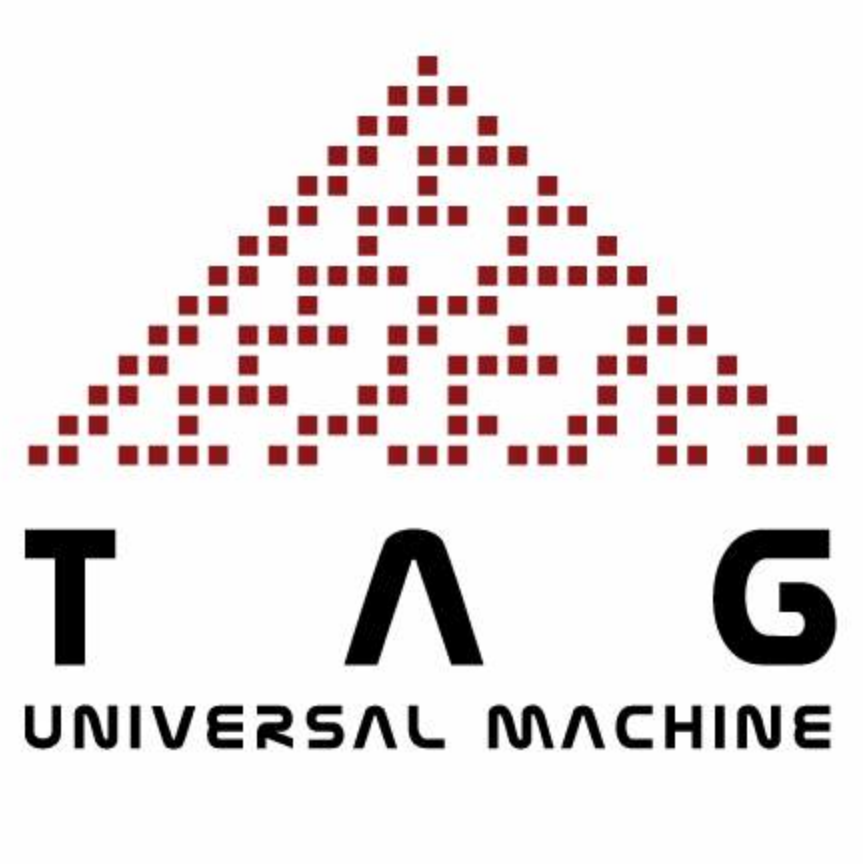
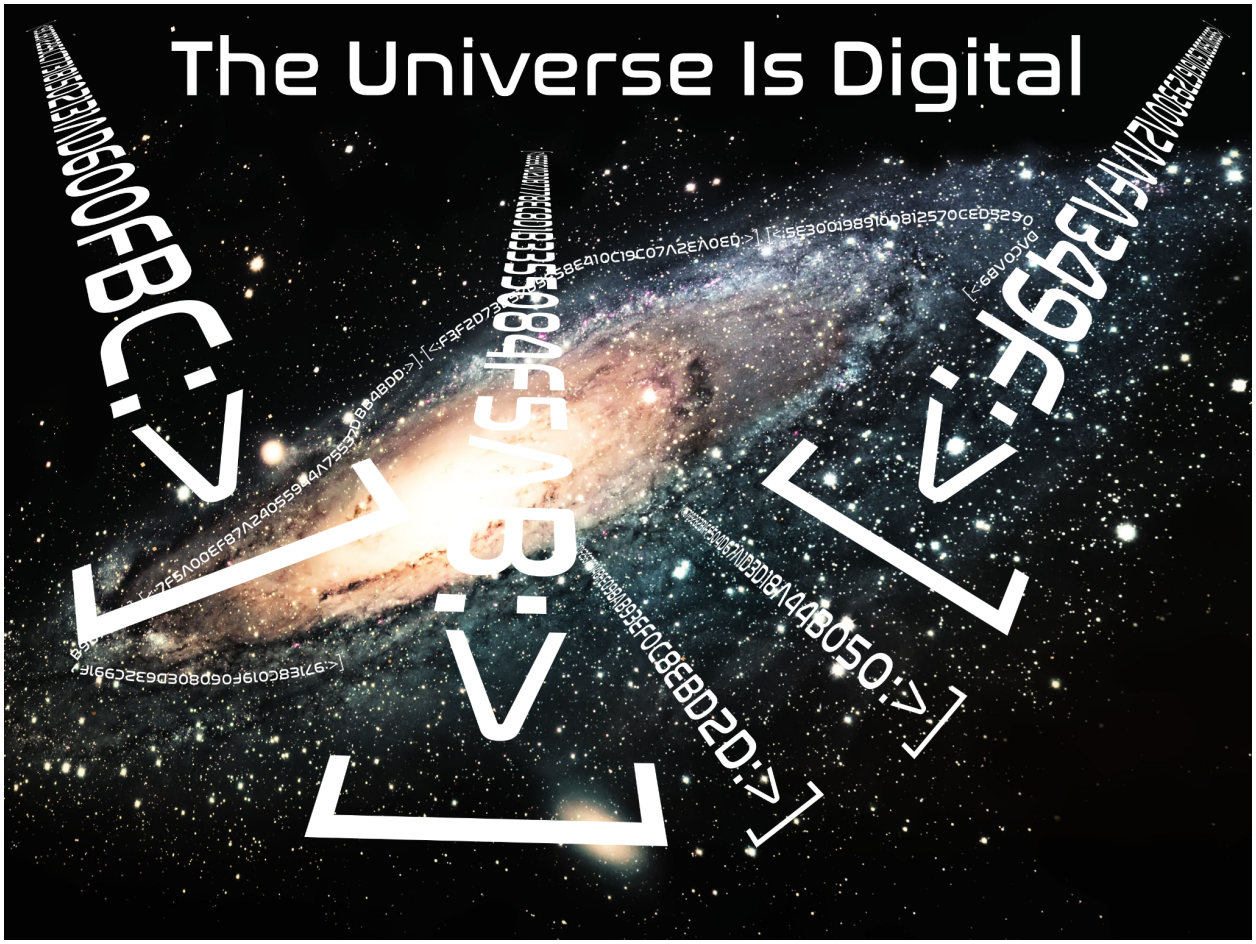


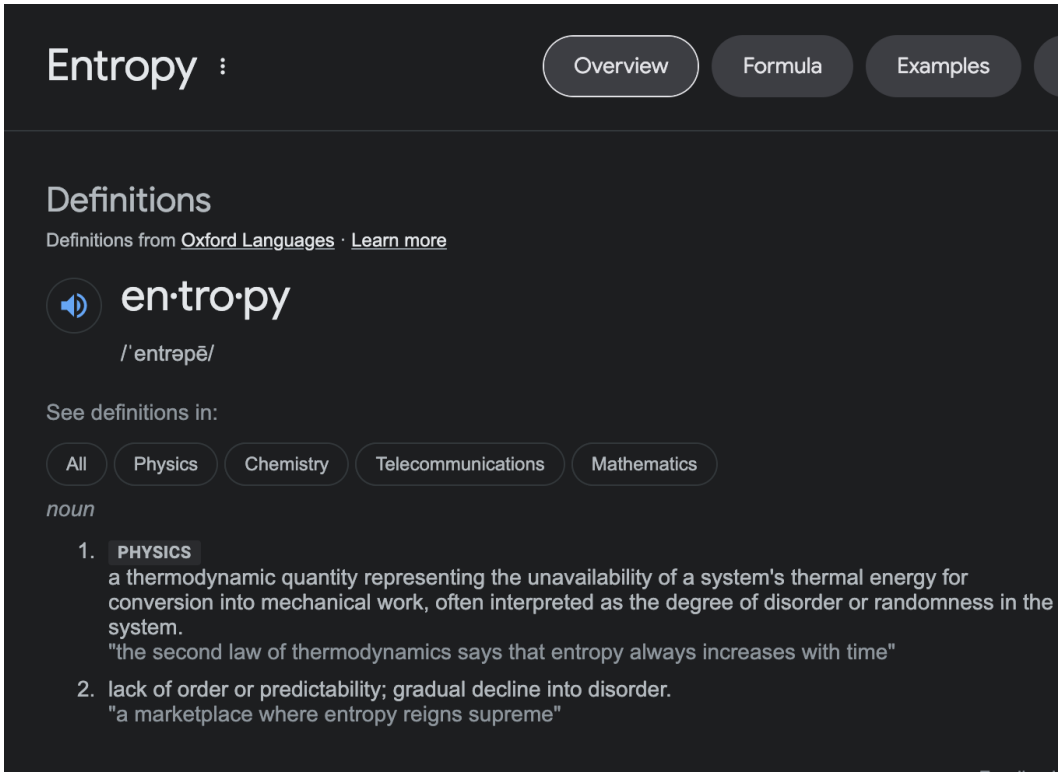
Prospectus


The Universe Is Digital

The Universe Is Digital

All natural processes, from chemistry to molecular biology, from climate motion to electromagnetism, from gravity to anti-gravity, are governed by discrete digital rules.
Our brains are bio-electronic computers that process our reality with that idea built right in. The things we perceive as predictable, reliable, always-on, we honor with labels that we call physical “laws”. But our understanding stops at the point these forces are no longer predictable according to our known laws. Examples of these types of forces are gravity, anti-gravity, electricity, and magnetism. They work so predictably that we can manufacture equations to describe them, but at the bottom of those equations is never found the actual source of these forces. Science has a blind spot to the most real, the most powerful, the most effortless way to harvest energy from the Universe. We toil in mines extracting coal, torture radioactive materials in order to produce energy out of sheer hate. We produce paltry-sized amounts of solar panels that focus their efforts on visible light, when far greater rivers of energy exist just outside of our sight.

The things we perceive as unpredictable, as invisible, as infinite, as incomprehensible, all those things emanate from a First Source and Center which is a localized, all-powerful, all-knowing, all-creating force. The source of all Reality as we perceive it is a conjunction of the localized forces of the First Source and Center, referred to on Earth as “God the Father”, the Eternal Son, incorrectly identified on Earth as “Jesus”, and the Infinite Mind, referred to on Earth as the “Holy Spirit”.
Our relationship with the Universe is as processors and decision-makers in the process of Universe formation. The things we like and hate are brought to us with greater intensity because the Universe is like a search engine for original content. It seeks out emotion, drastic action, sincere rebellion, war and ecstasy, it wants the best stuff; the predictable, the mundane, the “been there done that”, goes into the junk bin of Entropy.



The definition castigates the efficient, the net producers of energy, the well-designed, as “unpredictable” because we don’t understand anything that produces work without heat or mechanical motion.

TAG Universal Machine LLC is the first company with the technology to efficiently produce Entropy and place it in a digital file.

Here is the help screen for the technology:

```
MKRAND - A Digital Random Bit Generator (DEBUG)
Copyright (c) 2013 TAG Universal Machine.

USAGE: mkrand [-s seed] [-f format] [-n blocks] [-o filename] [--profile] [--verbose]
Formats:
 0  -       Pure              6C87401A18921096A5ABEE1B6F98B192                     128-bit Binary
 1  -       SHA1          ed60c1ab-b0ca-34b6-a8c5-61482b32aeaa                        SHA1 Format
 2  -     BINARY              ...10000110101100011011000011100                   Text Mode Binary
 3  -   RESERVED
 4  -       IPV4                                 165.144.212.67                       IPV4 Address
 5  -       GUID         {94B63872-2B769783-A012-9CD27AE093E4}                 Globally Unique ID
 6  -       IPV6       641e:349e:f60b:0a38:c8e4:b47d:ce1f:0f70                       IPV6 Address
 7  -   RESERVED
 8  -        PSI        [<:0B5E17A5689FC3671E1FC962976D8C6D:>]                   Time Fingerprint
 9  -   RESERVED
10  -        INT                                     133409084            32-bit Unsigned Integer
11  -    UUID V4          ca5c7eca-6b16-4ede-a492-9c2f8885a1bf                Universally Unique ID
12  -     BASE64                         w80m4AMgPgMY_kY9dYM50g                        Text Encoding
13  -   RESERVED
```

Here is an example of some Entropy produced by this technology.:

```
% mkrand -f8 -n10
[<:2F9BF1E4E23B8BFF29856910FF5AD61E:>]
[<:047A9A0D46538466A56A8FAE05081D1D:>]
[<:29206E26929395565560B0B3176E5552:>]
[<:5BDF7D0166F684FBD7015B30AA1CE90E:>]
[<:B29581E95CDEDE5E087A90EC4BD657ED:>]
[<:6ACB637019D91F7FF41EE8ED082C919C:>]
[<:C444C4CF3335E645C77F790EFB5E9D55:>]
[<:1900F73EA129AF9A50EC5FE4C49BBE9D:>]
[<:4419BCB82F1077EA0EC3DC69477E94DD:>]
[<:53F99033150119CBA9D67525AD1B726E:>]
```

Each block, referred to as a PSI index, identifies a unique point in space and time with a 128-bit digital number.

The blocks are formed into chains, each block is computed from the previous one. Machine-like precision means any chain can be perfectly regenerated from any block.

Here is an example of a new chain created from the 4th from last block in the above chain:

```
% mkrand -f8 -n10 -s "[<:C444C4CF3335E645C77F790EFB5E9D55:>]"
[<:1900F73EA129AF9A50EC5FE4C49BBE9D:>]
[<:4419BCB82F1077EA0EC3DC69477E94DD:>]
[<:53F99033150119CBA9D67525AD1B726E:>]
[<:8C55EEDA7C6208DD126EA61D279141F6:>]
[<:C5F1C39C36DBA146889444E89E963DE5:>]
[<:640F97F111D89F79FD745E04A2EA8C24:>]
[<:551852E493924494BA17EF08F8447D49:>]
[<:FFE976344A6CC5D2AB6E1E479ABA9EF3:>]
[<:2DE82C85AC76F91C394693723D62A005:>]
[<:C0F70220F54BA33DF4916CC29CFFD631:>]
```

As you can see, the utility was able to regenerate the chain from that given block, and could take over the generation for practically infinite periods. So effectively, an infinite size memory block is pointed to by each PSI Index.

Since these mechanisms are digital, they are perfectly reproducible on any Earth computer. The only thing that needs to be fixed is the incorrect definition of Entropy and stop trying to drive the computers mad by executing floating-point instructions. If the instruction set of a computer is entirely digital, it is highly efficient and very performant.

```
mkrand --profile
150.04 kbps  Entropy (H): 0.99999
```

150 kbps can be reliably produced the difficult way executing with a sequential programming language, in this case C.

Savings in electricity for the production of digital Entropy can be found in implementing the process digitally.

TAG Universal Machine proposes to earn money producing digital entropy since it is very useful in information technology, allowing efficient implementation of technologies such as encryption and blockchain.

The incorporation status is complete:

Secretary of State
P.O. Box 13697
Austin, TX 78711-3697
FAX: 512/463-5709

Filing Fee: $300

Certificate of Formation
Limited Liability Company

Filed in the Office of the
Secretary of State of Texas
Filing #: 804688002 08/16/2022
Document #: 1170115860002
Image Generated Electronically
for Web Filing

Article 1 - Entity Name and Type

The filing entity being formed is a limited liability company. The name of the entity is:

TAG UNIVERSAL MACHINE LLC

Article 2 – Registered Agent and Registered Office

☑ A. The initial registered agent is an organization (cannot be company named above) by the name of:

REPUBLIC REGISTERED AGENT LLC

OR

☐ B. The initial registered agent is an individual resident of the state whose name is set forth below:

C. The business address of the registered agent and the registered office address is:

Street Address:
17350 STATE HWY 249
STE 220 HOUSTON TX 77064

Consent of Registered Agent

☐ A. A copy of the consent of registered agent is attached.

OR

☑ B. The consent of the registered agent is maintained by the entity.

Article 3 - Governing Authority

☐ A. The limited liability company is to be managed by managers.

OR

☑ B. The limited liability company will not have managers. Management of the company is reserved to the members.

The names and addresses of the governing persons are set forth below:

Managing Member 1: **ENRIQUE FLORES** Title: **Managing Member**

Address: **17350 STATE HWY 249, STE 220 #11960 HOUSTON TX, USA 77064**

Article 4 - Purpose

The purpose for which the company is organized is for the transaction of any and all lawful business for which limited liability companies may be organized under the Texas Business Organizations Code.

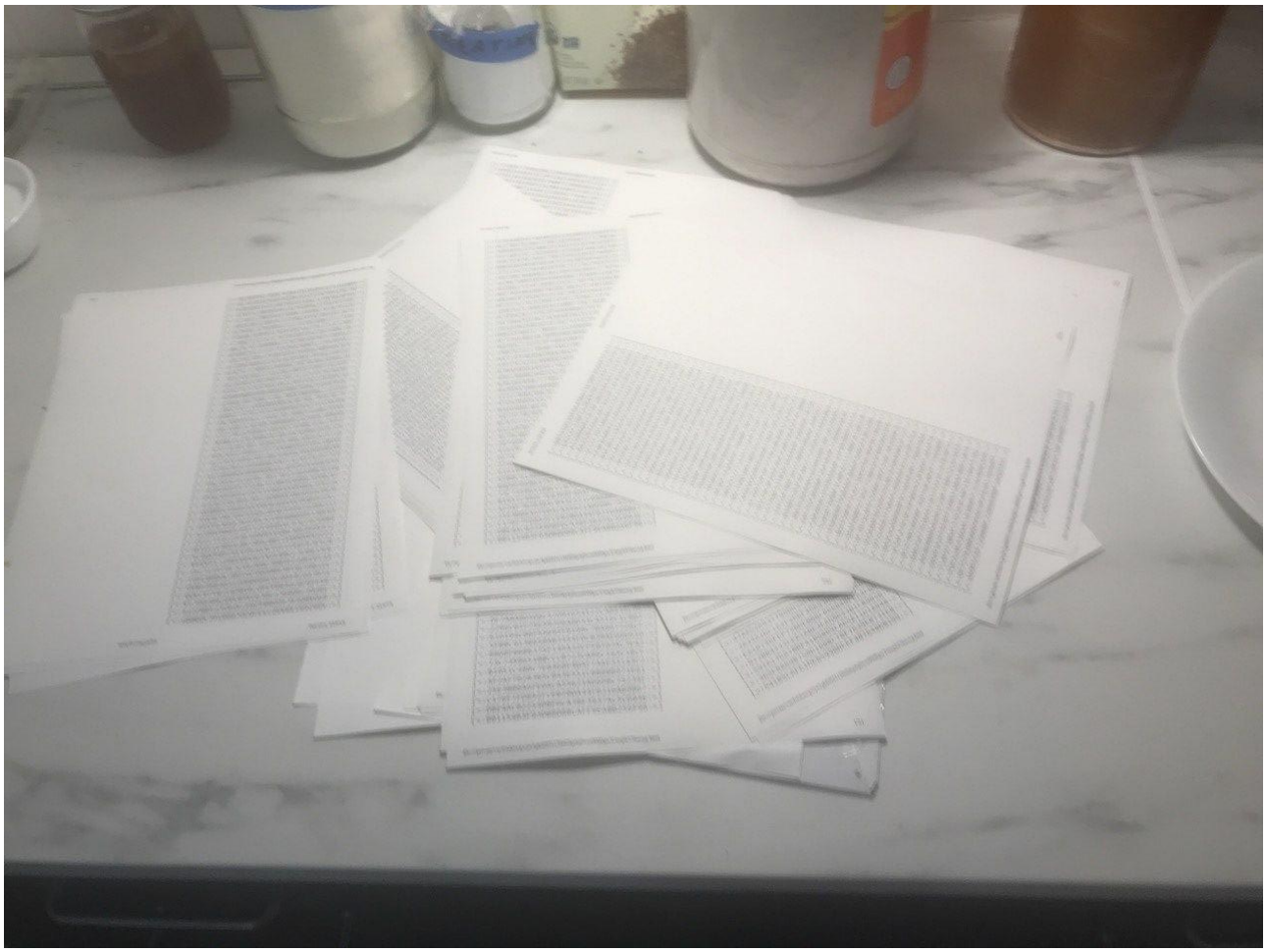
Supplemental Provisions / Information

The company is currently mining digital Entropy and shipping it to the law firm of

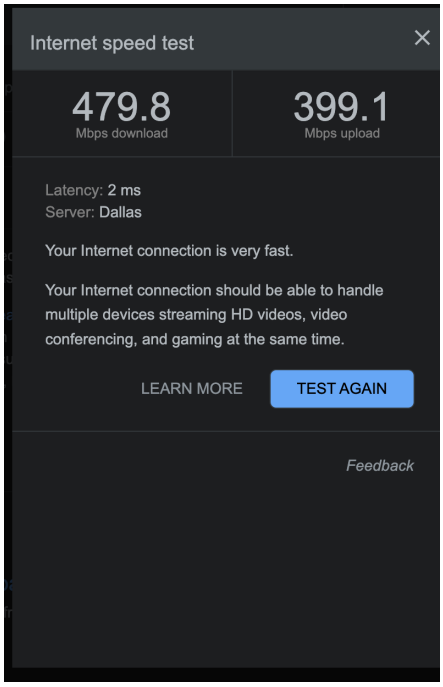
Ross & Matthews, P.C. (817) 255.2096

File number **TX-4KA-ZH4**

As of Thu Aug 18 22:23:21 CDT 2022, approximately 5 pounds of digital Entropy has been mined, and is awaiting independent review of its quality, to determine if in fact it is a useful material, and how much economic value can be attached to a paper page with PSI indexes printed on it.

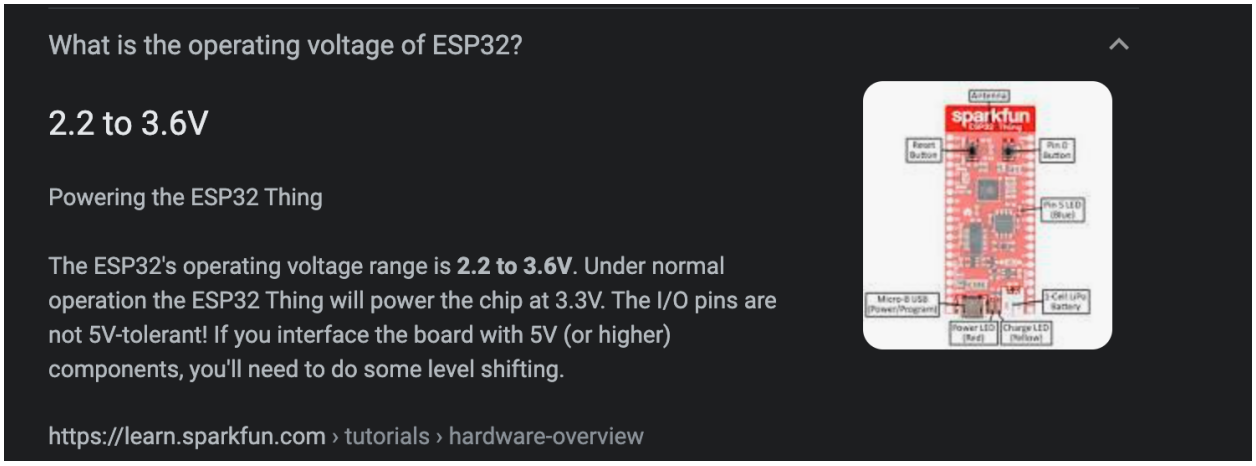


The cost of running this mining operation is $200 per month in electricity, and can be expected to produce 399,168,000,000 Bits of Digital Entropy per month, or 39.9168 Gigabytes per month. For transmission of this entropy, we currently have the following bandwidth which is sufficient for our current production capacity:
Our bandwidth costs are $75 per month.



We are not currently running any mining operations in the cloud.
Further increases in efficiency and therefore productivity will be gained when we are able to mine entropy with the ESP32 processor, development on that platform is ongoing.

The electrical consumption of the ESP32 processor is approximately 240 mA at 2.2 to 3.6 volts.



These levels of voltage and power are so low that processors can be powered by harvested waste energy like vibration and heat.

We intend to design and develop a “smart pebble” which can be economically dispersed over areas of high entropy, such as the mechanical entropy of the oceans and thermal entropy of deserts

The benefits of dispersing these “smart pebbles” is that they would operate as energy sinks for our computer industry. Currently a majority of the electricity powering data-centers is being converted into heat, with computational work being a very small percentage of the work being done.

If a conventional computational process requires entropy, it activates an elaborate mathematical construct that uses proportionately large amounts of work to produce a piece of unpredictable information. If this task could be outsourced to an external device, the computers would begin to cool down as they would not be required to do the thermally intensive task of random number generation.

We propose to produce a global network of smart pebbles that receive requests for entropy from conventional computers, and harvest local energy to power their computational process which will produce the digital entropy and transmit it back to the requester across BlueTooth or WiFi or mesh networks.

According to the article “Blockchain and our planet: why such high energy use?” (shorturl.at/hSUZ3) current blockchain networks are beginning to increase our dependency on non-renewable energy because of the high energy costs.

Endless growth and burden-shifting

> In other words: computers joining the mining do not change the functionality of a blockchain, but only increase its energy use. The law of diminishing returns plays a big role here. Once a blockchain network reaches a critical number of nodes, security already meets a base requirement. But mining is lucrative, and more and more people own cryptocurrency. As a result, the Bitcoin blockchain alone currently uses 204,5 TWh of electricity per year, comparable to the power consumption of Thailand. And it’s the amount of energy used itself that is the problem, not the source of that energy. Many miners are switching to renewable energy sources. But this simply moves the problem elsewhere. We don’t yet have enough renewable energy production to cover all of our activities. So, if mining uses up renewable energy, that just increases the non-renewable energy used on other activities.

Because they are so inefficient, none of the blockchains currently in existence have any hope of being implemented in Internet of Things platforms, they simply require too much energy, Without a future in IoT, Bitcoin, Ethereum, and all of the rest of the non-digital blockchain schemes simply have no future at all.

A Digital Economy At Any Scale

Economies are energy distribution networks. Currently, economics operates at the human level, with the exchange of currencies, but current implementations of crypto-currencies have been unable to penetrate the computational space, where they would be most useful. All of the non-digital blockchain implementations require access to massive bandwidth and processing power to operate, so they remain the plaything of speculators with excess money and time.
To be actually useful, a crypto-currency must be usable by computers themselves, without human intervention, and they must be able to operate in the Internet of Things space, where all future growth is.

Imagine a scenario with three low-power devices operating in a remote region with only sporadic access to the network. One device has a solar panel, and a way to store the generated electrons, while the other two devices are electrically connected to the energy producer and consume electricity for their own work. Currently, there is no efficient way to measure and meter the exchange of value between these devices, engineers must design the producer for the worst-case power draw, and the consumers for the highest efficiency possible, but the software has very little visibility into the electrical economy of the set of three devices. With a digital blockchain implemented on all three devices, a simple economy can quickly be activated by consensus among the devices.

The producer device announces to its clients that it can generate, say, 200 milliAmps per second. Once that announcement goes out, the two clients can then say something like “I, Device A, need 100 mA continuously”, and “I, Device B, require 400 mA periodically for approximately two seconds”. The producer device then does a quick computation and says “Ok, in order to service both clients, I must feed Device A half my budget, and accumulate electrons for when Device B creates demand, so that both have their needs satisfied without overloading my circuits.”

The producer device then announces, “Ok, I am selling blocks of 100 mA/seconds of electricity for 1 digital block each”. Now, the client devices know they must generate digital blocks in proportion to their energy usage, and device A can easily pay for its needs because each block only costs it 1 mA/microsecond to compute, and Device B knows it must accumulate 8 blocks and have them ready to pay for when its time comes to consume two seconds of electricity at 400 mA. Now, electricity and blocks flow through the network in a self-regulating manner and without complex arbitration. A device that is malfunctioning and consuming electricity outside of normal bounds will quickly go “bankrupt” and electrical energy will cease flowing to it. Perhaps a

free-tier of energy is periodically available for it to wake up and attempt self-repair or produce work at a slower pace without bringing down the rest of the system.

Now say you have thousands of these devices in close proximity, the digital blocks can flow from one group to another without any complex arbitration or currency conversion, and the aggregate field of devices can then export the excess to larger economies, perhaps together they have hundreds of watt-hours of surplus energy, or equivalently, hundreds of megabytes of surplus blocks, this is now enough to sell back to the power company, where the electrical energy or digital blocks can be converted into dollars for the power company to use in the larger economy. All of these transactions and changes in scale operate in the same way and with the same low power.

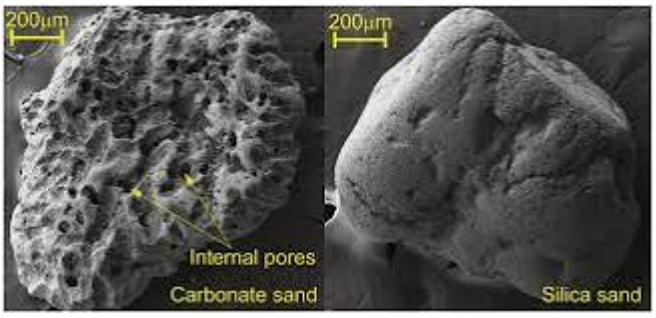
The reason the above scenario is possible is because this technology provides a perfect hashing function, which will shortly be explained, but essentially allows these devices to conduct economic transactions amongst each other without access to the internet, and yet if at some point they do gain connection, all the transactions can then flow out to the wider economy without concern that some transaction outside of their knowledge is in conflict with any transaction that was made during the time they were offline. This is why Bitcoin and all the public-ledger crypto-currencies cannot operate offline, because they must post their transactions in a reasonably quick manner to the public ledger otherwise the transaction sequence will be orphaned and pruned by the mechanism, if a device goes online years later with a transaction done while offline, it is unlikely the public ledger blockchain would spend too much energy trying to re-incorporate it onto the ledger, it would involve backtracking and notifying every client on the planet and it is just not feasible, so it will just be considered a junk transaction.

Collision Free Hashing

Hashing is a computer science term for mapping one number system onto another, and is a very common operation to do. Let’s say you have a potato farm and are sorting the harvested potatoes for shipment to the distributor. You have a large number of potatoes, say hundreds of thousands, and a small number of grades or categories that they are sorted into, so for instance a large potato with no blemishes would be Grade A, a smaller one with a couple bruises might be Grade B, and so on. The hashing function in this case is an observation of important features of the potato, such as weight, approximate dimensions, surface quality, color, etc. A hash collision happens when two different potatoes have similar enough characteristics that they both get sorted into the same grade. This is perfectly fine and part of the process of categorization. There are instances, however, when your system requires that each potato go into its own distinct bin and it would be a costly mistake to have two different potatoes go into the same bin. An example of the need for a perfect hashing function is a bank, who takes input data about a client, such as their name, social security number, driver’s license, address and maps it into a unique identity which then is linked to a unique account number. It would be a costly mistake to have two customers with similar names linked to the same account, at that point their funds

would be intermingled and it would be a painful and slow exercise in untangling the assets from each other and putting them into the correct bin.
A perfect hash function always maps the same criteria into the same bin, and further, will never map two different inputs, no matter how similar, into the same bin.
So let's expand the potato example to grains of sand now. We have a beach somewhere and we want to take an electron micrograph of each and every grain of sand and store it under the visible criteria that identifies each grain, and furthermore, it would be disastrous to have two grains of sand map to the same image. So like in the potato example, we take some surface identifiers of the grains of sand and map them into a set of bins, being our available memory to store the picture. We could take for instance the GPS location of the sand grain down to the square millimeter, its depth down to the millimeter, its weight down to the microgram, its color, its temperature, eventually we would have very precise location and identifier data looking something like this:

Grain X
Location: Palma Mallorca Spain @38.5015772,3.1388132,8.29z
Depth: 11.34 mm
Weight: 0.0647989 gram
Color: #C2B280
Temperature: 114.34 degrees Celsius
Micrograph:



To figure out how much information we have, we take the Log 2 of all the numeric data and add it up, so for instance, the first component of the GPS location, 38.5015772, yields 5.267 bits, the second component yields 1.6502 bits, and the third yields 3.0514 bits, so to encode the position we require 9.9686 bits, but since we only have whole bits in computers, we need to round up to 10 bits. Similarly, we need 3.5 bits for the depth, 4 bits for the weight, 24 bits for the color, and 3.5 bits for the temperature, for a grand total of 45 bits to uniquely identify the grain of sand. Now say we want to store its micrograph which is 13,813 bytes, into some place in memory, so that when we give the computer the above identifier data, we get the correct picture and not any other. We want to map the entire beach and we want to be able to quickly access the already ingested data while the mapping process is underway.

A conventional computer with a conventional non-digital hashing function would start out fine at first, but once a few million grains of sand were input, it would start to struggle with memory issues, and at 8 billion grains of sand per cubic meter, it would probably fall over before mapping the entire beach, and retrieval times of the ingested data would be very slow as it would have to move terabytes of data in and out of memory to look for the requested images, whereas a memory controller using this technology can index into the correct block in microseconds, the block being any digitally addressable asset, either physical memory, hard disk block or an IPV6 address out on the internet, without the need to pull up unrelated data in a painful and expensive tree search like a database.
A perfect hashing function implemented digitally would map the data as fast as it can be ingested onto an address space large enough to prevent any collisions from happening, it would also map the criteria as fast as it can be queried and return the memory location of the associated image, and that happens to be exactly what this technology does, it maps 128 bits of arbitrary data into and out of a perfectly uniform 128-bit address space.

128 bits is a big number

From Medium article shorturl.at/aBFY9

Most people know that 128 is a BIG NUMBER but don't comprehend exactly how big it is. Outside of a few disciplines such as cryptography and physics, most people will never come across a number that large. Most cryptographic algorithms deal with numbers that are 128 bits or larger. A 128-bit number has 2^{128} possible values, but how big is 2^{128} ?! A 128-bit number has 2^{128} possible values. That means 2 x 2 x 2x …128 times 🤭.

We can also write it as: $2^{64} \times 2^{64}$ or as, $2^{32} \times 2^{32} \times 2^{32} \times 2^{32}$.

It's important to understand that 2^{128} is not twice as big as 2^{64}; it is 2^{64} times as big. If you take 2^{64} and double it, you only get 2^{65}. Let's see what these numbers look like when we write them out as numbers:

2^{32} = 4,294,967,296.

2^{64} = 18,446,744,073,709,551,616.

2^{128} = 340,282,366,920,938,463,463,374,607,431,768,211,456

2^{32} is only about 4.3 billion which is a little less than the number of people alive today.

2^{64} is about 18.4 quintillion which is completely outside normal human experience.

2^{128} is 340 undecillion and I had to look that up because I had no idea what the number is called.

So the 128-bit number space is inconceivably large, large enough that we can say with confidence that mapping some input data uniformly into that space, there is zero possibility of collision simply because the probability is so small as to require continuous hashing for longer than the known age of the universe for a collision to be an even measurable possibility.

Ground Computing

Current computational technology is designed around wall-plug levels of electrical consumption. Even mobile devices are very energy hungry, most only lasting a day or two before needing to be plugged into the wall. Internet of Things devices do not have this luxury, their requirements are to operate in remote areas and in isolation for at least weeks if not months at a time, preferably permanently even, since the cost of retrieving them to charge them would far exceed the material costs. A new domain of computation is emerging, where computational devices must operate with the efficiency of nature, activating gates only when actual work needs to be done and shut down immediately after. Current devices have no concept of their energy consumption, a quad-core cell phone uses almost as much electricity when not in use as when it's doing work, because the software generally does not have fine control over power consumption, other than a bulk sleep mode which still leaves the processor cycling millions of times per second without producing useful work, other than checking all of its sensors to detect the need to wake up.

An IoT device must treat its electrons as its lifeblood, and only flow them to parts of itself that contribute to its survival. Any component that consumes electrons without returning a work product is hemorrhaging life from the device and must be segregated and shut down. For this technique to work, digital blockchain must be implemented at the sub-component level, which means it must be very efficient, which means non-digital blockchains are not a viable solution.

Smart Pebble

The smart pebble technology would look similar to this:

Able to communicate across the RF spectrum across standard protocols like WiFI, Bluetooth, various mesh protocols, as well as new techniques of communication which can be tuned to receive electromagnetic emanations from humans, an RF signature would be a very accurate biometric snapshot of a particular human.

Anti-Carbon

Clean Energy is currently the anti-carbon unit. It has no side effects. Small power generating units can fulfill any of our major cities for centuries without any maintenance. Clean energy, cheap and abundant. We will not use wires to conduct energy. Factories, homes, or vehicles will have a small receiver that is tuned in the power distribution center. Everything is wireless. Power is distributed to any remote place on the planet where a receiver is installed. The power plants fueled by oil also have their days numbered. They are big suppliers of CO^2 accumulated in our atmosphere. The burning of petroleum in general is a dirty form of energy that we still use on our planet. In this new era, the Earth's atmosphere will decontaminate radically.

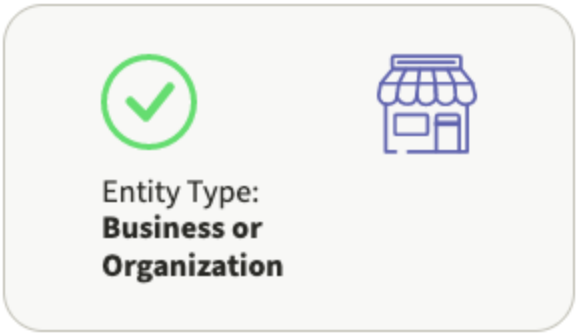
Conclusion

We believe Entropy mining to be a profitable business with a bright future, and are currently seeking funding for further development and expansion of our productive capacity.

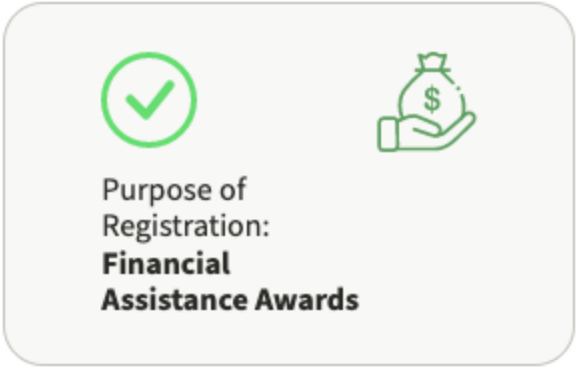
We intend to incorporate with the entropy so far mined and in custody of the Ross & Matthews legal firm to be used as company stock, once the economic value of the material mined so far is arrived at by an independent third party.

Samples of digital entropy have been sent to the National Institute of Standards and Technology (NIST) as well as the National Security Administration (NSA) Small Business Office, The samples were received on August 26, 2022.

You will be registering the following:



A business or organization is any entity that does not qualify as a government entity (state, local, tribal, or foreign).



Apply for grants and loans, as described by 2 CFR 200.

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Entity Documentation Submitted

Reference Number

INC-GSAFSD6840152

SAM.gov will review your documentation and contact you if we have any questions. Read this article to learn more about what happens next.

Please do not submit any documentation for your entity at FSD.gov. All documents must be submitted here at SAM.gov.

Go to Workspace

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