

Free Technology Workshop



A technical introduction to Bitcoin and crypto-currencies

Organised by Steven Gordon

Room RS410

9am - 12noon Friday 4 July 2014

<http://ict.sit.tu.ac.th/moodle/>

Sources

- bitcoin.org
- bitcoin.it
- coindesk.com
- blockchain.info
- tradeblock.com
- wikipedia.org
- ...

As of 3 July 2014

Current Bitcoin Exchange Rates



1 BTC



US 646



21,000 Baht

1 BTC = 10^3 mBTC
= 10^6 uBTC
= 10^8 satoshi

Bitcoin Price over Past 24 Hours



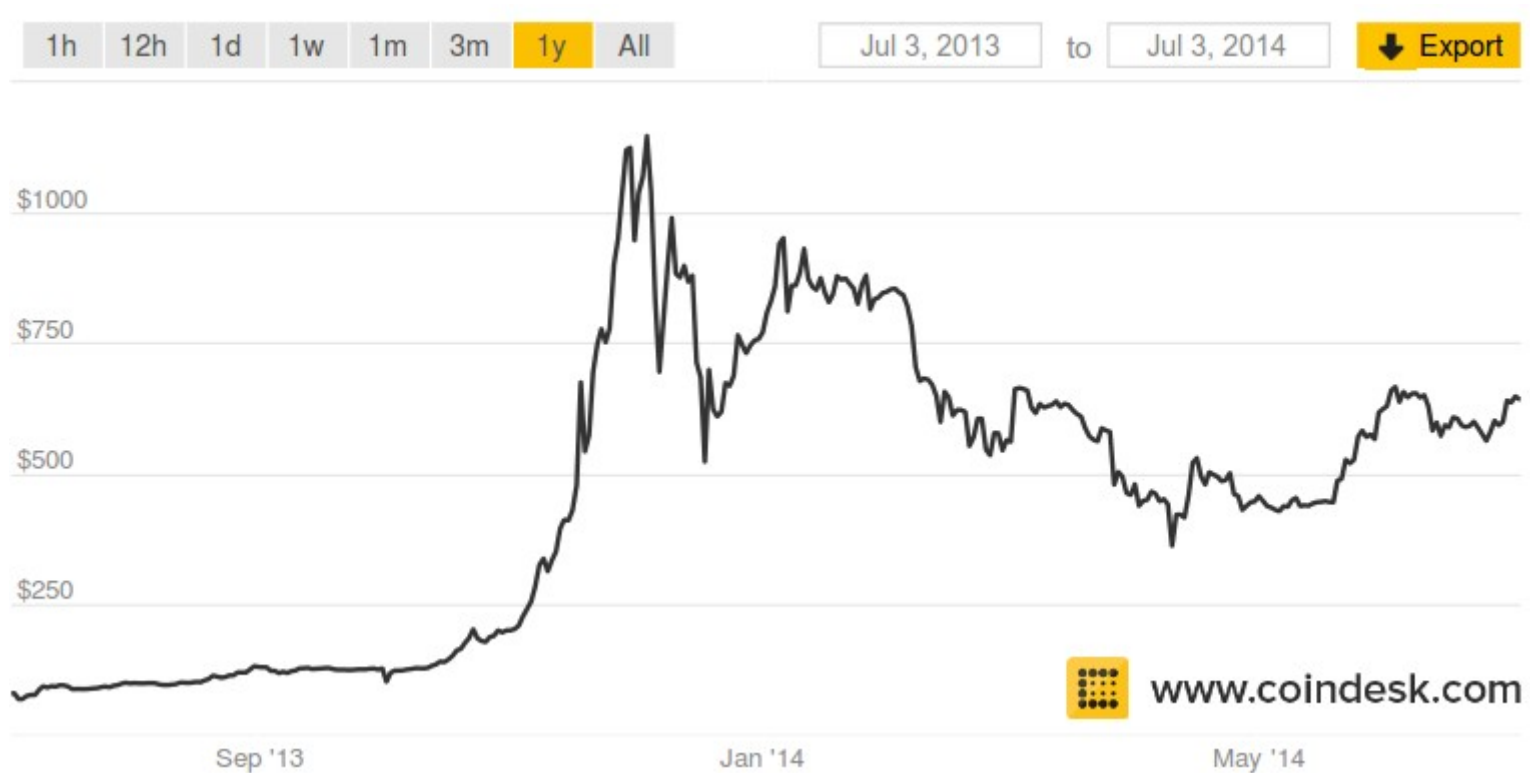
Bitcoin Price over Past Week



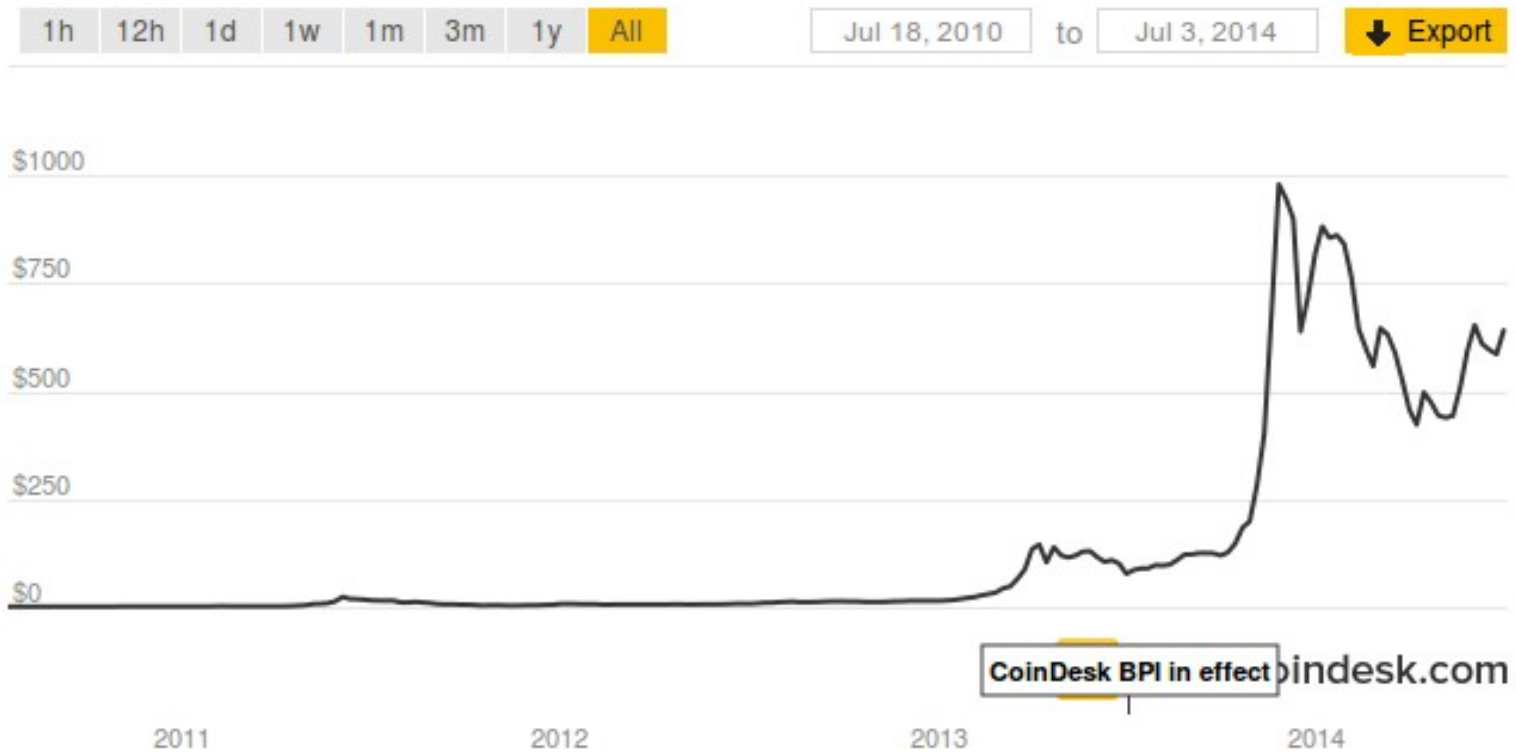
Bitcoin Price over Past Month



Bitcoin Price over Past Year



Bitcoin Price over All Time



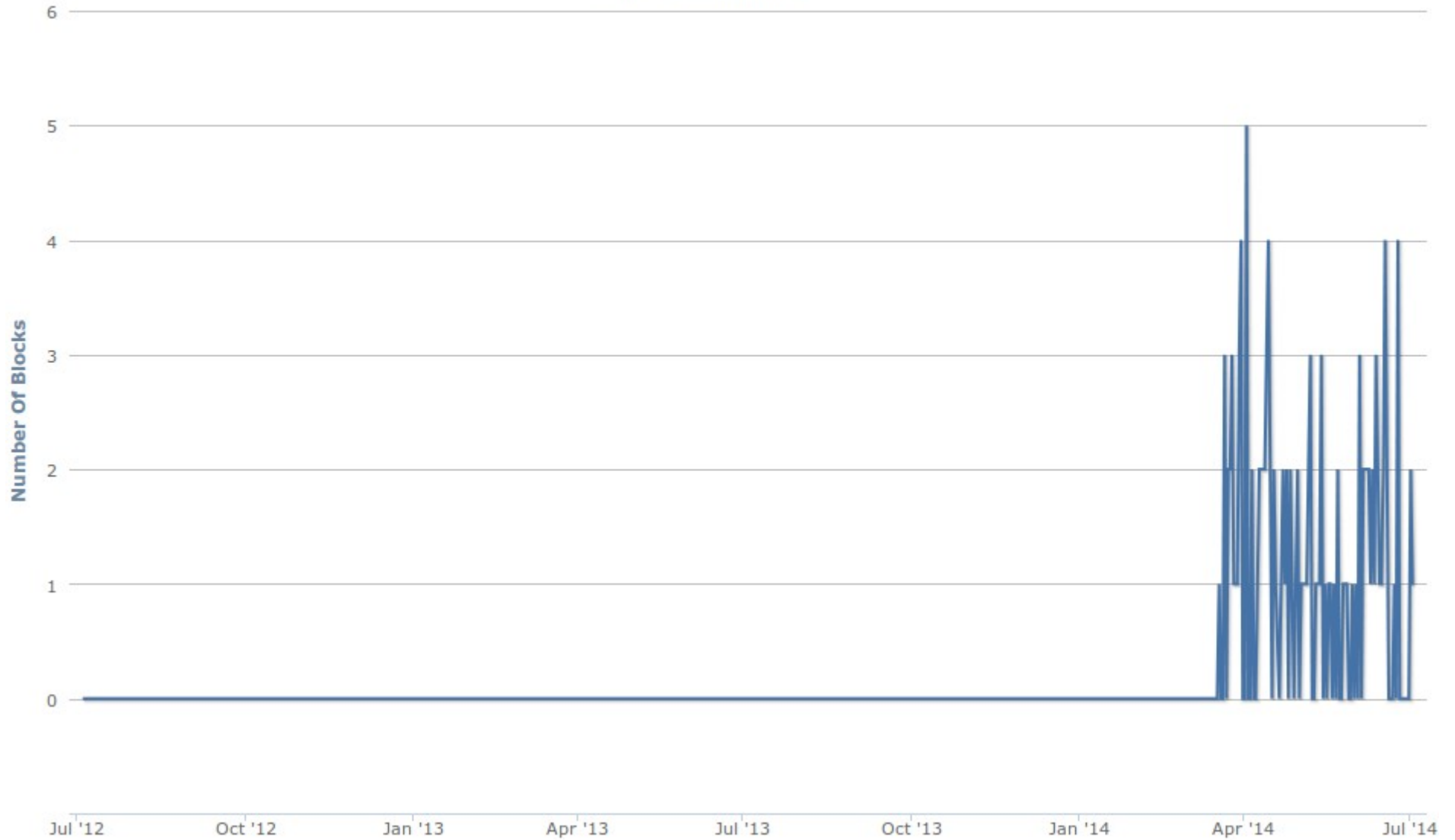
Transactions Per Block

Number of transactions per block
Source: blockchain.info



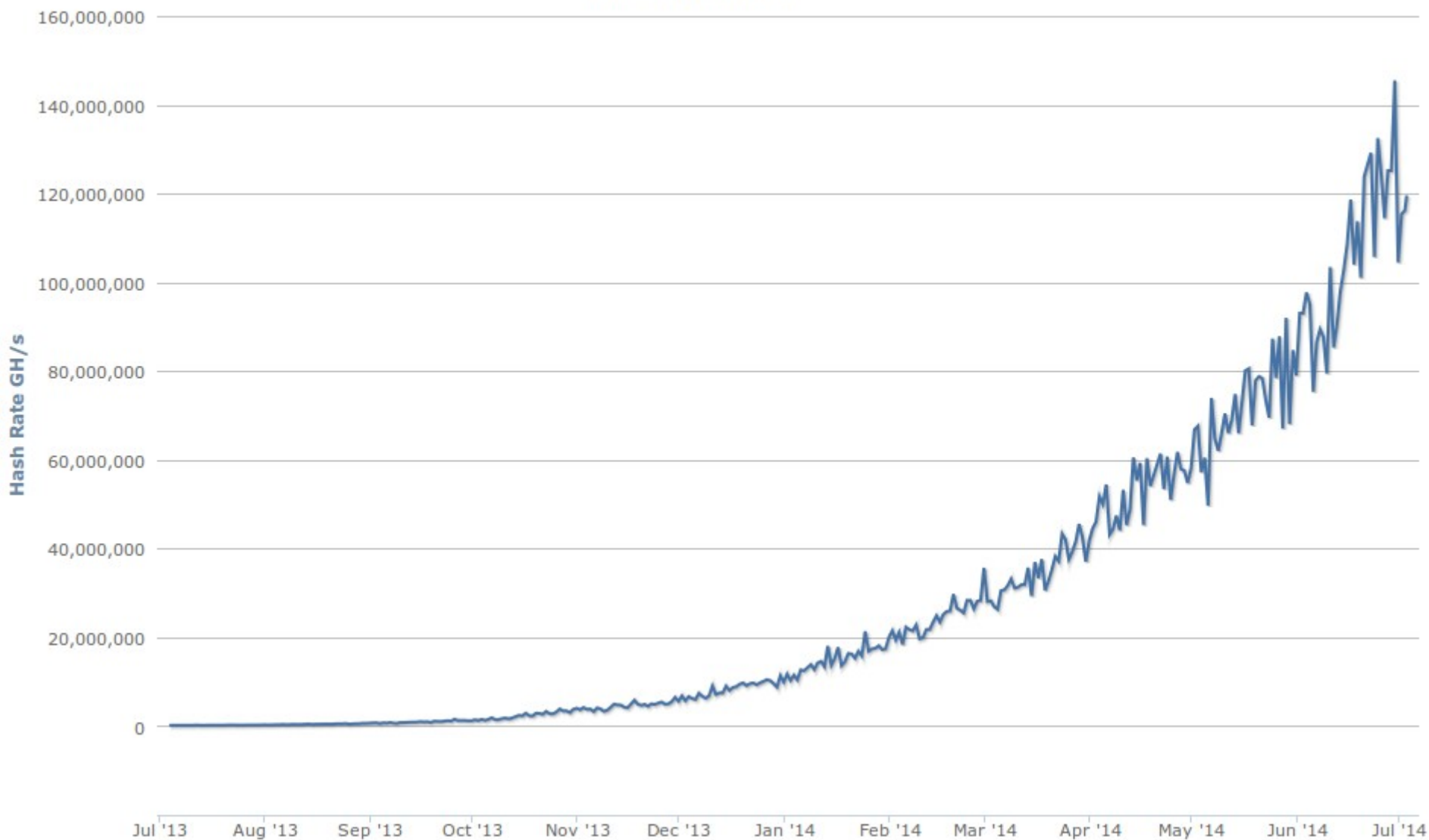
Number of Orphaned Blocks

Number Of Orphaned Blocks
Source: blockchain.info



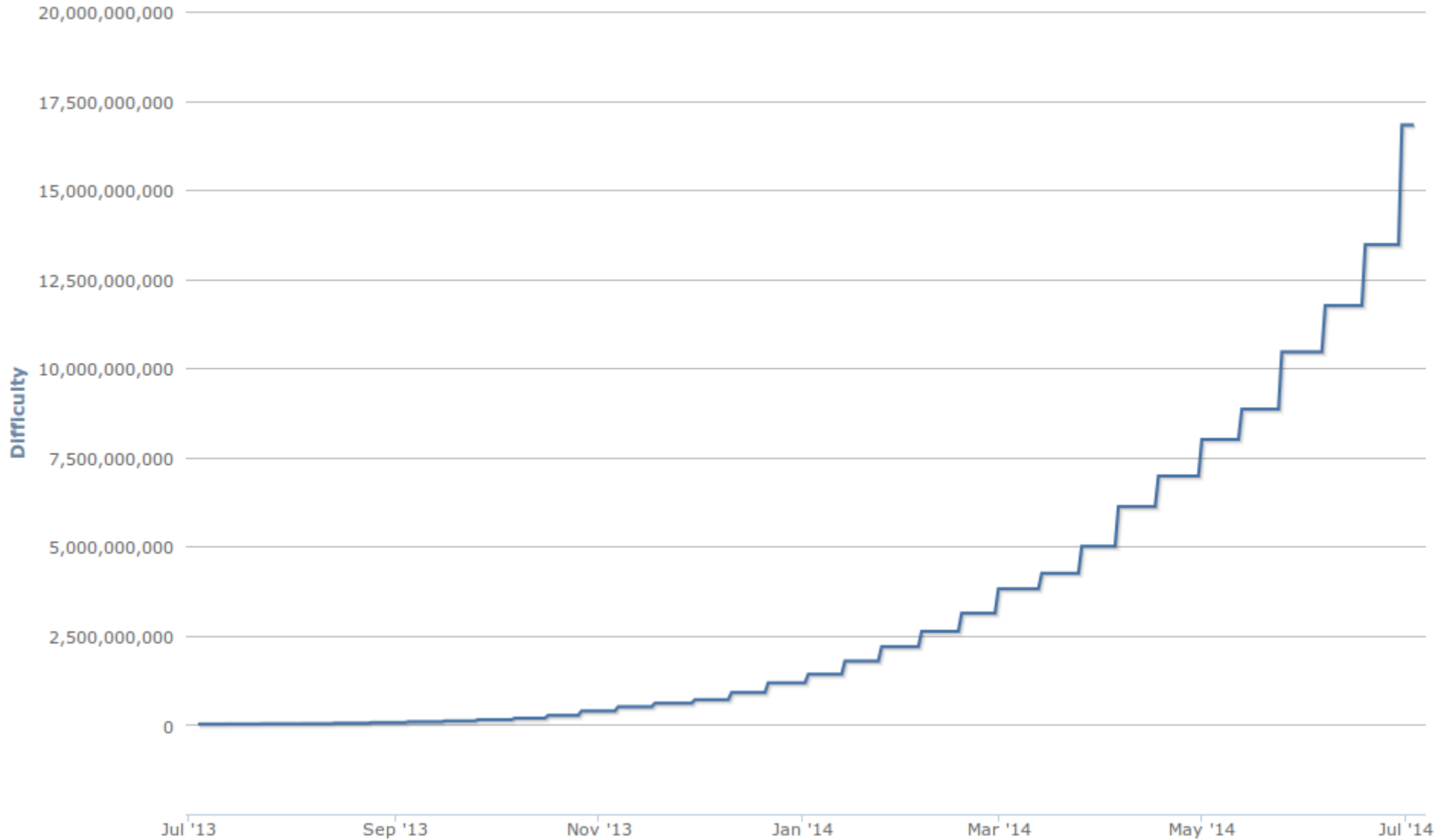
Hash Rate (GH/s)

Hash Rate
Source: blockchain.info



Difficulty Factor

Difficulty
Source: blockchain.info



Miners Revenue Per Day (USD)

Miners Revenue
Source: blockchain.info



Total

Block Chain Length	308,988
Bitcoins Mined	12,974,675
Reward per Block	25 BTC
Difficulty Factor	~ 16 billion = 2^{34}

Past 24 hours

Blocks added to chain	143
Bitcoins Mined	3,575
Time between Blocks	10.07 min
Transactions	66,110
Transaction Fees	12.75 BTC
Est. Transaction Volume	100,000 BTC
Hash Rate	120,000 TH/s

Mining Hardware

Type	MH/s	MH/s / Watt	MH/s / \$	Other Uses
CPU	10	0.1	0.1	General purpose
GPU	100	1	1	General purpose
FPGA	1000	1	1	Reprogrammable
ASIC	1,000,000	1000	100	Specific to hash algorithm



Solo Mining no longer cost efficient for Bitcoin
Pool Mining: greater chance of winning, reward shared across pool

Alternatives to Bitcoin

SHA-256



Namecoin



Peercoin



Mastercoin

script



Litecoin



Dogecoin



Auroracoin

Other/CPU



Darkcoin



Primecoin