Not-So-Fungible Crypto:

Privacy vs Social Integrity

020 BLOCK

Hong Kong Blockchain Week.

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parsiq.io
https://parsiq.io
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Preface

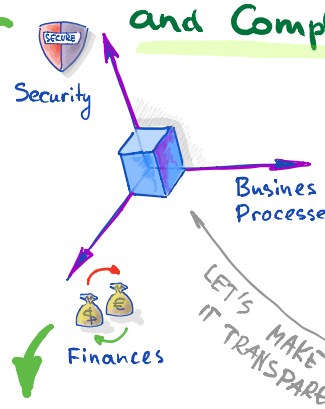
Cryptography.

PROVABLY FAIR
- Merkle Proofs
- Zero-Knowledge Proofs

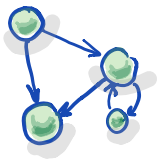
PROTECTED
- Asymetric cryptography (PKI)

Future of Audit and Compliance

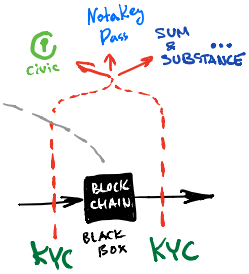
The new generation of auditors SHOULD be capable to audit digitalized dimensions of the business.



Smart Contracts DAO/DAPPS
- Business rules in Blockchain



LET'S MAKE IT TRANSPARENT



TRADITIONAL AUDITORS PREFER TO BLACKBOX BLOCKCHAIN PART OF THE PROJECT AND CHECK ONLY INPUT/OUTPUT GATES
it is a WRONG APPROACH!

SOME TIME AGO THIS PICTURE WAS PRESENTED BY
Blockvis
TO A BIG AUDITOR ENTITY...

IT WAS A vision...

Crypto-Currencies
- Transaction Traceability.
- Graph audit
- Deals and Taxes on BLOCKCHAIN

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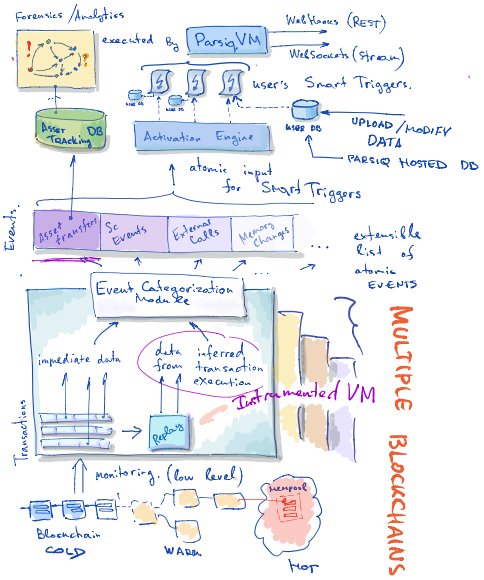
Now it's parsiq.io [under development]



- system for an in-depth analysis of multiple blockchains
  - EVEN AT THE LEVEL OF SUB-TRANSACTION ASSET MOVEMENTS
- Realtime notification engine, that allows continuous Busines Logic Audit via SMART TRIGGERS

NOW EVERYBODY IS ASKING ABOUT ANONYMOUS / TRULY FUNGIBLE COINS AND OUR POSITION ON PRIVACY.

[WE RESPECT PRIVACY] OK...

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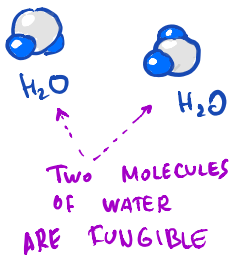
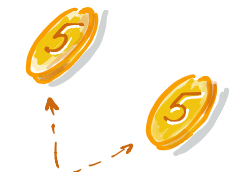
Fungibility

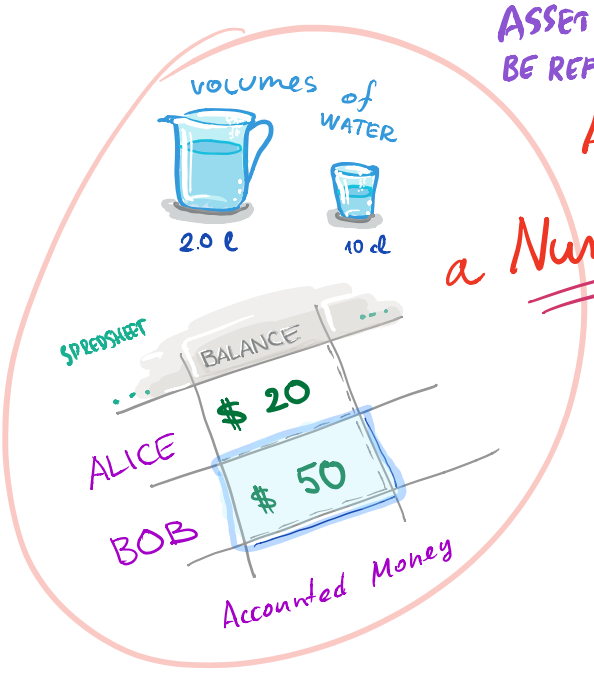


TWO MOLECULES OF WATER ARE FUNGIBLE



TWO Coins ARE FUNGIBLE AS WELL

Amount of the fungible ASSET COULD BE REPRESENTED AS A a Number!



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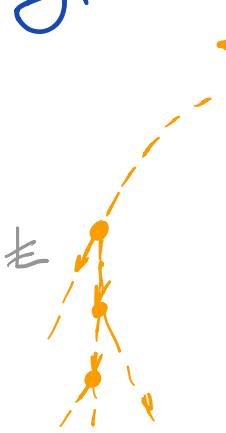
Crypto :

Main Concern : fungibility of BTC



Bitcoin WAS BORN TO BE Fungible

But IT IS NOT

AT LEAST AS IT EXISTS NOW

AND THE PLETHORA OF IT'S DESCENDANTS

THE SAME FOR ETHEREUM

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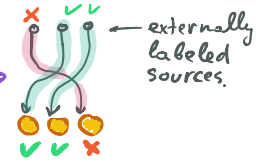
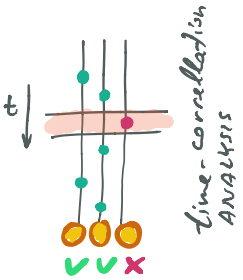
WHY ?

with appropriate game-theoretic incentivisation based

- IF THE PATH OF THE COIN IS TRACEABLE...
- IF TRANSACTIONS ARE TIMESTAMPED...
- IF TRANSACTIONS ARE STORED... IN A REPLAYABLE FORM
- IF YOU CAN PROVE TO SOMEBODY OTHER THAN THE RECIPIENT THAT YOU'VE PAID GIVEN AMOUNT IN PARTICULAR DIRECTION...





!!! ...

A LOT of other properties

then the coin is NOT formally FUNGIBLE

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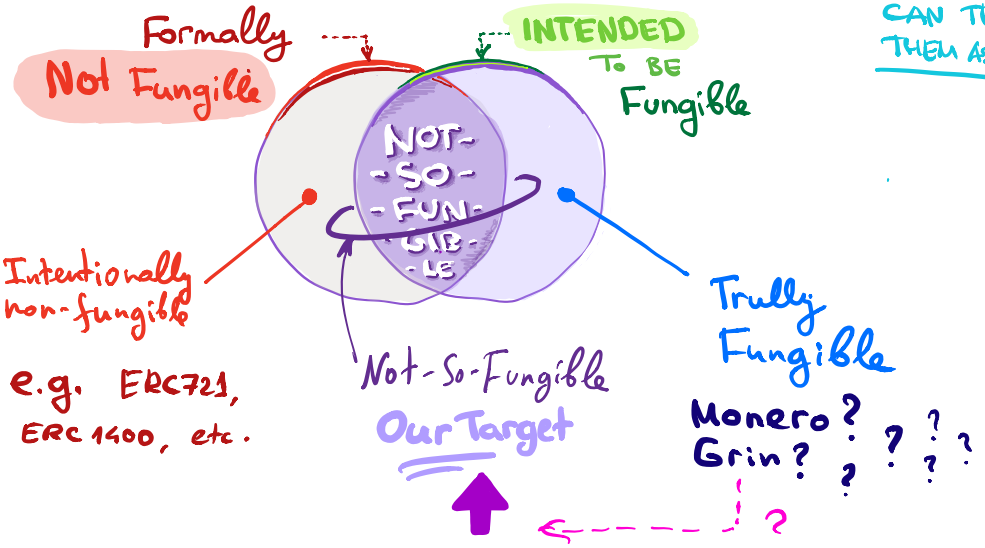
In this context we don't speak about

[identifiable assets distinct] **ERC721**, and other Crypto-Kitties

Yet WE CAN TRACK THEM AS WELL



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True Fungibility

is NECESSARY for implementing MONEY → 21th CENTORY

necessary for implementing

PRIVATE ANONYMOUS UNTRACKABLE MONEY }

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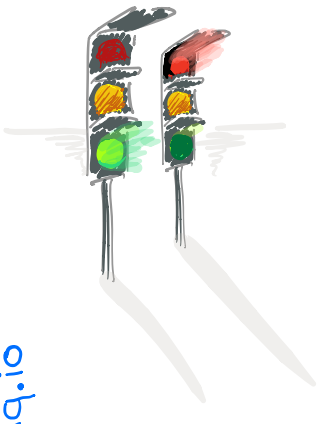
GAME-THEORETIC Result :



KNOWN AS "The Tradegy of Commons"
shows that SOMETIMES the society
without SOME INTELLIGENT REGULATION
tends to shoot itself into a leg.

E.g. Will you argue with the Traffic Lights ?

IS IT APPLICABLE
TO THE ANONYMOUS
UNTRACEABLE MONEY ?

↳ YET TO BE ANSWERED...

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$\int_{-\infty}^{+\infty} \frac{1}{0}$ Social Integrity

The liberty of one citizen
ends where the liberty
of anoter citezen begins

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Don't kill
Don't steal
Don't humiliate

« please tell me
who said that »
?

WHAT IS AT RISK ?

AML ⚡ CTF

COUNTERMEASURES BECOME INEFFECTIVE

NAIVE APPROACHE 2.

ASKING EITHER WEAKENING THE CRYPTOGRAPHY USED OR ASKING EMBEDDING THE BACKDOORS

NAIVE PROHIBITATIVE APPROACH

BAN ALL THE CRYPTO BY DEFAULT

OK, YET ITS A Progress...

NOT OK RUINS Privacy BETWEEN PEERS ! Hackers are welcome !

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SMARTER SOLUTIONS
The Parsiq Way

- Use any not-so-fungible crypto-currency imperfections, and status quo implementations

- To mitigate AML/CTF risks related to the accepted crypto
- To provide necessary information for investigations an fraud prevention

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SMARTER SOLUTIONS
The Parsiq Way

- Promote and Inegrate ZERO KNOWLEDGE proof-BASED SOLUTIONS FOR AML } AUTOMATIC RISK DELEGATION VIA BLOCKCHAIN
- Promote and Integrate cryptocurrencies with STATE-OF-THE-ART CRYPTOGRAPHY WITH SUPPORT OF OPT-IN/VOLUNTARY AUDITABILITY

MIMBLE WIMBLE + OPT IN AUDIT

=

BEAM.MW

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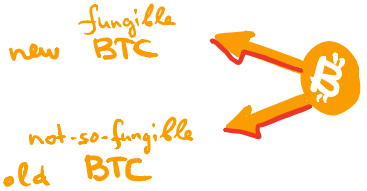
IS IT SUSTAINABLE APPROACH?

? "Fungibility should be implemented"

we see TWO SCENARIOS

Adam Back [at BHB'18]



fungibility enforced W/O auditability

fungibility enforced WITH opt-in AUDITABILITY

↑ YET ANOTHER BLOODY FORK

Sustainable growth

ANYWAY PARSIQ IS HERE

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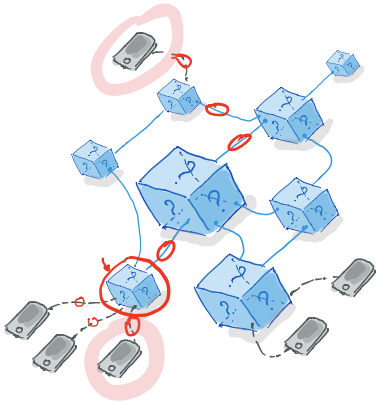
And What About Lightning Network?



SHORT ANSWER:

2-rd LAYER IT'S A PAIN

HOWEVER

WE SEE IT'S FUTURE PROBLEMS, AND WE PROBABLY SEE HOW TO ALIGN THE NEEDS, FEARS AND HOPES OF THE SOCIETY

with the Progress, Privacy and Social Integrity

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Thank You! Q/A?

[probably at networking]

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