How to Get Users To Use CoinBlesk/Bitcoin?

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Outline

- Background
  - Bitcoin technology
  - Mobile payment services
- How To Get Users To Use Coinblesk/Bitcoin
  - Assessment of current state
  - Possible Solutions
- Discussion

Bitcoin

- 2008: white paper called “Bitcoin: A Peer-to-Peer Electronic Cash System” by Satoshi Nakamoto
- digital payment system
  - Bitcoin protocol that uses peer-to-peer technology
  - bitcoins: crypto currency

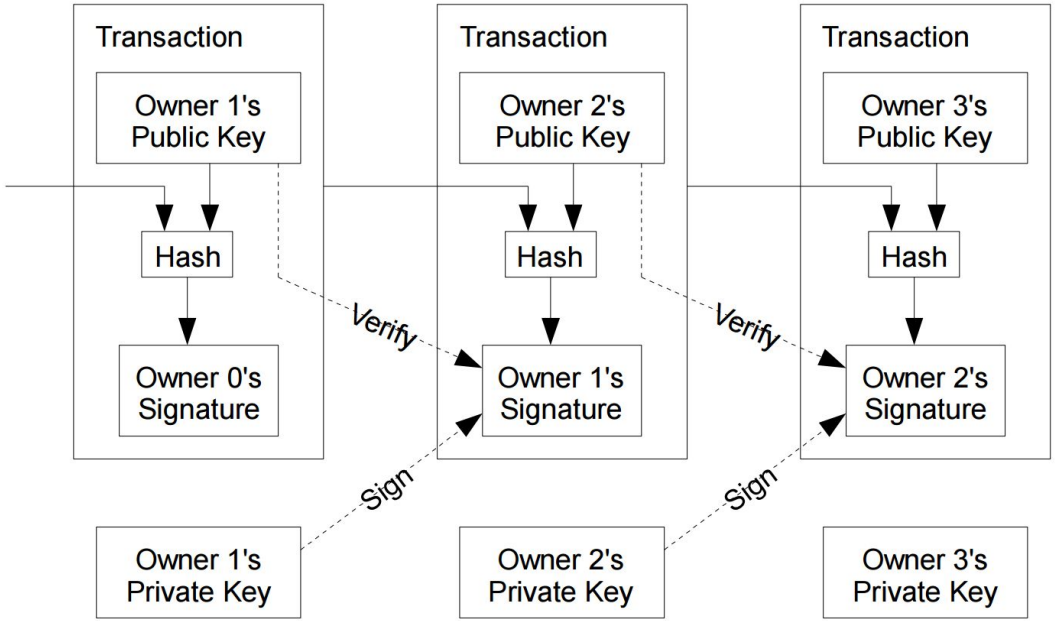
Bitcoin - The Bitcoin Protocol

- Bitcoin wallet
  - Bitcoin address(es) (public keys)
- block chain
  - shared public ledger
  - stores all confirmed transactions
  - uses cryptography

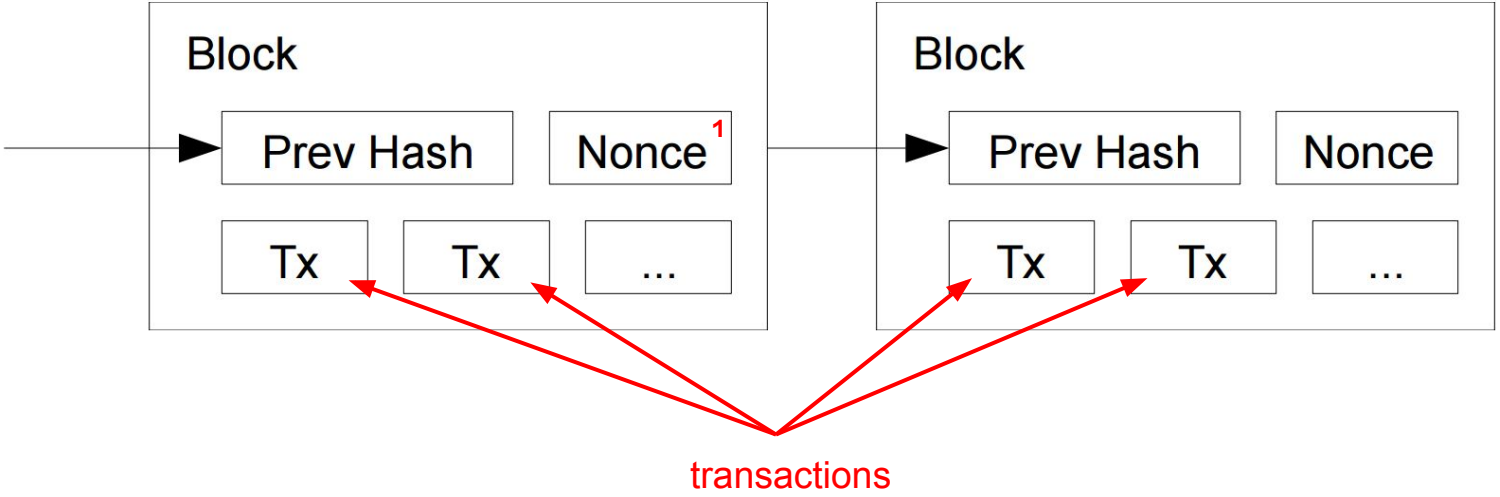
Bitcoin - The Bitcoin Protocol II

- transactions
  - private key (signatures) serve as validation
- mining
  - the system has to be in a consensus state
  - to be confirmed transactions need to be packed into a block

Bitcoin - Transactions

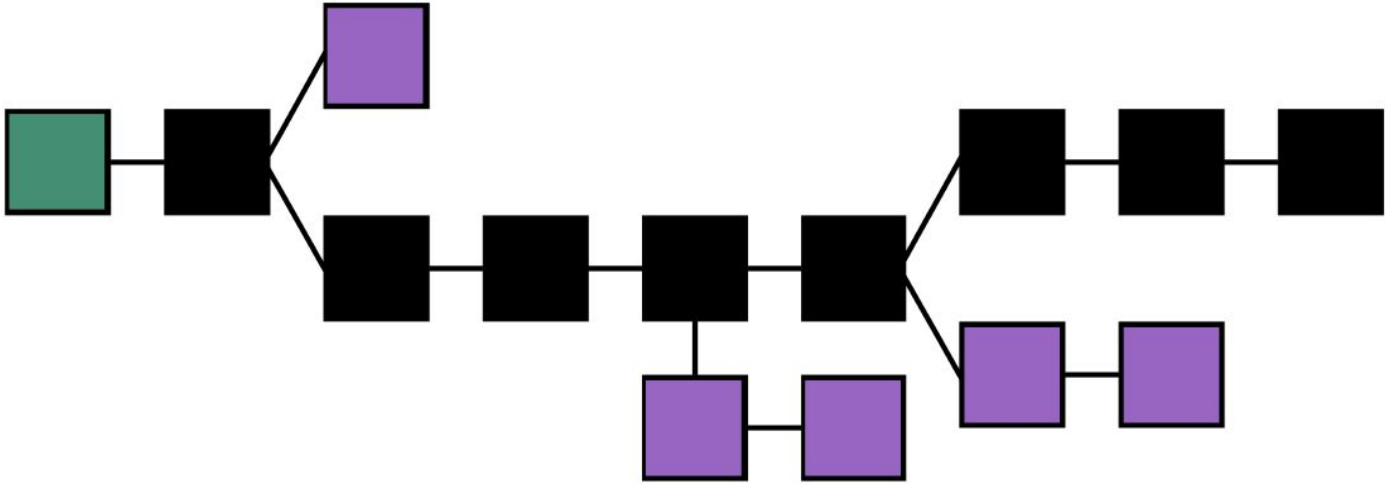


Bitcoin - The Block Chain



[1] nonce = temporary place holder

Bitcoin - Proof-of-Work



simplified example of a block chain:

- black path: greatest proof-of-work effort
- purple blocks: orphaned blocks (chains)
- green: genesis block

Bitcoin - Advantages

- no central authority
- global accessibility
- open-source
- low (or no) transaction fees
- secure
  - no central point of failure (such as data centers)
  - bitcoins are impossible to counterfeit
  - bitcoins cannot be stolen or lost

Bitcoin - Disadvantages

- limited amount of bitcoins
- volatile
- waste of energy

Mobile Payment Services

A mobile payment involves

- money transaction between two parties …
- using a mobile device ...
  - mobile phones
  - chip cards
- and belonging services.
  - eg. peer-to-peer payment platforms

(Today usually with a smartphone)

Mobile Payment App

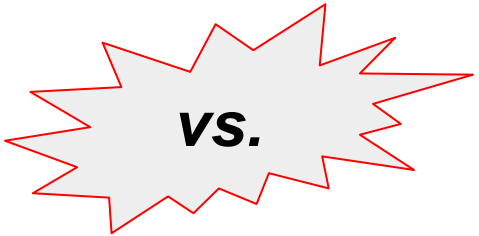
- Download to smartphone
- Setup with a
  - bank account
  - credit card
  - debit card
  - Bitcoins
- Phone number is often used for identification
- Pin code authorizes the transaction

Mobile Payment Services - Forecast vs. Reality

Positive growth forecasts

Mobile Payment Services - Forecast vs. Reality

Positive growth forecasts



disappointing situation in reality

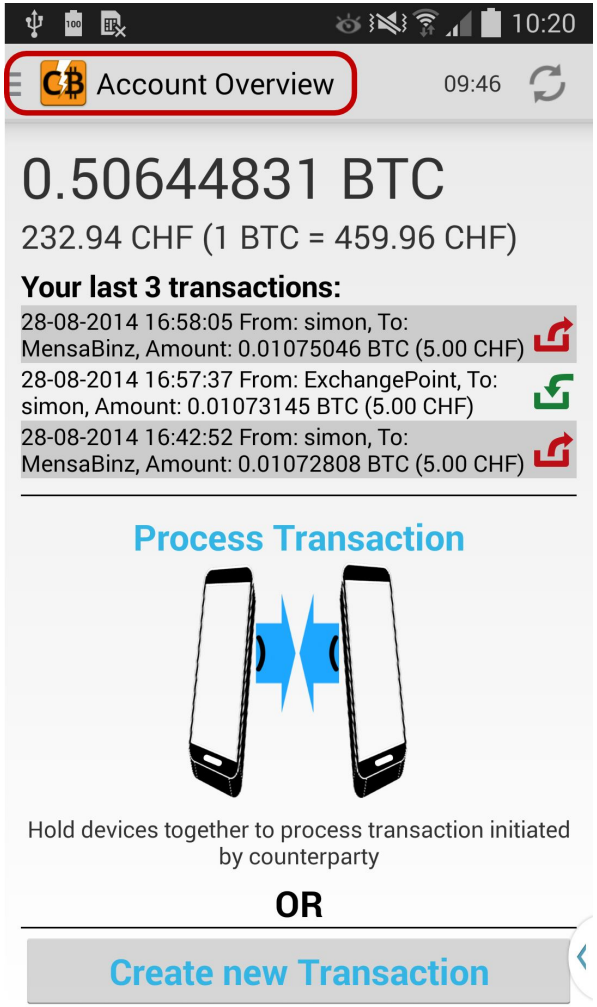
Mobile Payment Services - Success Factors

- Accessibility
  - Low/no entry hurdle.
  - Easy setup
- Simple and intuitive to use
- Low costs
- Availability
- Trust
  - in technology

CoinBlesk

CoinBlesk is a mobile online wallet with the unique feature to exchange Bitcoins with two-way NFC.

- University of Zurich
- Open Source



CoinBlesk

- Point of sale for ~512$
  - Nexus 10 tablet
  - Nexus 10 Pogo Cable
  - OTG Host Adapter
  - ACR122U NFC USB Reader/Writer
  - USB Ethernet adapter
  - USB Hub

- CoinBlesk provides building blocks for C2C and C2B

CoinBlesk

Producer/Provider	University of Zurich
Lifespan	2014 - dato
Origin	Switzerland
Distribution	
- geographically	Zurich, Switzerland
- number of users	< 100 (estimation)
Payment service type	Bitcoins
Supported platforms	Android 4.4 and above, needs NFC support
Initial effort / Requirements	User needs Bitcoins
Fees	According to Bitcoin
Currencies	Bitcoin to CHF

MobilePay

Handle a mobile payment as simple as sending a chat message.

- Danske Bank
- Over 2 million users

MobilePay - Functionality

- Transactions between private users
- Transactions between private user & business, shops and even online shops
- Offers the possibility for other apps to use it as integrated payment service
- Charities and NGOs accept donations via MobilePay
- Offers a bonus program

MobilePay

Producer/Provider	Danske Banke, Trifork
Lifespan	2013 - dato
Origin	Denmark
Distribution	
- geographically	Denmark, Finland, Norway
- number of users	> 2 million
Payment service type	Bank account, credit card
Supported platforms	iOS, Android, Windowsphone
Initial effort / Requirements	App installed, bank account or credit card, internet connection
Fees	Free for private users,
Currencies	Norwegian Kroner (NOK)

Paymit

send and request money in a simple, comfortable and secure way

Paymit

Producer/Provider	SIX, UBS, ZKB
Lifespan	2015 - dato
Origin	Switzerland
Distribution	
- geographically	Switzerland
- number of users	> 20'000 (estimation)
Payment service type	Credit cards, bank accounts
Supported platforms	iOS, Android
Initial effort / Requirements	mobile number, credit card or bank account
Fees	Depending on the Paymit provider SIX, UBS(free), ZKB(only free with certain ZKB accounts, otherwise 20 CHF per year and 2CHF per transaction), and so on
Currencies	CHF

Tapit

- A digital wallet for the mobile phone
  - able to transfer money
  - collect bonus points
  - function as an electronic key for doors
- By Swisscom
- Uses NFC

Tapit

Producer/Provider	Swisscom, Tapit
Lifespan	2014 - 2016
Origin	Switzerland
Distribution	
- geographically	Switzerland
- number of users	< 50'000 (estimation)
Payment service type	mobile credit card
Supported platforms	Android
Initial effort / Requirements	App installed, special sim card, special credit card
Fees	Free for private users
Currencies	CHF

Mobile Payment Services - Success Factors

- Accessability + Paymit, MobilePay - CoinBlesk, Tapit
  - Low/no entry hurdle.
  - Easy setup
- Simple and intuitive to use + All
- Low costs + All
- Availability + MobilePay - CoinBlesk, Tapit, Paymit
- Trust Switzerland vs. Skandinavia
  - in technology

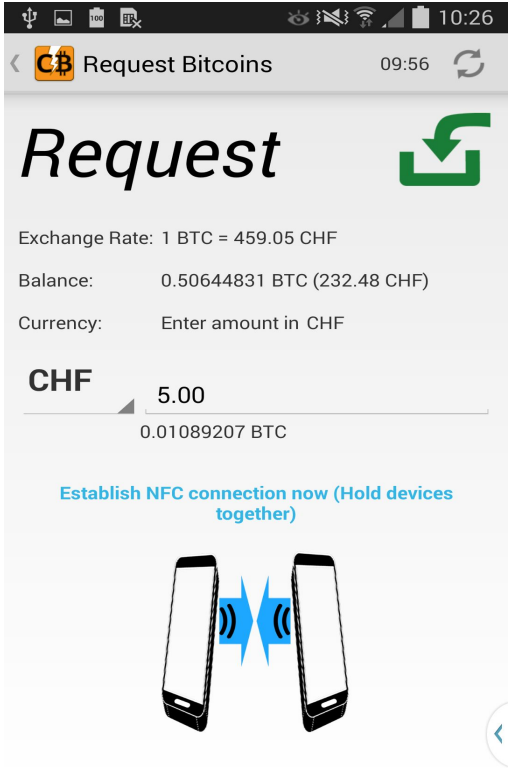
How to Get Users To Use CoinBlesk/Bitcoins?

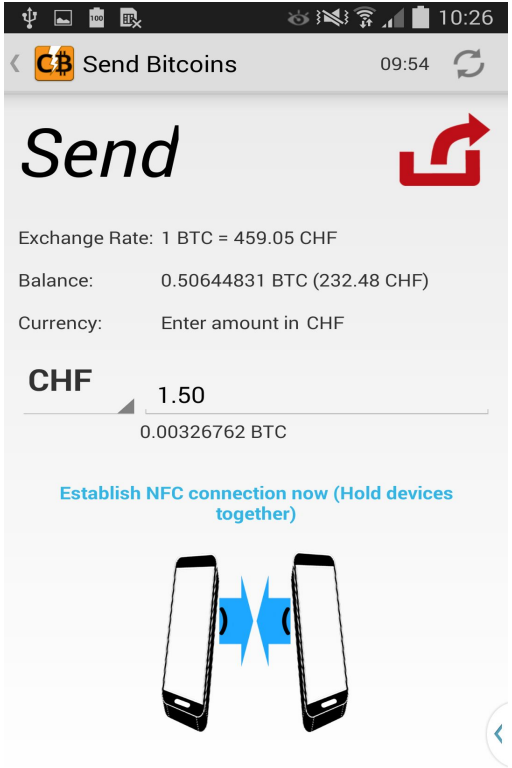
Assessment of current state

- Two transaction scenarios are likely to be prevalent:
  - B2C (Business-to-customer)
  - C2C (Customer-to-customer)
- Questions asked?
  - What benefits does CoinBlesk (or a similar application) offer for businesses or consumers?
  - What could be holding people back?
- Problems faced are similar, but the focus on how to improve the situation should be slightly different

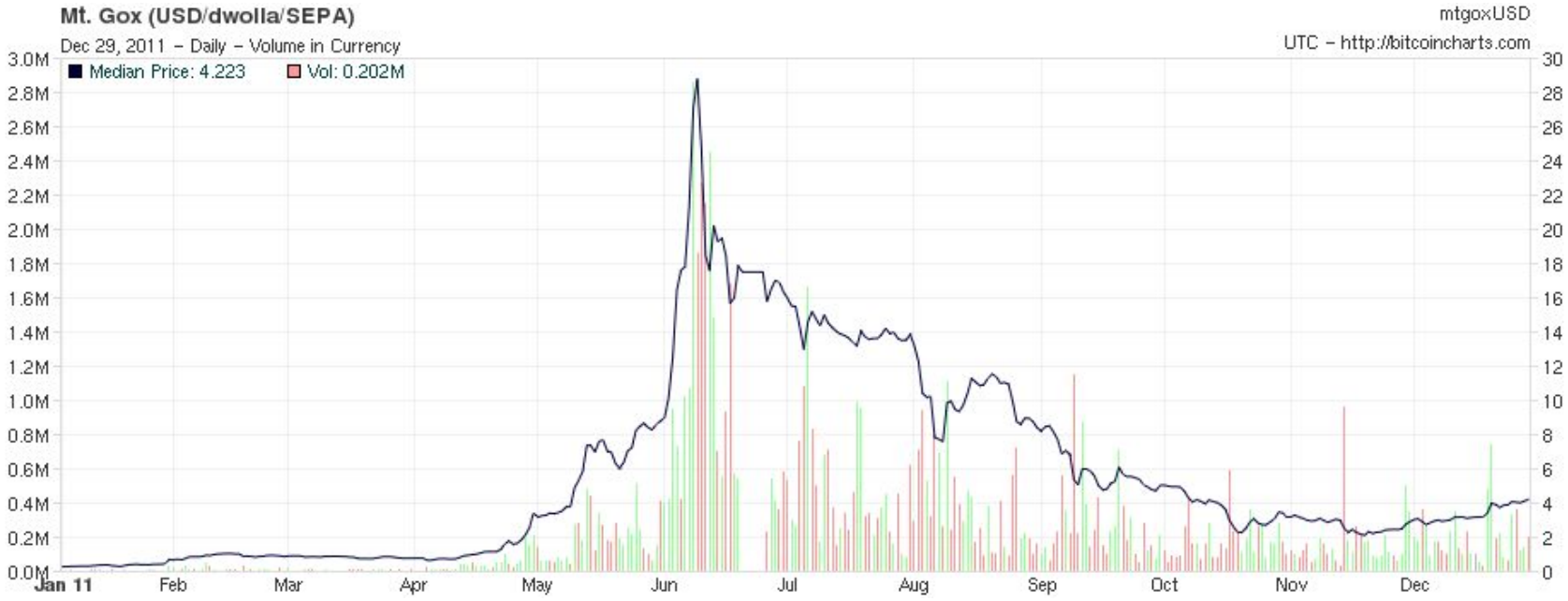
B2C Use Case: Paying at Retailers

C2C Use Case: Paying Back a Friend





Problem: Bitcoin Volatility



Summary: Main Problems

- Lack of (perceived) added benefit for either businesses or consumers
- Volatility of the bitcoin currency
- Bitcoin not being known to a wide population and the resulting lack of trust therein

Summary: Possible Solutions

- Providing some sort of (perceived) added benefit
- Seeking out partnerships with (online) retailers
- Making the Bitcoin technology more known
- Identifying potential user groups

Questions

Discussion

Has anyone used a mobile payment system before?

What do you think, could be holding people back?

What would be needed for you to use such an application?

Can you think of advantages, this application offers, compared to credit cards?

Do you trust bitcoins, more than traditional currencies? Why or why not?

How would you feel about a system that uses Bitcoin technology coupled with traditional currencies?