

# The -coin called Bit coin

Ramki

# What is Bitcoin?

- Money without oversight by a Central authority
- An Utopian currency- no borders, no change fees, no closing hours, no regulator ...
- A Digital peer-to-peer currency based on cryptography
- Created in 2009
- By a mysterious man named Satoshi Nakamoto
- It has come a long way since then!

# How is Bitcoin created (mined)

- Ok- you can't start mining for Bitcoin now!
- You need powerful computers
- People run software that competes to solve a computational puzzle that requires very smart computers to solve
- When a puzzle is solved new Bitcoins are awarded
- Then a new challenge is set up...

# How is Bitcoin controlled?

- Mathematical techniques are used to control everything i.e
  - New Bitcoins
  - Verification of genuineness /ruling out counterfeiting
    - The verification of Bitcoin genuineness takes around 10 Mins –but can take upto 1 hour
      - Litecoin scores here as it can be verified in 2.5 mins
  - Max no. of Bitcoins that can exist etc

# So who owns the largest Bitcoins hoard?

- Recall the movie “The social network”?
- And the twins who sue Mark Zuckerberg of Facebook fame saying he stole their idea?
- The same Winklevoss twins Cameron and Tyler own the largest pile of Bitcoins - \$11M at last count!

# Attracting major investors

- PE investors have invested millions in Bitcoin start ups like Opencoin, Coinbase, Bitpay etc
- Other start ups which are in Bitcoin arena: Bitinstant, Coinsetter ...
- Bitcoins circulation over \$1B
- But
- Value very volatile
- Rose from \$50 to \$265 and then fell back to \$50

# There are Bitcoin ATMS

- see:  
<http://www.youtube.com/watch?v=ZqEdBCKFPAo>
- One such ATM operates like this:
  - It prompts users to scan a QR code on their cellphone teaching ATM where to send the Bitcoin.
  - Users then insert paper money which is turned into Bit coin and delivered to user accounts.
    - It takes less than 15 secs

# The technology behind is awesome!

- The mining speed of the bitcoin network on Bitcoinwatch.com passed 1 exaFLOPS (more than 8 times the combined speed of top 500 supercomputers (as measured in 2011)
  - (Flops is Floating point operations per second)
- Even though Bitcoin uses an integer calculation and no floating point ops and hence this is not a correct comparison, this is mind boggling speed –all the same!



# Which establishments accept Bitcoin?

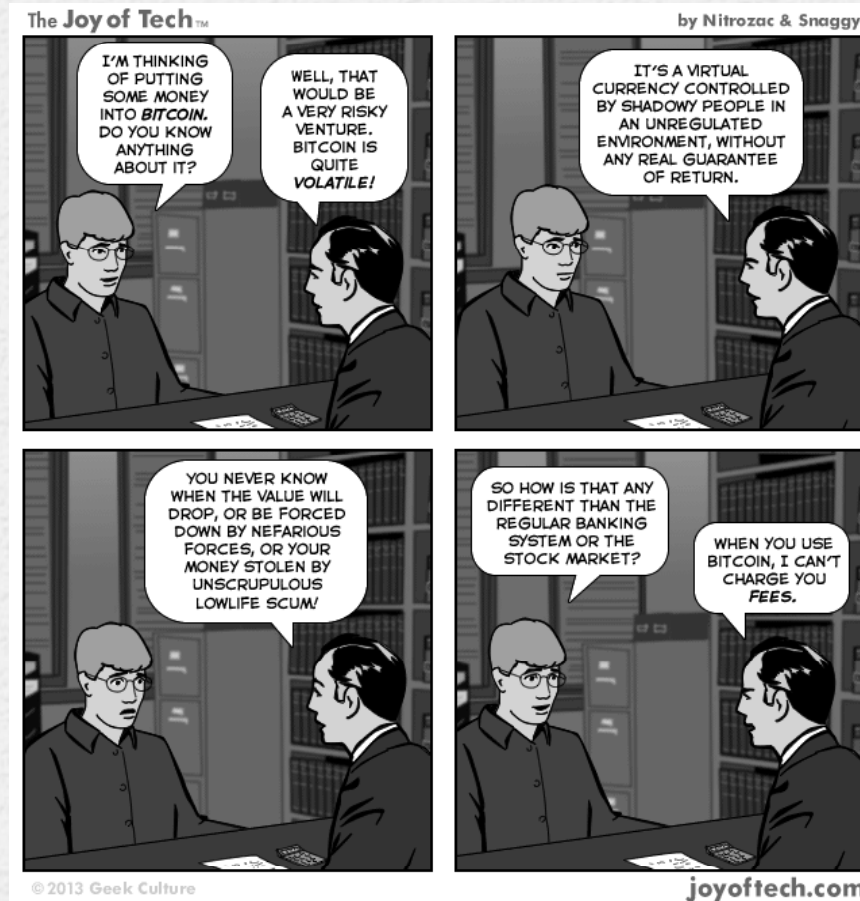
- Bitplay handles Bitcoin transactions for 4500 companies in various businesses from Cars to consumer goods
- Mohd. Rafigh sells his music
- Many e-commerce websites take Bitcoins
- OkCupid –dating service
- Most important -Silk road- said to be a market place for narcotics!
- Western Union considering entering the world of Bitcoins
- Mike Caldwell of Utah –even mints physical versions of Bitcoin!

# Conferences etc

- Bitcoin 2013 the first large conference devoted to Bitcoin attended by 1100 people
- Bitcoinshow – is an online only program dedicated to all things Bitcoin

# How is Bitcoin different from normal coins?

See Joyof tech cartoon!



# Concerns

- Possible misuse of Bitcoins
  - Now US money laundering laws apply to the Bitcoin exchange
- Concentration risk:
  - MtGox handles over 80% of all Bitcoin trade
- In Apr 13 Bitfloor the largest US bitcoin exchange shut down
- In May 13 , a Court order from Dept. of Homeland security led to Dwolla money moving service not being able to transfer money to and from leading bit coin trading platform Mt. Gox
- A Mysterious founder!
- Volatility

# The melt down in Apr 13

- In hours in Apr Bitcoin value halved
- Why?
- No, this was not a DDOS (Distributed denial of service attack)
- It was due to Bitcoin's own success and growth
- A sudden spurt in new accounts (from base 60k to addition of 75k in first few days of April) and surge in transactions of existing users (Tripled in 24 hours) led to a system lag and the buyers panicked and sold!

# Experts say ..

- Steve Hanke Professor specializing in alternate currencies says about Bitcoin:
  - “To say highly speculative, would be the understatement of the century”
- Art Cashin UBS stock broker:
  - Trading in Tulips in real time- referring to the 18<sup>th</sup> century craze of Dutch speculators in Tulips
- But history proves experts not always right!

# Are there other Cryptocurrencies?

- Yes
- Litecoin (called the silver coin as opposed to Bitcoin which is considered as gold) uses math puzzles that can't be solved with custom processors which are used to mine Bitcoins
- Ppcoin which uses the lottery method (if you own more you have a better chance of winning)
- Ripple
- On 13<sup>th</sup> May, Amazon launched 'Amazon coins'

# What do I think?

- I think alternate forms of currency are here to stay
- Yes, there are problems
- But where is no problem anything?
- One day may be –just may be -people will be talking about the time when currencies were regulated by Central banks!



# References

- Kurzweil- bitcoin attracts major investors
- Dwolla payments to bitcoin platform shut down by Homeland security-Mashable
- Bitcoin network speed 8 times faster than the top 500 supercomputers combined -Kurzweil
- Tiny ATM takes your money and gives you bitcoins-Mashable
- Largest US bitcoin exchange shuts down -Mashable
- Bitcoin is not the only Cryptocurrency in town -Mashable

# References contd.

- Amazon launches virtual currency- Smart Planet
- Western union mulls using Bitcoin-Mashable
- Bitcoin just took a nosedive-why?- Mashable
- Wild unregulated hacker currency gains following-R&D news
- Never mind Facebook: Winlevoss twins rule in Digital money -NY times
- Bitcoin was the victim of its own success , not DDOS attack-Mashable
- These start ups are betting everything on Bitcoin-Mashable
- Why bankers want you to fear Bitcoin-Sunday Comics
- Bitcoin isn't the only Cryptocurrency in town-Mashable