A Tale of Ledgers & Blockchains

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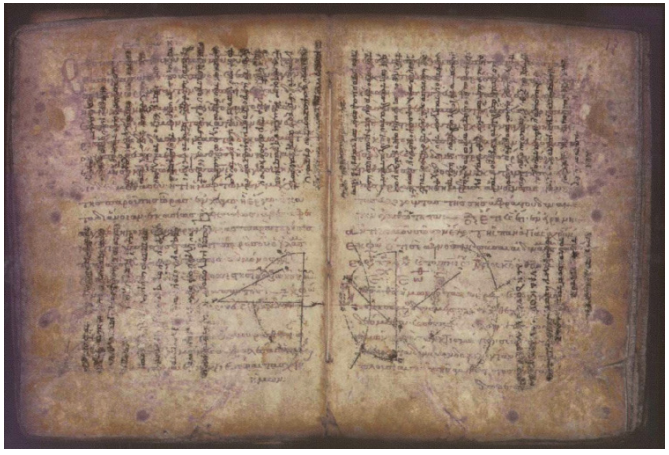
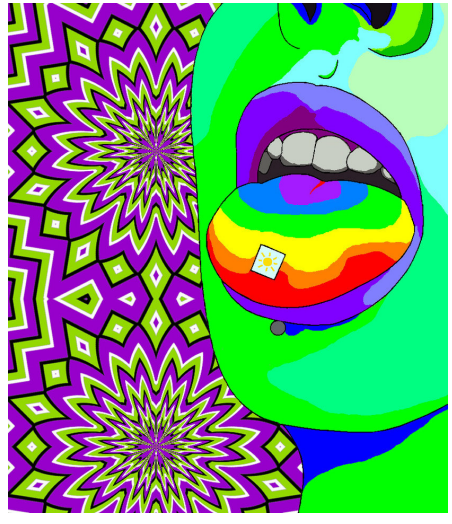
A brief history of data storage



amazon
REDSHIFT

...and then there were databases

- What do we need? *State!*
- Relational databases! ACID, awwww yisssss!
- When do we need it? *Wait...what do you mean?*
- NoSQL! BASE! (because AIDS was already taken!)
- No, no, not now....*any* time!



The time of analytics

- Immutability in the focus.
- Say something about Event Sourcing as if it's a good idea.
- Apache HBase - Stream all the things!
- Datomic - Storage is just a component. It's about facts!

Datomic architecture

define:ledger

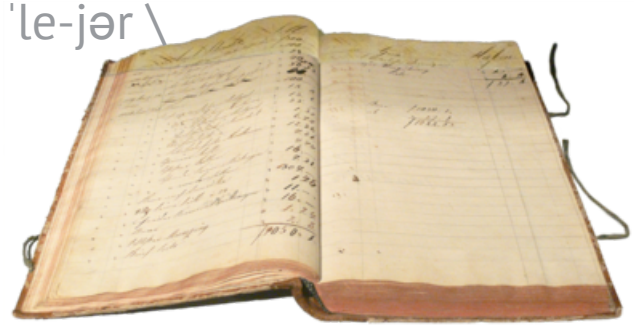
ledger (dictionary) noun led·ger \ ˈle-jər \

- book containing accounts to which debits and credits are posted from books of original entry

- First Known Use: 1588

ledger (us, here in the room, right now) noun led·ger \ ˈle-jər \

- an append only log of stuff!



Quis gubernat ipsos ledgericus?

- Centralized
- Distributed

"Finally" - exhales the audience

A blockchain is:

- A consensus based fault tolerant immutable distributed ledger.

A blockchain (typically) contains:

- Blocks - payloads with properties(e.g. Merkle root for verification).
- A consensus algorithm with a reasonable fault tolerence level.
- An identifier mechanism.
- Storage, networking(potentially sharding) mechanisms).

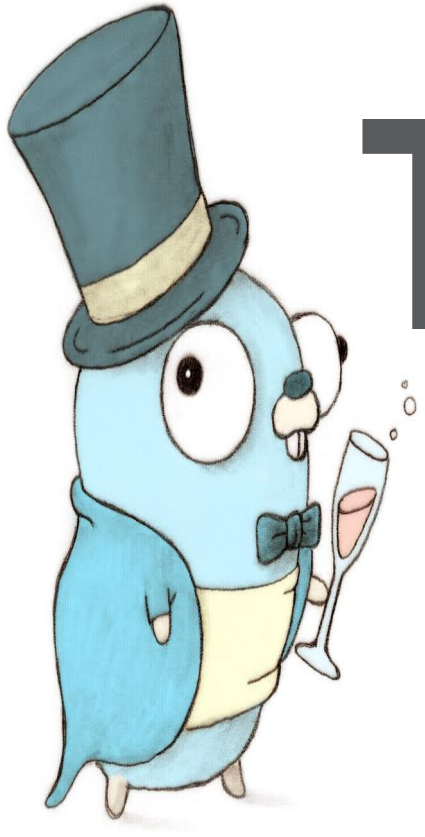
Blockchain as a platform

- Roll your own chain!
- How much worse could it be?
- Use a toolkit!
- Hyperledger X/Y/Z

HYPERLEDGER

The ~~Holy~~ Recap

- Immutable storage is here to stay.
- The mindset change towards building protocols is lacking.
- It's really just another tech. Make chains, not war.



Thank you!