

THE UX HISTORY OF *bitcoin*

Disclaimer

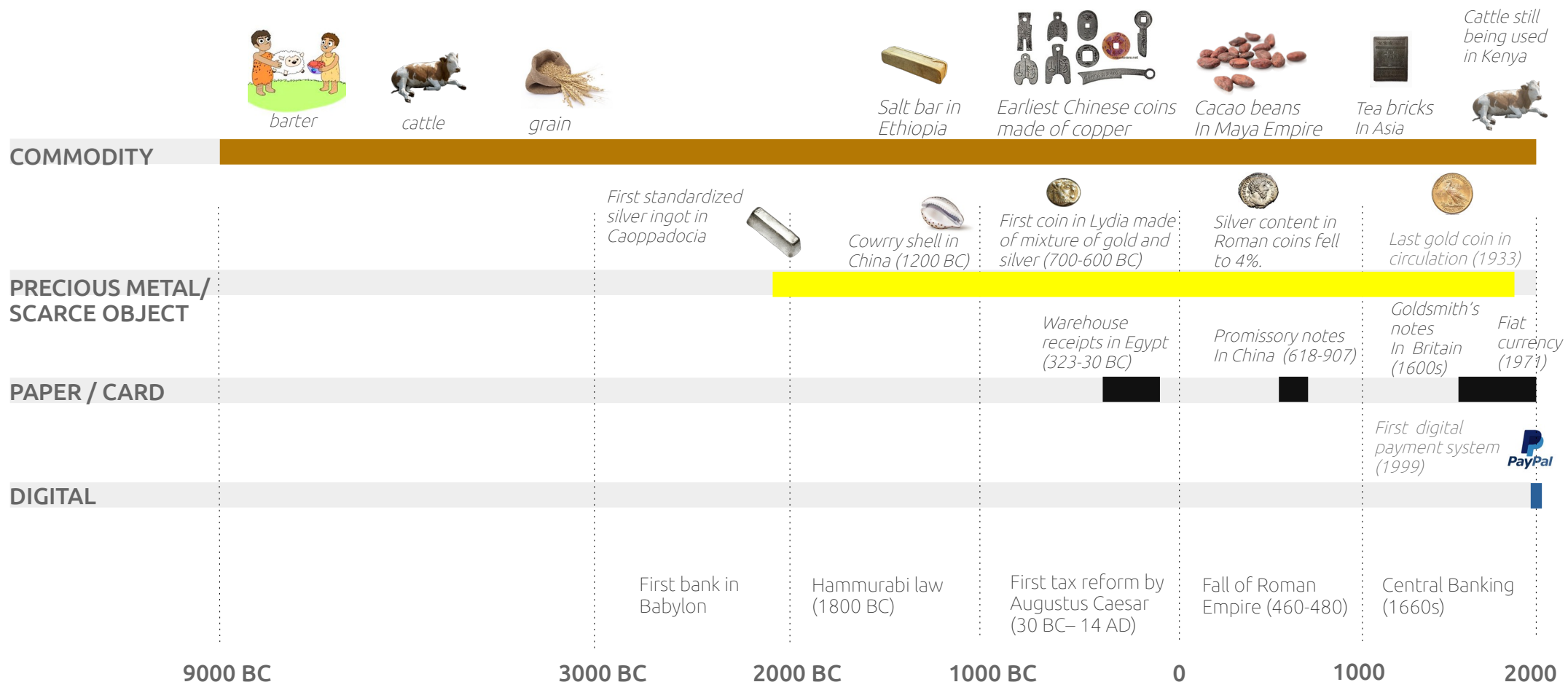
The original title of this paper was “The History of Bitcoin UX”. But then “Bitcoin UX” might sound like one of the Bitcoin forks or forgery out there. Bitcoin is still a very controversial topic. It requires up to hundreds of hours of proper studying to be fairly understood. The content of this paper aims to focus on the user experience of Bitcoin as a digital product only.

Not financial advisor.

A BRIEF LONG HISTORY OF MONEY

Prerequisite

Bitcoin and other *cryptocurrencies* (or cryptographically secured digital assets) are the latest known innovation of monetary technology. Bitcoin is created by software and exists only in digital form. The prerequisite to understand Bitcoin is often to understand what money is, and the history of money. Money is an ancient technology which has existed in various forms; each form often last for more than one lifetime. An average person has less memory of how money looked like in the previous generation. This is the first and massive challenge for the UX: how do you convince people *bitcoin* is a form of money? After all, what chosen to be money is the collective agreement of a society, in technical term, the *network effect*.

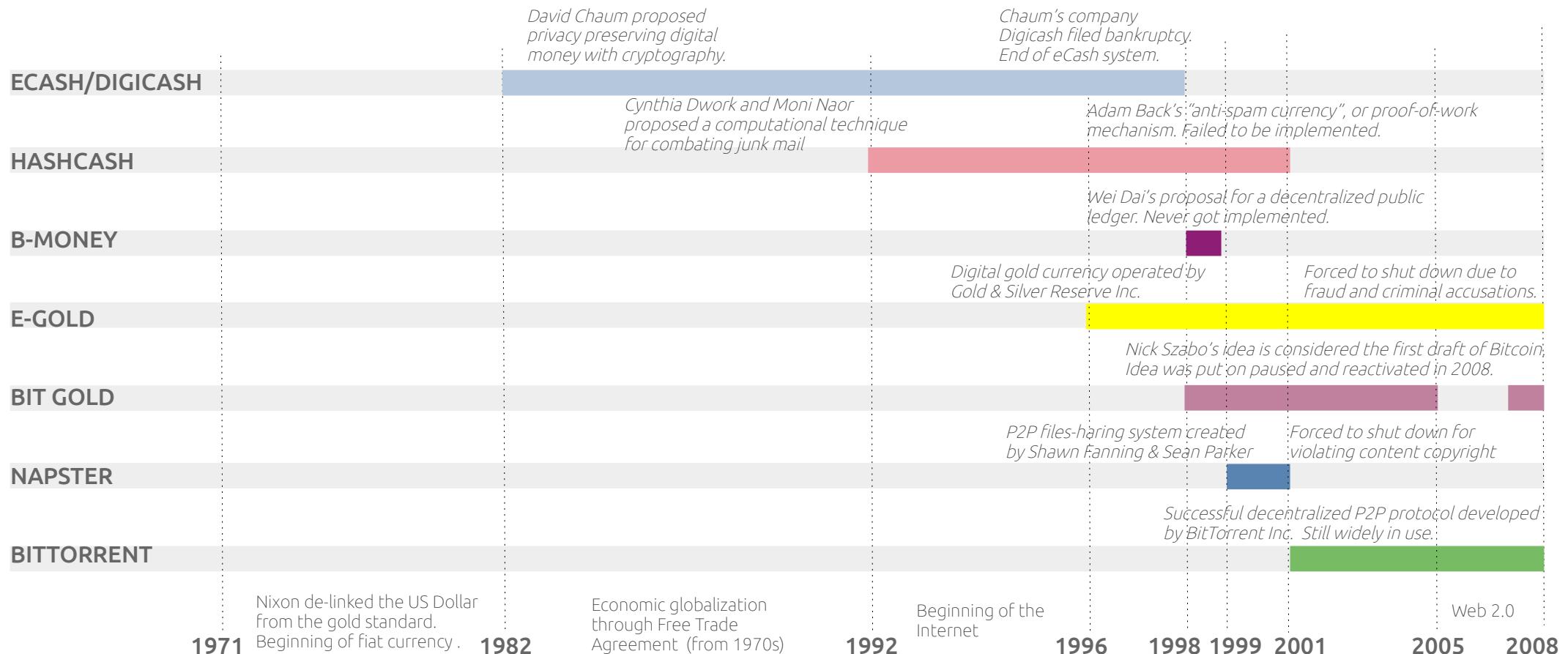


THE PREHISTORY

A History of Failure

The dedication of *Why we fail? Learning From Experience Design Failures* by Victor Lombardi states: “For everyone brave enough to design into existence something entirely new in the hope of improving our world.” Don Norman also wrote for the preface of the book: “We learn of the strengths of each product—what was done right—as well as the weaknesses—what was done wrong [...] Just having a great product is not sufficient. Products do not exist in isolation: they need a supportive surrounding environment.”

Creating a new form of money can’t be easy. There were multiple similar projects before Bitcoin, but they all failed. Bitcoin works so far because it absorbs all the critical points of the forerunners and adopts similar features from successful products. The technology in Bitcoin is a combination of cryptography, decentralized peer-to-peer (P2P) system, proof-of-work mechanism, and game theory in economics. This is merely technical, but the aspect of learning from previous successes and failures is critical, which needs to be mentioned here.



THE GENESIS

Who is the product manager?

Bitcoin was invented by a pseudonymous name called Satoshi Nakamoto. The discussion was first exchanged only in the *Cryptography Mailing List*, later in *p2pfoundation* and *bitcointalk* website forums. There has never been a CEO or product manager. The software is complete open-sourced, developed by the engineer group called *Bitcoin Core*. This is operated in an open manner similar like Linux contributions. The *ecosystem* of Bitcoin, however, has been built by the community who participate in the network. This evolves on a track of its own, organically. There was no business plan or user research.

31.10.2008

Satoshi Nakamoto released the Bitcoin whitepaper "Bitcoin: A Peer-to-Peer Electronic Cash System"

The value unit generated from the Bitcoin software is coined "coin" by the author. Later it's commonly known among the community as "bitcoin", the currency used in the Bitcoin network.

This was the first confusion: using a term that has a physical form for something that is completely virtual and intangible.. No wonder incidents like people buying the representative souvenir form in Ebay, thinking that they're real bitcoin.



NOT real bitcoin.

BIT COIN

2008

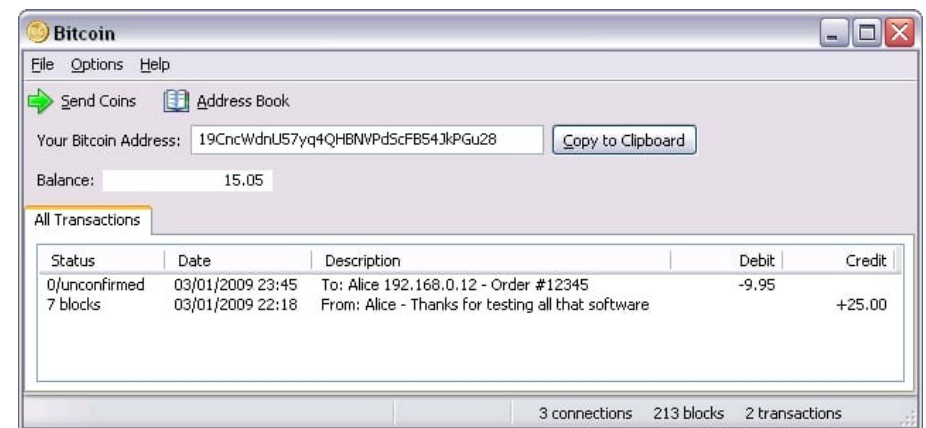
Global financial crisis 2007-2008. Bankrupts and bank bailouts.

3.1.2009

The first "block" was created, geneting 50 bitcoin by Satoshi Nakamoto, known as the "Genesis block".

9.1.2009

Version 0.1 of the Bitcoin software was released by Satoshi Nakamoto, along with its source code and the first Bitcoin logo.



2009

First Bitcoin payment between Satoshi Nakamoto and Hal Finney, starting forming a network.

THE GROWTH ERA

Who are the users?

Although there was no user research in Bitcoin, the space witnesses all types of participants: the original *cyberpunks*, libertarians, computer geeks, tech nerds, criminals, venture capitalists, investors, financial institutions, retail investors, speculators, politicians, common folks, and the *FOMOs* (Fear Of Missing Out). The latest legal tender act in El Salvador added 2.1 millions active users into the network.

Although the narrative of Bitcoin evangelists and Bitcoin advocates is often “Bitcoin is for everyone”, it’s hard to generalize what everyone wants. Bitcoin still faces the usability problems because it’s too technical and confusing.

24.2.2009

Satoshi Nakamoto updated the Bitcoin icon.



satoshi
Founder
Hero Member
○○○○○

Posts: 575



Ignore

New icon/logo
February 24, 2010, 09:24:23 PM

New icons, what do you think? Better than the old one?



Full size 530x529 image for scaling down to custom sizes:
<http://www.bitcoin.org/download/bitcoin530.png>

This is the second confusion. Although Bitcoin was introduced as “electronic cash payment system”, its description is analogous to gold, or a form of hard money that is not easy to create, similar like gold mining, or “digital gold”. The golden coin symbol emphasized this perception.

This symbol also got criticism that it resembles the ฿ symbol of the Thai baht currency.

1.11.2010

A user named bitboy proposed a new icon and set of promotional graphics on the Bitcointalk forum. This iteration added a flat style, the hex color #F7931A, and a 14-degree rotation of the B. This interpretation of the bitcoin logo is still ubiquitous today.

 **bitcoin**

 **bitcoin**
ACCEPTED HERE

 **bitcoin**
ACCEPTED HERE

 **bitcoin**

 **bitcoin**
ACCEPTED HERE

 **bitcoin**
ACCEPTED HERE

BIT COIN

2009

2010

The first exchange “The Bitcoin Market”, first platform bridging bitcoin and fiat currency.

THE RISE OF MINERS

Who are the miners?

Bitcoin *mining* is the process of creating blocks and therefore generating bitcoin as rewards. This operation has developed at industrial scale with *mining rigs*. Bitcoin miners have become a real new job, referring to people who use computational power to compete with one another for creating new blocks. Since computational operation requires a lot of energy, mining rigs are often located in areas with cheap energy or with resources of renewable energy in use. A whole new hardware generation optimizing for bitcoin mining was created. This somewhat reflects what Alan Kay said: "People who are serious about software should make their own hardware."



Miners' role in the Bitcoin network is critical. They don't just secure the network, but also the ones who create bitcoin, and trade bitcoin to reinvest in their equipment

4.2011

Satoshi Nakamoto left the project and gave the bitcoin.org domain to Bitcoin Core developers. The community continues developing the network.

9.2011



Mike Caldwell started creating physical bitcoins which he called Casacius coins. They are physical discs of metal, each with a unique private key embedded behind a hologram sticker. Each coin's private key is linked to an address that is funded with a specified amount of bitcoins, as depicted on the coin.

This design is very exclusive because they are prized as collector's items and cost much more than the value of the bitcoins contained in them. They also cannot be transferred digitally.

Wallets

A bitcoin wallets is a device , application or in paper form to store the private key that is critical for a bitcoin transaction. Again, this concept causes confusion, because the term relates to the physical wallet that holds the coins. Many users think they have their digital coins in their digital wallets, which is wrong, because the coins are always on the network chain.



Bitcoin wall symbol, also designed by Bitboy



Paper wallet with a banknote-like design

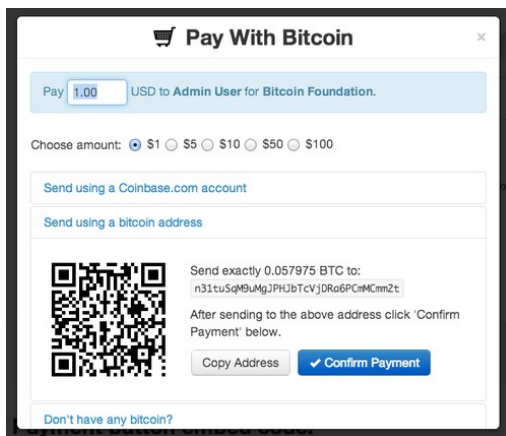
THE EXISTENTIAL THREAT

Who are the story tellers?

Bitcoin is well known for its negative reputation: the association with criminal activities, anarchists, and the latest one is environment damaged by bitcoin mining. The one single academic research paper in 2018 *Bitcoin emissions alone could push global warming above 2°C*, which has been proved to be false claimed by many counter-argument reports, but still quoted till now by mainstream media. There are no other prestigious scientific researches with negative narrative about Bitcoin except headlines, articles and personal interviews.

The community in early years were just small meetups and online forums. Bitcoin Magazine and Andreas Antonopoulos were one of the first story tellers. The stories they told about Bitcoin are fantastic, but how would they be reflected on the product and send the message to the users?

Coinbase Global, Inc.



More exchange platforms got into the scene like Coinbase aiming to aid merchants in adopting bitcoin as payment and offer trading options to new users. The interface was rather chunky, hard to use for a non-tech person. This is a user who has just stumbled upon Bitcoin and pretty much sees it like some kind of "digital software transaction thingy."

2.10.2015

The bitcoin sign glyph is added in Unicode, aside with other common currencies.

m฿ 4791.6503
m฿7.12
0.2฿
AMOUNT: ฿

BIT COIN

2013

Mt. Gox, the largest bitcoin exchange in Japan was hacked.
Silk Road, the illegal online market was cracked down.
Alan Greenspan referred to it as a "bubble".
China banned bitcoin the first time.

2015

Warren Buffett called bitcoin a "mirage".

THE CIVIL WAR

Who are the communities?

Building a community around the product has been in recent years a necessary part of any marketing strategy. The shift is now from a distribution center to directly to consumers and users. Now a successful product needs UX designers, story tellers, artists and community managers.

The Bitcoin community, however, cracked within itself. This phase was called “civil war” or “tribalism”, amplified by some attacking voices across the media. It could easily happen in a community in which no one is in charge. Bitcoin has been praised as “Rules without rulers”, but the fights among groups have proved rules are not enough. Members should agree on the vision of the project, and the direction it would go. This sounds like an impossible task, by why not starting from improving first of all communication channels?

21.7.2017

The community splitted into two groups: the present Bitcoin community and the “big blockers” who wanted to increase the block size and therefore compromise the security and integrity of the network. This second group call themselves “Bitcoin Cash”. They own the domain “bitcoin.com”, adding more confusion to the scene.

The consensus mechanism in Bitcoin follows the “longest chain rule”, that means, there is one and only one Bitcoin network. This doesn’t stop all the ramifications claiming themselves as “the real Bitcoin”. The challenge is how to highlight this major difference and help new users avoid misleading information and scams.

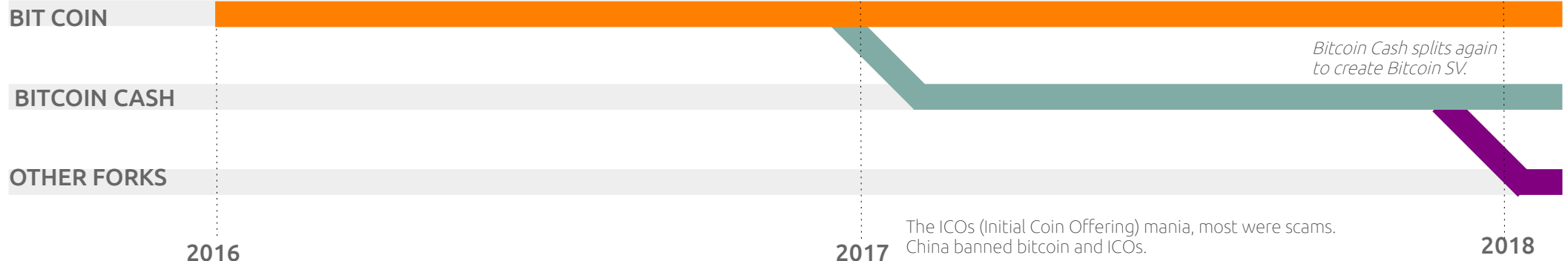
Self-custodian wallets

More services for storing private keys in form of software or hardware are relatively easier to user for beginners (with fair amount of research and practice). These emphasize the security aspect of using bitcoin. The network itself has never been hacked successfully. Most of the hacks happened in the exchange platforms or human mistakes like losing or forgetting their private keys.

One way of arguments about this matter is actually to make the process more difficult for users, so they can’t lose their funds easily. For this type of services there are also custodian wallets, whom users have to put their trust upon.



Hardware wallets



The ICOs (Initial Coin Offering) mania, most were scams. China banned bitcoin and ICOs.

THE PRESENT

Who are the next users?

All the surveys about bitcoin or cryptocurrencies users in general show a clear difference in age groups. Young people tend to be more friendly towards these new digital assets, while there are more resistance from people above 60 year old. The generation who grew up with the internet and interact more with digital products, digital games and virtual world could be naturally the next users.

A new concept like Bitcoin might take generations to be appreciated. Some products just need a paradigm shift or generational change. It is critical point to think a bit ahead of time about the next possible users.

Mobile wallets

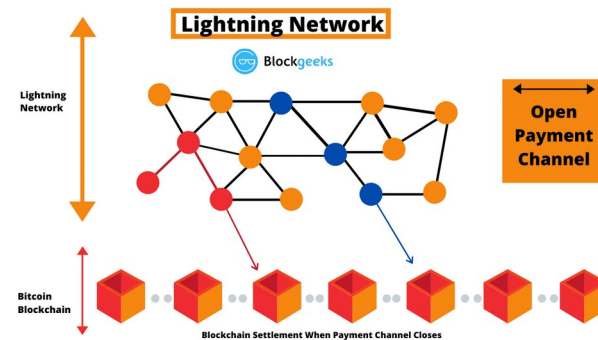
Mobile wallets are getting easier to use, like the mobile wallets of Coinbase, Kraken, etc. These are mostly for simple trading without withdrawal function due to security reason. The Pro version of these apps are actually more complicated for professional traders, and indeed, charge less fee.

For an average person who usually uses smartphones it's easy to buy and sell bitcoin with these mobile apps. The friction often lies between transaction from/to banks or traditional institutions.



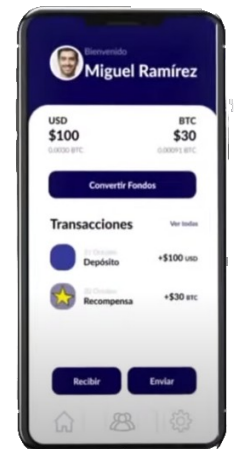
Lightning Network in use

Layer 2 solution of the Bitcoin network enables speed and efficiency, not just technically but also with real user research and UX design.



9.2021

El Salvador made bitcoin legal tender. Government's Chivo wallet is available to download for all citizens.



BIT COIN

Warren Buffett called bitcoin a "rat poison".

2019

China considers eliminating crypto mining but eventually declines to act.

2020

COVID19 Pandemic Global crisis.. US Federal Reserves printed 9 trillion \$ which took 22% of all the \$ in circulation in the US history. Other countries' governments also increased the printing speed. Inflation is warned to come.

2021

China banned bitcoin mining. Miners left to other countries, known as the Exodus.

THE FUTURE

Conclusion

Bitcoin, like other technologies, is just a tool. What comes out of it is what users choose to do. No one can tell the future. But we can always learn some lessons from history. Fiat currency had a 100% failure rate throughout history. Bitcoin, and the whole ecosystem being built around it is an alternative financial system, a parallel economy.

This technology has been shared to the people as an open-sourced project. Just like the internet, the possibilities of what people could build on it are unlimited. The community keeps calling for more UX designers to come in, because it's the topmost problems that Bitcoin is facing. Not technical problem, not political problem. It's how to make it usable and accessible to most people.

Since the Genesis block on 3rd Jan 2009, the Bitcoin blockchain has never ceased to run. Circa around 10 minutes a block was created. All the block numbers and transactions are traceable, as it is a public ledger. Despite all the events and narratives around it, the network just works like a clock, reliably, and securely.

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