BLOCKCHAINS FOR DUMMIES

A "HELPFUL" BOOK

BY

PAUL SZTORC

...in one draft.

Chapter One : Database

✳ A Blockchain is a database.

Illustration:

Databases
Blockchains

✳ What is a database?

It is a "base" of operations, where you store your "data".

Name	Eye Color	Height
Fred	Brown	74
Andy	Blue	80
Erin	Blue	68
.	.	.
.	.	.

A Database.

A NOTE ABOUT "LOGIC"

This book uses something called "logic".

P1) Socrates is a Man.
P2) All Men are Mortal.
C1) Socrates is Mortal.
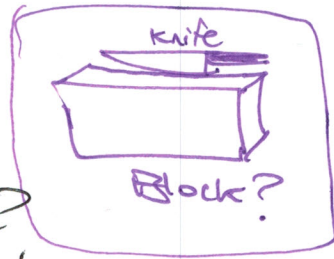
Sample

Mortal Things
Men
Socrates

Chapter Two : Block, Chain

There's no agreed definition of "Blockchain", because some people] aren't smart (and/or)
2] want consulting jobs at banks.

Blockchain = Blocks, in a Chain

?

Chain?

A chopping block?
A starting block?
An engine block?
No!

knife

Block?

A conceptual block!
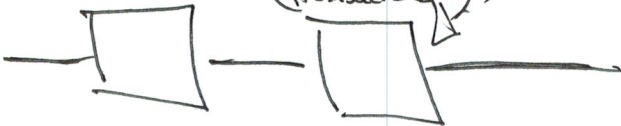
A grouping!

Data Block
Building Block
Soviet Bloc

Chain necklace, with jewels.

(group of transactions)

Yes!!

Block chain, with data blocks

Chapter Three: Internet Money

\# **Money** \# is a database of favors.

A → Favor → B

B thinks: "I **owe** him."
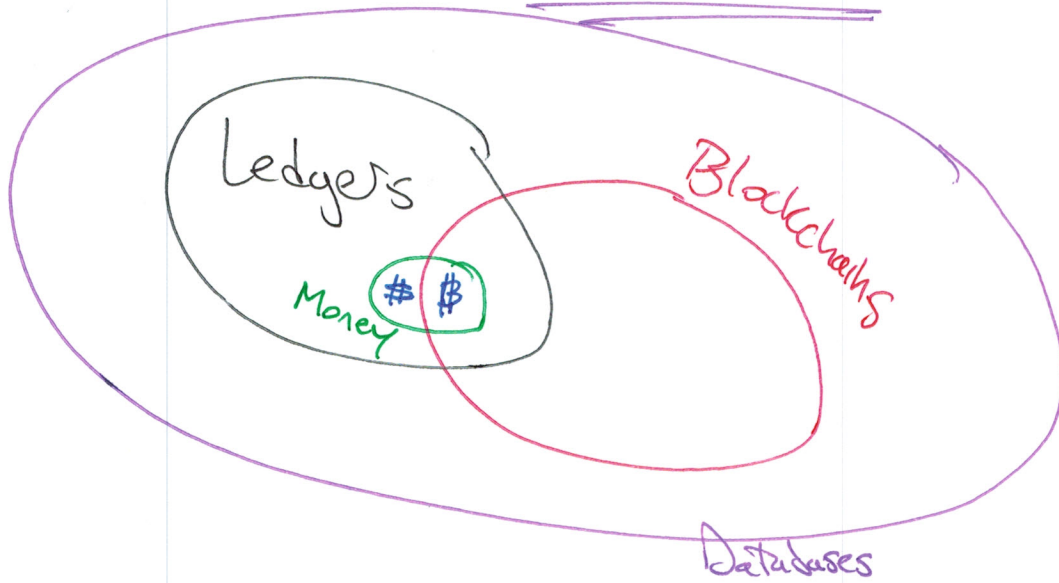
Bitcoin in the 1970's

- Digital signatures/identities, invented in the 70's!
- Protocol:
  1. Register
  2. Buy Coins
  3. Transfer Coins

"It's as easy as "1" "2" "3"! "
— Michael Jackson

Chapter Four: Losing the Database
[PART ONE]

Cash is _slow_.

CASH + INTERNET = FROWN FACE

Solution: Use **banks**. (and/or 3rd parties).

BANK = FAST, CHEAP DATABASE

(PRIVATE) | **CASH** | **BANK** (NOT PRIVATE)

$1,000 | $1,000

Invest 30 years @ 8%

≈ $10,000.00

(30 years later)

(??.% INFLATION)

US TAXES IN 2010

ACCORDING TO HARVARD ECONOMIST GREG MANKIW

39.6% FEDERAL*

1.2% DEDUCTION PHASEOUT

3.8% MEDICARE

5.3% (MA) STATE*

35.0% corporate

" * capital gains

55% ESTATE

6.25% SALES
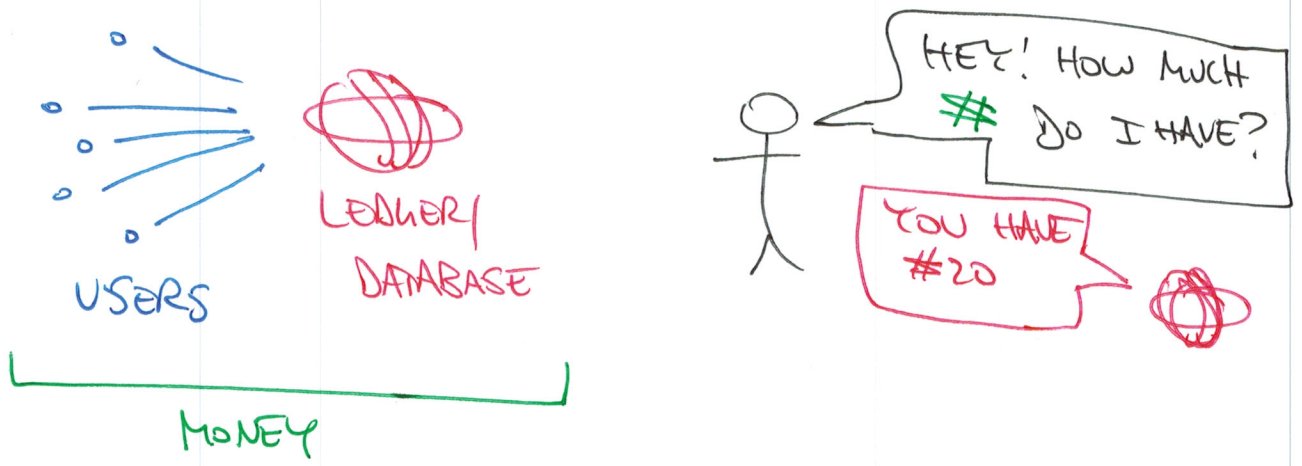
≈ $940.00

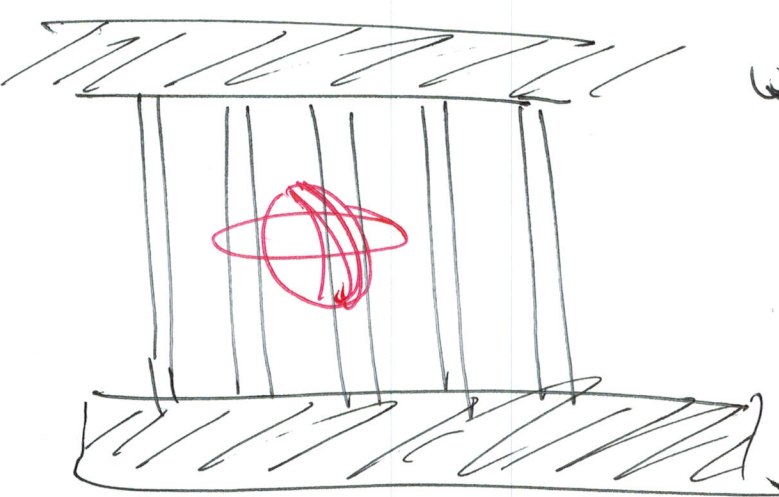(30 years later)

Chapter four: Losing the ~~ledger~~ Database
[PART TWO]

USERS ———→ LEDGER/DATABASE

MONEY

> HEY! HOW MUCH # DO I HAVE?
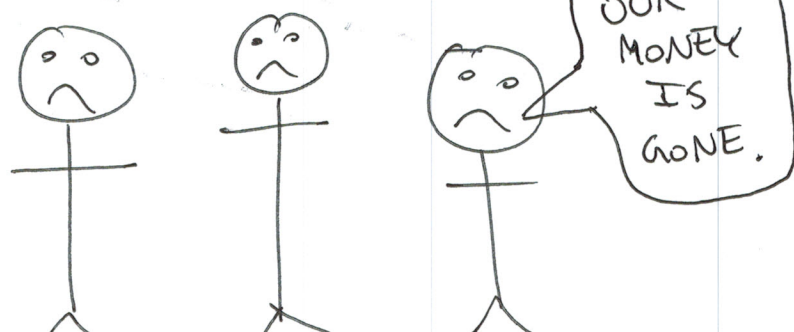
> YOU HAVE #20

Those { e Gold, Liberty Dollars, Liberty Reserve } who tried to mix

properties of cash

with

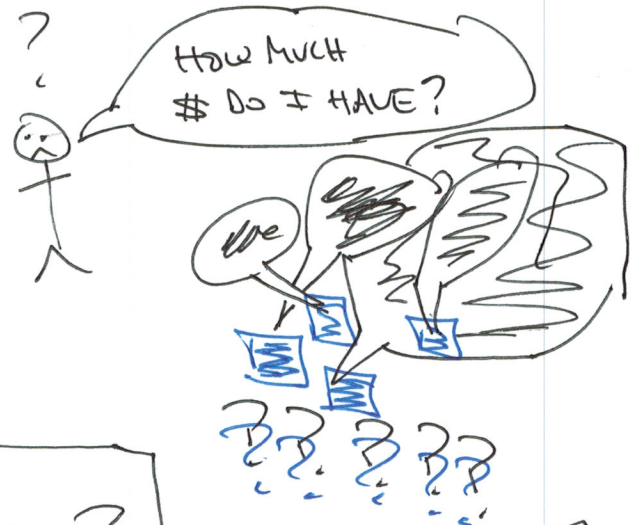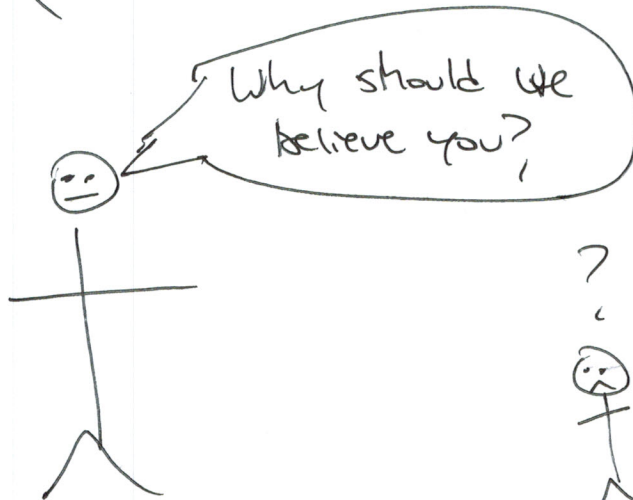properties of database

were imprisoned and

the ledger was destroyed.

The slammer.

> OUR MONEY IS GONE.

Chapter Five: Recovering Database

People like to lie about how much $ they have.

This one is the right one!

No! This one!

Why should we believe you?

?

How much $ do I have?

Which database is the correct version?

...Maybe I should shut up.

Data has been lost — unrecoverable

Chapter Six : Blockchain Solution

Database A

Database B

???

HOW TO TELL WHICH OF THESE IS THE REAL ONE?

Satoshi Nakamoto

IDEA!

DATA + PUBLIC SET OF RULES = A NUMBER
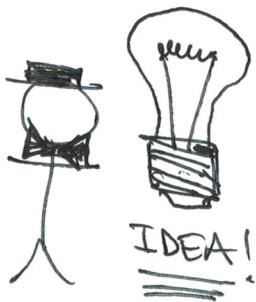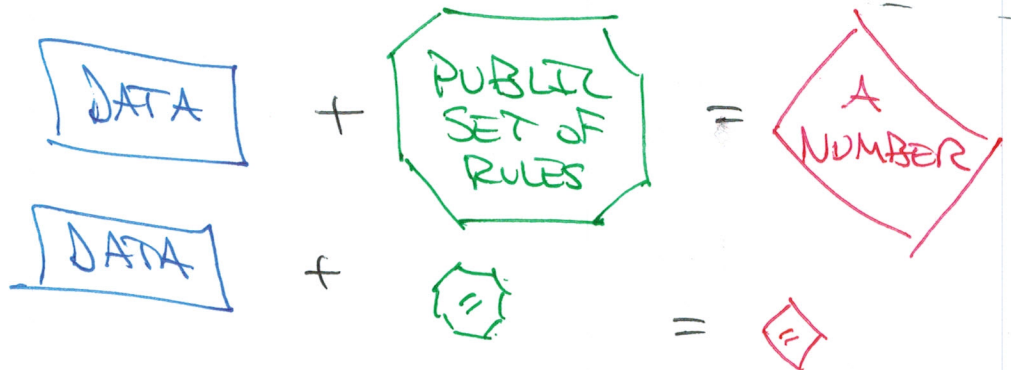
DATA + ⬡ = ◇

What if every database had a number?
Then we could agree to pick the highest number.
("heaviest chain rule")

Database A
SCORE 8

Database B
SCORE 12

THE END!