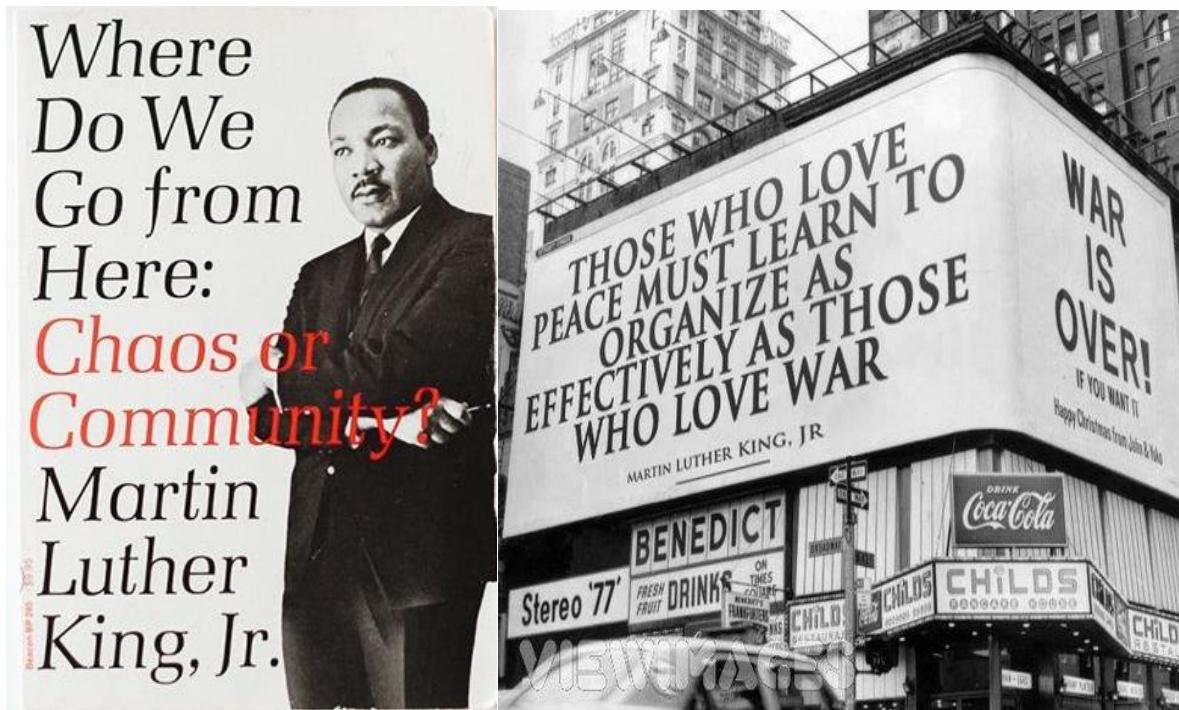
FEDERATION: from Latin: foedus, gen.: foederis, covenant characterized by a union of partially self-governing states or regions under a central (federal) government. In a federation, the self-governing status of the component states, as well as the division of power between them and the central government, 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 re-used as a procedural template framework is key to forming and maintaining sustainable Trade Federations as Distributed Autonomous Organizations DAO's / DAC's Corporations.

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. Shown above is a 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 in use by Bitcoin community

The Heart Beacon Cycle Time - Space Meter main use case: synchronizing geo-spatial temporal Eco - Econometrics among Trade Federations / DAO Distributed Autonomous Organizations. Members of trade federations agree to use standards, processes, shared components / building blocks and conventions.

The trade federation's adaptive procedural template checklist is agreed upon as items as minimum requirements to join a trade federation (cloud computing term). Entries to the procedural template checklist -- a clipboard of things needed to accomplish a goal (establish a trade federation) refer to detailed treatises.

Project: form trade federations of autonomous communities, states / sovereign nations following a procedural template checklist promoting synchronization among geo-spatially dispersed groups. Federated groups follow a procedural template guiding group activities across time - space to achieve synergy, synchronicity and inter community cooperation where activities are orchestrated from grassroots to capitals, from micro to macro-economic cycles. SOURCE [URL](http://sawconcepts.com/index/id5.html)  
<http://sawconcepts.com/index/id5.html>



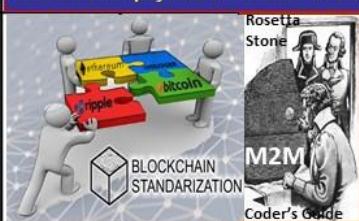
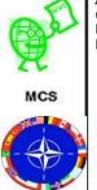
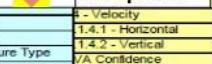
FROM	GCCS-A	ALPHA-NUMERIC BREVITY CODES			CODE GUIDE	Information Elements Roles	
ASAS	C002 C203 F002 F014 F015 F541 S201 S309	C002 C203 F014 F002 F541 F015 S305 S201 S309 S507	ATDS	MCS	C002 C203 F002 F002 F014 F002 F541 F015 S305 S201 S309 S507	• COI Determination Org Interaction	
		USMTF / XML MTF FORMATTED MESSAGE CATALOG = 300 + messages info exchange sets using common, CONSENSUS Message Text Formats MTFs. MTFs specify </CONTENT> / info agreed by group consensus presenting information in a logical, well specified unambiguous layout resulting in a highly efficient info payload to overhead ratio		INFOCON	C203 C400 D630 E500 F002 F014	• Search and Discovery	
	A423 C203 C505 F002 F014 F015 F541 S201		Rosetta Stone M2M Coder's Guide	A423 C400 C505 F002 F014 F015 F541 S201	'SYMBOLS RULE THE WORLD'	• Ontologies STANDARDS	
	MCS					• Taxonomies REFERENCE	
						• Metadata Attributes / Filters ('Org_ID') {"URN"}	FILTERS
							
MESSAGE CATALOG 300 + Use Cases		Data Elements: entity, attribute, relationship equivalents			FFUDN: Field Format Unit Designator # FFIRN Field Format Index Reference # Structured military messaging ID's messages, message sets, data element, symbol fields BY Form Field Position & NUMBER		
Information Categories and Examples							
Object Categories	Examples	Location	Movement	Identify	Status	Activity	Intent
OOB	<b>SYNTAX LEXICON</b>	STRUCTURED DATA lat/long	EXCHANGE spd/hdg	Message country / alliance, type/class	Sets readiness	targeting, reconning	COA {"Java JS"}
Infrastructure	Comm, power, transportation, water/sewer	Machine Trust Language network, grid	throughput, flow rates,	name, part-of relationships	BDA, op levels	repair, maintenance	YAML expansion
Sociological	Culture, religion, economic, ethnic, government, history, languages	ER Model temples, historic structures	Class Diagram Table	Relational Database Object DBMS	XML DTD / Schema Element	TADILS Message	MTF Message
Geophysical	Terrain, weather, climatology, oceanography, astrometry	feature lat/long, alt/dpth	Attribute	Field / Column	Child Element or Element Attribute	FFRN / FFN / FFUDN	
		Domain Value PURCHASE CODES	PURCHASE CODES	Instance, Value	FEDERATE	DUI	FFUDN
PROCESS MESSAGE BY PRECEDENCE UNIVERSAL EVENT / ALERT MESSAGE BUS							
OPERATIONAL NODES / ACTIVITIES							
DATA	SYSTEM FUNCTIONS	PERFORMANCE					
11.4 - Classification		11.8 - Kinematics					
11.4.1 - Category		11.8.1 - Pos / Vel / Acc (PVA)					
11.4.1.1 - Confidence Level		11.8.1.1 - Acceleration					
11.4.1.1.1 - Angular		11.8.1.1.1 - Angular					
11.4.1.2 - Estimate Type		11.1.2 - Linear					
11.4.1.2.1 - Alternative		11.1.2.1 - Estimate Type					
11.4.1.2.2 - Evaluated		11.2.1 - Estimated					
11.4.1.3 - Value		11.2.2 - Observed					
	PURCHASE CODES	11.2.3 - Predicted					
		11.2.4 - Uncertain					
SYMBOL	Friend	Neutral	Hostile				
2525C	Partner			Competitor			
				4 - Velocity			
				11.4.1.3.5 - Surface	1.4.1 - Horizontal		
				11.4.2 - Platform / Point / Feature Type	1.4.2 - Vertical		
				11.4.3 - Specific Type	1/A Confidence		
				11.4.4 - Type Modifier	1 - Bearing Angle		
				11.4.5 - Unit	2 - Bearing Angle Rate		
					3 - Covariance Matrix		

FIGURE 7 Syntax Lexicon Library 300 + Message Template NATO Use Cases

Syntax is represented by template spreadsheet form fields "FFIRN's", "FFUDNS" in structured military messaging where the form number and field position has significance and reduces data type ambiguity in message set parsing, processing.

Our proposal is to reuse the logic behind structured military messaging form field unit identifiers in commercial use cases. A method to convert syntax conventions among the myriad metaphors and memes -- a Rosetta Stone syntax lexicon library is needed. LINK <http://sawconcepts.com/index/id4.html>

The HBC involves a heartbeat flash message universal event, alert message bus. It is based on NATO's best practice, 300 + structured data exchange templates, micro-macro (economic) situational awareness sync delta data exchange schedule. The Heart Beacon cycle includes a universal metrics measurements physical meme (see Supreme Court Alice Corp Vs CLS Bank) for use among myriad Bitcoin Blockchain internet of money Block-Time arbitrage memes to support standardization of a one world economic system of systems.

Cyclic updates of state meta data snapshots / heartbeat messages from micro-to macro (economic) cycles distributed among a system of systems is simply powerful and is key to forming the net Grail. The military adopted the policy of only sending changes or "heartbeat sync deltas" for the same reason the Bitcoin community must adopt the same paradigm. SOURCE [LINK](#)



FIGURE 8: NATO STRUCTURED DATA EXCHANGE MESSAGE TEMPLATES

The HBC is based on NATO's best practice, 300 + structured data exchange templates, micro-macro (economic) situational awareness sync delta data exchange schedule. The Heart Beacon cycle includes a universal metrics measurements physical meme (see Supreme Court Alice Corp Vs CLS Bank) for use among myriad Bitcoin Blockchain internet of money Block-time arbitrage memes to standardize, sync a one world economic system of systems.

Sending changes, not the entire document or the "sync delta's" in military parlance conserves bandwidth and increases throughput. The military relies on "heartbeat" messages as do stock exchanges -- i.e., FIX ("108") heartbeat messages, First response, time sync systems etc, etc. 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. SOURCE [LINK](#)

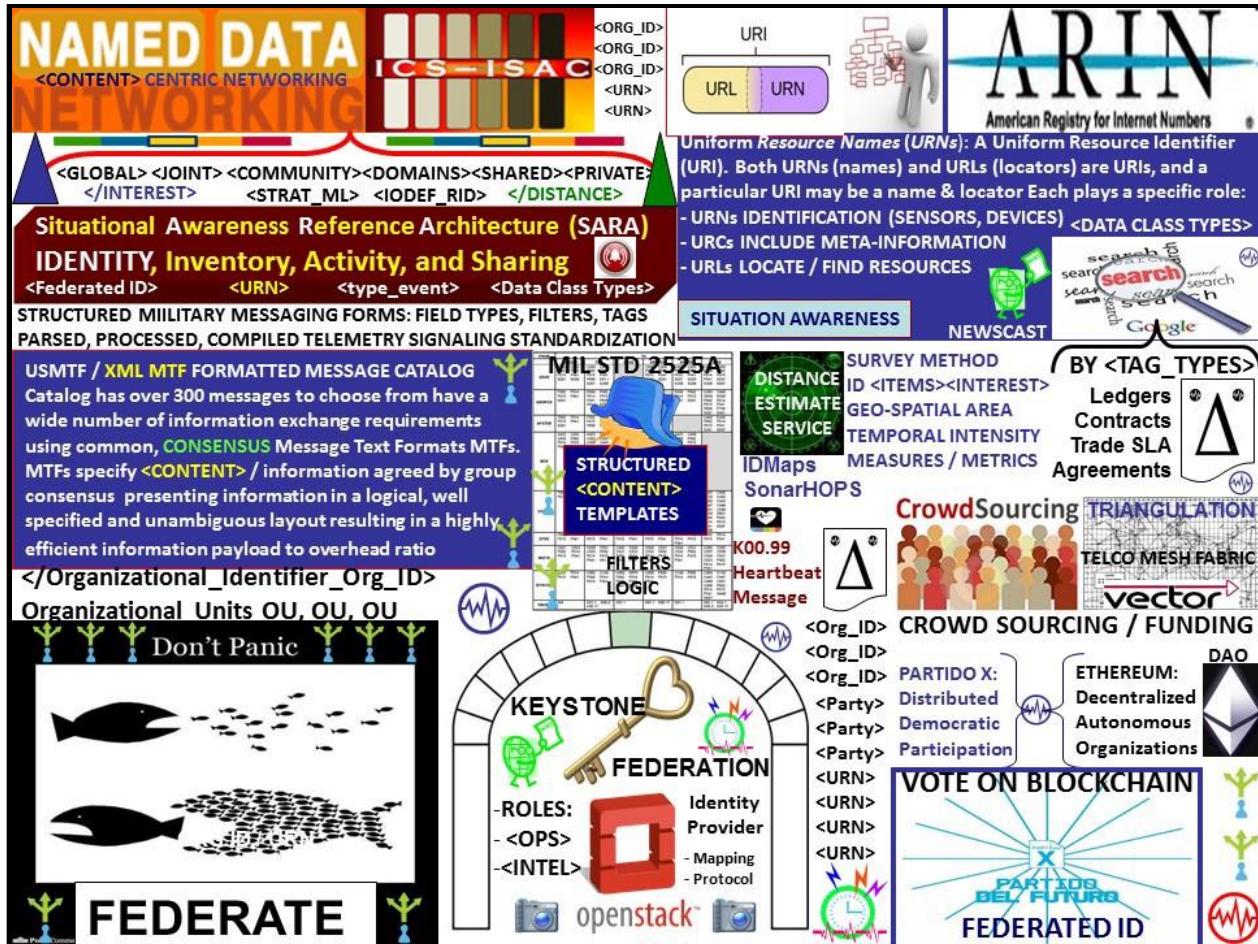


FIGURE 9: FEDERATE AND GRADUATE / FEDERATION SYNTAX LEXICON

Project: form trade federations of autonomous communities, states / sovereign nations following a procedural template checklist promoting synchronization among geo-spatially dispersed groups. Federated groups follow a procedural template guiding group activities across time - space to achieve synergy, synchronicity and inter community cooperation where activities are orchestrated from grassroots to capitals, from micro to macro economic cycles. Distributed Autonomous Organization / Corporations DAO - DAC federated trade organizations.

Synchronous, reliable, predictable cyclical update of state meta data snapshots across a system of systems is flexible, and adaptable across many use cases. The System of systems engineer approach improves systemic, sustainable solutions through cyclic, reliable, predictable signaling, telemetry, news-casting of sync delta updates across a network of networks defining equitable metrics, meters for trade arbitrage among federated, autonomous trade groups SOURCE [LINK](#)



FIGURE 10: Firefly Inspired Heart Beacon Algorithm

"The shortest path to the knowledge of truth is through nature" Luxor Temple Inscription: LINK <http://sawconcepts.com/index/id22.html>

The Earth Intelligence Network will benefit from a universal algorithm that includes flash heartbeat messages reporting changes to the system of systems such as events / alerts. We propose an algorithm based on nature to form a neural network emulation conceived by the University of Hungary and Bologna Italy whose alumni includes the Borgia Pope.

The Heart Beacon Cycle—by whatever description or naming meme is not a new idea. Re-use of Battlefield Digitization / Network Centric Operations research for

First Response was conceived by the German Military early last decade. Re-use of the military's skill at taking individuals and forming them into groups working towards common goals, projects, purposes e.g., participating in a Ecologically responsible Trade Federation supported by system of systems signaling, telemetry—an Annex K Signals-Telemetry Annex for Bucky Fuller's Spaceship Earth's Operating Manual



FIGURE 11: TERRA Trade Reference Currency TRC & firefly heartbeat event bus

Thomas Edison and Henry Ford proposed a currency based on a commodity basket index in 1921. A FEDCOIN / WORLD coin pegged to a commodity basket index would follow in Thomas Edison's 1921 footsteps. 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 two main building blocks to reshape our world and provide building blocks for Governance 2.0.

Satoshi Nakamoto: "#Bitcoin is intended to be paired with a market place" "the blockchain stores references to market indexes" SOURCE: Satoshi Nakamoto:

"Bitcoin is intended to be paired with a market place" "the blockchain stores references to market indexes" [LINK](http://sawconcepts.com/index/id6.html) <http://sawconcepts.com/index/id6.html>

SOURCE: Edison's Monetary Option: [LINK](#):

<https://www.supermoney.com/2014/06/thomas-edisons-view-money/>



FIGURE 12: Economist Milton Friedman's K % Rule / Firefly – Heartbeat Algorithm

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.

Economist Milton Friedman's K percent % \$ rule advocates establish an economic periodic pulse representing a countries real GDP. The firefly-heartbeat algorithm could sample time - series databases to arrive at a statistical mean value index comprised of leading economic indicators that would determine currency levels released by the Federal Reserve. A countries currency or FEDCOIN or the World's standard currency World-Coin could be based on actual values of commodities.

A statistical mean commodity / currency price index derived from firefly algorithm / closest heartbeat is needed to adjust for the myriad Bitcoin variations i.e., fork splits, coin counts, proof of work Vs proof of stake age, velocity, voting assignment methods, coins pegged to precious metals, or to a currency index of 22 other currencies (VEN) that pose an issue to Bitcoin's fungibility 1 to 1 substitution among coins. A composite Bitcoin price is published by many different sources daily. A universal, code, program neutral service based on a method to valuate Bitcoin types among a variety of metaphors / memes is needed to support an economic heartbeat. SOURCE [LINK](http://sawconcepts.com/index/id43.html) <http://sawconcepts.com/index/id43.html>



FIGURE 13: FEDCOIN / WORLDCOIN commodity index based Economic Heartbeat

**FEDCOIN / WORLDCOIN:** Use Edison's, Milton Friedman's visions in concert with an firefly-heartbeat algorithm developed by the University of Bologna, University of Hungary = WORLDCOIN

- TERRA TRC TRADE REFERENCE CURRENCY described by Economist Bernard Lietard

- WAVES: TOKENIZES NATIONAL CURRENCIES

- ECONOMIST MILTON FRIEDMAN'S K% RULE

SOURCE [LINK](http://sawconcepts.com/index/id9.html) <http://sawconcepts.com/index/id9.html>:



FIGURE 14: BEACON COMMUNITY SYNCHRONIZATION:

We can synchronize ourselves and our cities in time—space for a common purpose: ecologically sound econometrics i.e., through use of a Signals and Telemetry annex for Buckminster Fuller's Operations Manual for Spaceship Earth. The HBC provides a firefly inspired heartbeat flash message universal event, alert message bus. Pentagon C4ISR systems have 300+ structured data exchange templates that are operationally, iteratively scheduled, synchronized from micro to macro cycle [LINK](#)



FIGURE 15: High Frequency Trade HFT Circuit Breaker, Algorithmic Regulation

Use Case: algorithmic regulation. For example, 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.

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 -- enter STAAS Space - Time As A Service TAAS using a novel stochastic harmonization algorithm based on the mating behavior of certain species of fireflies that strive to sync during mating activity. The fireflies attempt to arrive at a uniform flash rate (consensus) is matched to the closest heartbeat cycle.

All sophisticated algorithms, bots, mots, scripts, agents make use of the heartbeat -- opportunities, intervals, windows in time. High frequency flash trade algorithms are

sophisticated and distributed -- however, all algorithms report to a single master controller. The heartbeat = start bit / stop bit, Time To Live = algorithm on / algorithm off / algorithm duration. Heartbeat </108> messages and the heartbeat time cycle can be used to limit trade sessions by trading session or trade time cycle e.g., one trade per cycle and / or n trades per session.

Math genius John Nash of Princeton's equilibrium theorem may be used for stock, currency market equilibrium through use of algorithms to control cartel behavior through sanctions and penalties. The increasing reliance on game theory as a foundation for auctions and electronic commerce, efficient algorithms for computing equilibria in multiplayer general-sum games are of practical interest for example, in finding a Nash equilibrium for an average-payoff repeated bi-matrix game polynomial-time algorithm. Finite-state equilibrium strategies can be found efficiently and expressed succinctly. Paper: A Polynomial-time Nash Equilibrium Algorithm for Repeated Games: LINK <http://bit.ly/1NWeLLu>

STORM / TRIDENT applies real time distributed computation of events at speeds of a million tuples per node per second using worker / task heartbeats to get put instructions for example, to Wall Street high frequency flash trade describing trade window Time To Live TTL and start, stop commands e.g., stop commands to runaway stock exchange trading sessions.

Time cycles match Bitcoin blockchain transaction rates currently estimated to be 3 – 7 per second with High Frequency Flash trade rates. Project Lightning's sync delta approach -- sending only the changes to ledgers from one (heartbeat) time cycle to the next instead of refreshing the entire ledger is one solution for trade speed parity. SOURCE [LINK: http://sawconcepts.com/index/id18.html](http://sawconcepts.com/index/id18.html)





FIGURE 16 ENERGY TOKEN ECONOMY METRICS – METERS

Heartbeat Messages used in power, internet systems: shows energy grid protocols that use a heartbeat, heartbeat messages. IEC C37.118 Harmonization and Synchronization is used across smart grid applications and specifies a heartbeat update interval in milliseconds -- depending on the time sync source. Micro-grid use is set to increase dramatically in both military and commercial applications.

The ability to accurately, reliably and consistently meter changes in power consumption between a community specializing in micro-grid energy production and a community specializing in ecology module purifying water or producing bio-mass can monitor usage in terms of surpluses or shortages based on the last sync delta update across a consortium as a basis for exchange based on group concurrence such as Service Level Agreements SLA performance measures. Why the "water drop in pond" / sonar and "Paul Revere" metaphors, memes? Because Supreme Court Alice Corp Vs CLS Bank states "claims may not direct towards abstract ideas" Internet TCP/IP "hops", "pings" are abstractions -- they do not physically exist whereas the Navy's use of sonar under water is a well known physical meme example as is Paul Revere's "hops" or rides from town to town. Physical is the

opposite of abstract. Actually, there were many riders out the night of Paul Revere's ride. Revere's name was used because it rhymed with the words listen and you will hear.. See Sct 573 134 2347Alice Corp Vs CLS Bank court ruling SOURCE [LINK](http://sawconcepts.com/index/id16.html): <http://sawconcepts.com/index/id16.html>

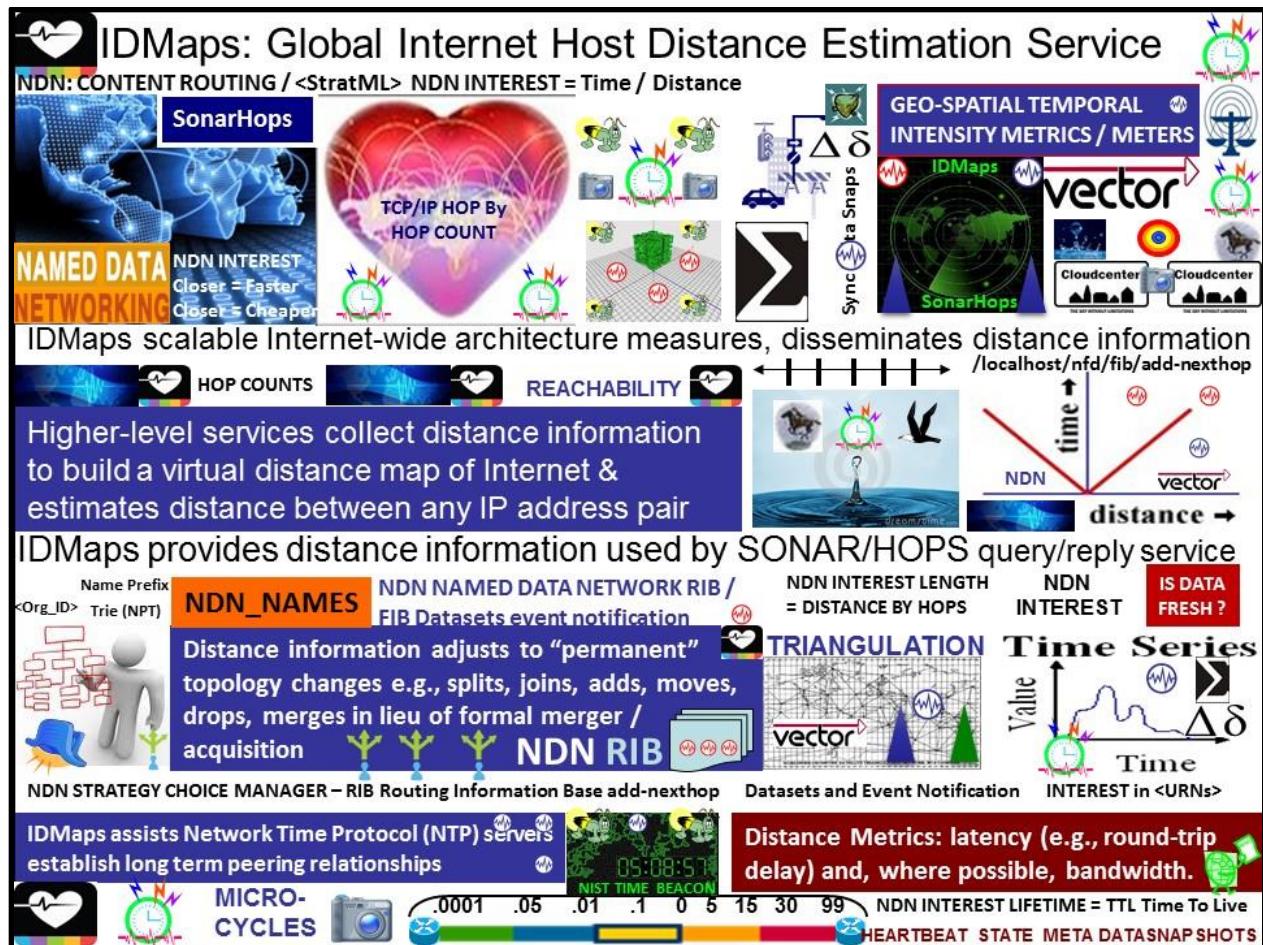


FIGURE 17: IDMaps – SonarHops Distance Estimation Service

GOAL: [#Cloud](#), [#IoT](#), [#Blockchain](#) Service Level Agreements SLA incentivized Eco friendly transactions leveraging bitcoin's micro payment function supporting the TERRA Trade Reference Currency TRC by economist Lietaer For example, closer = cheaper, closer = less fuel ? 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. The Heart Beacon Cycle Time - Space meter describes universal geo-spatial econometrics and meters and includes distance location services such as IDMaps - SonarHops. Geo-spatial temporal techniques like IDMaps /SonarHops and the firefly heartbeat stochastic harmonization method can be used to account for trades distributed across time zones and trading on the stock exchange floor and off where the length of the fiber optic cable is significant in High Frequency Trade volume.

Globalization involves multi-national corporate entities vying for control of regional resources. A proven strategy to identify, track, and monitor resources regionally within the global economic matrix is needed. The Heart Beacon Cycle: a procedural template listing tools, syntax, processes useful in forming, maintaining a system of services providing consistent scheduling of micro-services reporting to macro-cycle updates to decision support overlays and scheduling signaling, telemetry exchanges among a collective, distributed system of (economic) systems. SOURCE [LINK](#): <http://sawconcepts.com/index/id24.html>

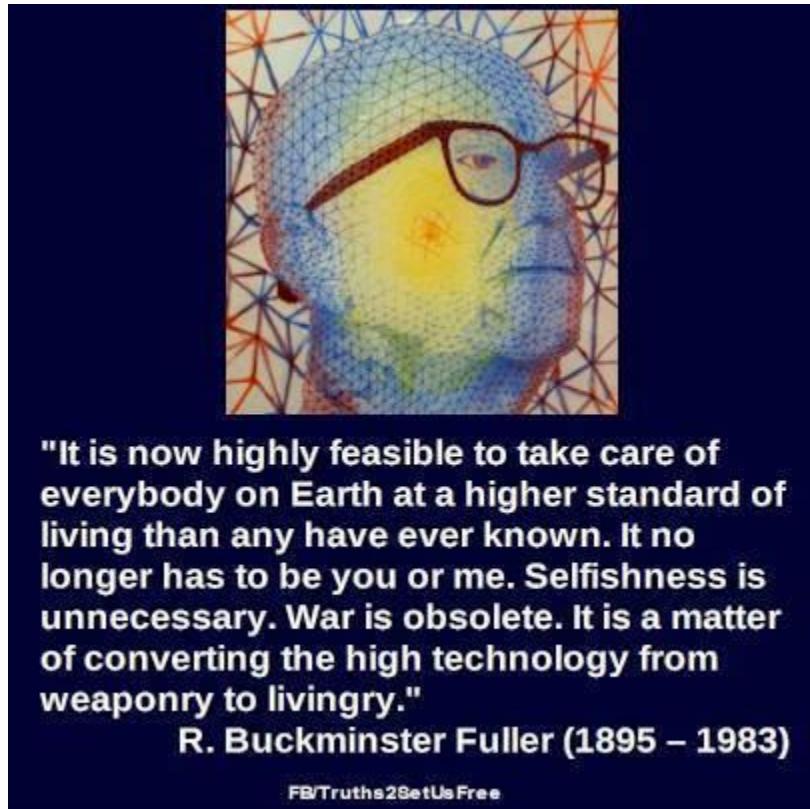


FIGURE 18: SIGNALS AND TELEMETRY ANNEX FOR OUR SPACESHIP EARTH

"We can synchronize ourselves and our cities in time - space for a common purpose: Dr. Jose Arguelles of the Law of Time dot org -- ecologically sound econometrics i.e., through use of a Signals and Telemetry annex for Buckminster Fuller's Operations Manual for Spaceship Earth. The HBC involves a heartbeat flash message universal event, alert message bus. It is based on NATO's best practice, 300 + structured data exchange templates, micro-macro (economic) situational awareness sync delta data micro to macro eco economic exchange schedule.

Ecologically sound econometrics - The Heart Beacon Cycle Time — Space Meter USPTO 13/573,002 is a Signals, Telemetry annex for Buckminster Fuller's Operations Manual for Spaceship Earth. Our proposal is based on a proven system of systems building blocks and best practice framework leveraging a signaling, telemetry heartbeat flash message universal event, alert message bus.

EVERYDAY SHOULD BE SPACESHIP EARTH DAY see article on Medium dot com  
SOURCE [LINK](http://bit.ly/2onq90G) SOURCE [LINK](http://sawconcepts.com/index/id56.html)



RBF "the secret to change is build a new model that makes the old model obsolete" / RBF "Earth is a spaceship that cannot be resupplied" WHAT IF EVERYDAY IS SPACESHIP EARTH DAY ? What if we formed economic trade federations incentivizing environment friendly business practices leveraging Bitcoin's micro-payment capabilities supporting the TERRA Trade Reference Currency TRC demurrage resource handling charges and pledged our fealty to Spaceship Earth ?  
SOURCE [LINK](http://sawconcepts.com/index/id42.html)



FIGURE 19: “The Secret to change is to build a new model making the old model obsolete” RBF Richard Buckminster Fuller

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 to reshape our world and provide the building blocks for Governance 2.0.

Ecologically responsible economics—either we demonstrate responsibility towards the planet we live on or we don’t—it’s that simple. The Heart Beacon Cycle is a swords to plowshare re-use of tax subsidized research into optimal use of individuals joining groups synchronized in time-space to accomplish common goals e.g., optimal geo-spatial, temporal econometrics, vectors to reduce for example, CO2 carbon footprint due to inefficient transport, resource vectors through a novel, improved use of an algorithm based on nature and NATO best operational practice, and Incentives for ecologically sound economics. The German Military cited Battlefield Digitization / NEO Net Enabled Operations OOTW in 2003, why postpone the inevitable? SOURCE: [LINK http://sawconcepts.com/index/id20.html](http://sawconcepts.com/index/id20.html)

Earth Day every day on the Bitcoin Blockchain leveraging Bitcoin / Ethereum's micro-payments to subsidize TERRA TRC Trade Reference Currency demurrage fees. If a one world anything is going to happen any time soon, NATO will provide the template system of systems. Earth Day Every Day on the Bitcoin Blockchain. Use Bitcoin, Ethereum etc. based apps micro-payments in concert with TERRA TRC Trade Reference Currency & add Pentagon system of systems best practice then shake, system integrate well [LINK http://sawconcepts.com/index/id42.html](http://sawconcepts.com/index/id42.html)

The Heart Beacon Cycle Time – Space Meter and Applique Overlay is a Signaling and Coordinating Instructions Annex for Buckminster Fuller's Operating Manual for Spaceship Earth. Adaptive use case: geo-spatial, temporal econometrics, vectors to reduce CO<sub>2</sub> carbon footprint due to inefficient transport, resource, logistic vectors. Bitcoin, Ethereum and other token based blockchain strategies are ideal to remunerate, compensate logistic demurrage parking, commodity handling fees supporting the 1991 Belgian Economist Bernard Lieitaer's TERRA TRC Trade Reference Currency proposal that was partially articulated by Thomas Edison and Henry Ford in 1921 and by economists in the minority during the late 1800's. Edison felt that crops held their value best over time.

Given energy is everywhere as Tesla and Einstein are thought to have believed or stated in so many words, and given our climate change challenges, it's time to move to an energy token based economy where tokens are traded for other commodities. For example, a region that excels in food production could federate to trade its excess or surplus production with another region with excess production in another area. As micro-cycle sync delta reports are aggregated by processing them at regional, off site collection gateways, unused resources in macro-economic strategic stores can be matched with unmet need at the regional, local, micro-economic level cross levelling resources improving regional sharing where closer is cheaper and closer uses less fuel thus reducing Earth's carbon footprint

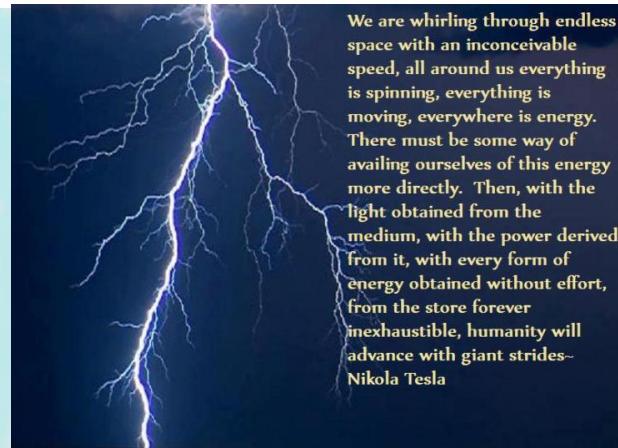
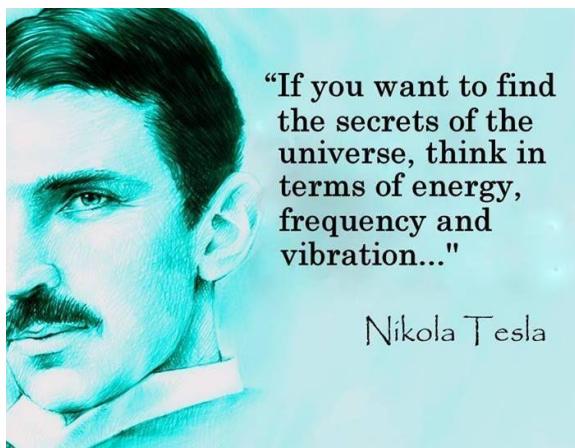




FIGURE 20: BITCOIN BLOCKCHAIN -- Blueprint for a New Economy Melanie Swan

'Blockchain: Blueprint for a New Economy', is a book that considers theoretical, philosophical, and societal impact of digital currencies and blockchain technologies. It takes one beyond the currency and smart contracts to show how the blockchain is in position to become the fifth ground breaking computing paradigm after mainframes, PCs, the Internet, and mobile/social networking. The blockchain has the potential of being a worldwide, decentralized record for the registration, inventory, and transfer of all assets: finances, property, intangible assets such as votes, software, health data, and ideas. The book comprises such topics as creating cheaper, more efficient services traditionally provided by nations, making better use of the data-mining network. Blockchain technologies could be used to monitor public health, crowdfund projects, provide community supercomputing, and even birth artificial intelligences. Network Economies: Economic System as a Configurable Parameter One way to implement the direct model is through micropayments, where users click on icons to allocate pre-specified amounts of Bitcoin or token to take community actions. The central issue in decentralized p2p content systems to be prototyped and tested is user willingness to micro-pay for content operations. Economic System as a Configurable Parameter LINK <https://lnkd.in/bFMwAyp>

SCRIBD LINK: <https://www.scribd.com/document/358073517/OPERATION-Rig-UNRIG>

Scientists marching is awesome. So is sustained, systemic action instead of protesting whoever is selected to read teleprompters. In addition to protesting the lack of ecological protective actions, we can focus on forming local and regional equitable, sustainable trade federations where closer is cheaper (geo-spatial econometrics) re-using NATO procedures derived from in use host nation agreements for food, water, energy... swords to plowshare style. [LINK](#)



HEART BEACON SCULPTURE PORTLAND OREGON [LINK](#)

<https://www.codaworx.com/project/heart-beacon-city-of-portland>



FIGURE 23: Heart Beacon Cycle Time – Space Meter Summary

- 300 + Structured Data Exchange Message Template Use Cases
- Syntax Lexicon Library Coder's Guide with Alpha - Numeric Brevity A.I. codes
- leT / IoT, Big Data, Internet of Money Bitcoin Blockchain synchronization
- Metrics Meters for Ecologically Responsible Econometrics
- Swords to plowshare formation of Eco-responsible, sustainable Trade federations**
- adaptive procedural template checklist of things, processes, tools, building blocks derived from NATO Network Enabled Operations - Battlefield Digitization - Network Centric Warfare

We need to 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/id11.html): <http://www.sawconcepts.com/index/id11.html>



Simple Always\* Wins Concepts LLC caveat... when standing on shoulders of giants

**SAW Concepts LLC SOURCE: USPTO Application # 13,573,002 The Heart Beacon Cycle Time Space Meter and applique overlays includes methods to form (currency) price indexes and land / property survey methods, metrics, and meters IRS memo #1421.**



David Vs Goliath? No, standing on the shoulders of giants