



Damian Ward
Vocalink / Mastercard / BITUG

CRYPTO CURRENCIES #102 BRING ON THE ALTCOINS

January 6, 2018

Cryptocurrencies beyond Bitcoin

Altcoin, what's an Altcoin.?

2

- ❑ Bitcoin is a cryptocurrency and worldwide payment system released in 2009
- ❑ Today Bitcoin is one of 1000's of cryptocurrencies
- ❑ Bitcoin represents around 35% (and falling) of the cryptocurrency market
- ❑ Cryptocurrencies that are not Bitcoin are known as Altcoins

Bitcoin is grabbing headlines in 2017

3



When I predicted Bitcoin at \$500,000 by the end of 2020, it used a model that predicted \$5,000 at the end of 2017. BTC has accelerated much faster than my model assumptions. I now predict Bitcoin at \$1 million by the end of 2020. I will still eat my dick if wrong.

3:56 PM - Nov 29, 2017

💬 1,244 ↺ 7,174 ❤️ 12,526

James Altucher predicts bitcoin will reach \$1 million by 2020

- Outspoken libertarian and MGT Capital Investments CEO John McAfee tweets he predicts bitcoin will reach \$1 million by the end of 2020, double his previous forecast.
- "I'll say \$1 million by 2020, as well, easily," James Altucher says on CNBC's "Squawk Alley." "There's 15 million millionaires around the world. All their financial advisors are going to say, 'Hey, buy a bitcoin. You need some exposure.'"
- Bitcoin hit a record high of \$11,377.33 earlier in the day, according to CoinDesk.

[Evelyn Cheng](#) | @chengevelyn

Published 12:21 PM ET Wed, 29 Nov 2017 | Updated 12:40 PM ET Wed, 29 Nov 2017

"Bitcoin is the most important invention in the history of the world since the Internet."

- Roger Ver

"Bitcoin will do to banks what email did to the postal industry"

- Rick Falkvinge, Founder of the Swedish pirate party

'Bitcoin is a FRAUD': JP Morgan boss Jamie Dimon says he will FIRE staff trading bitcoin

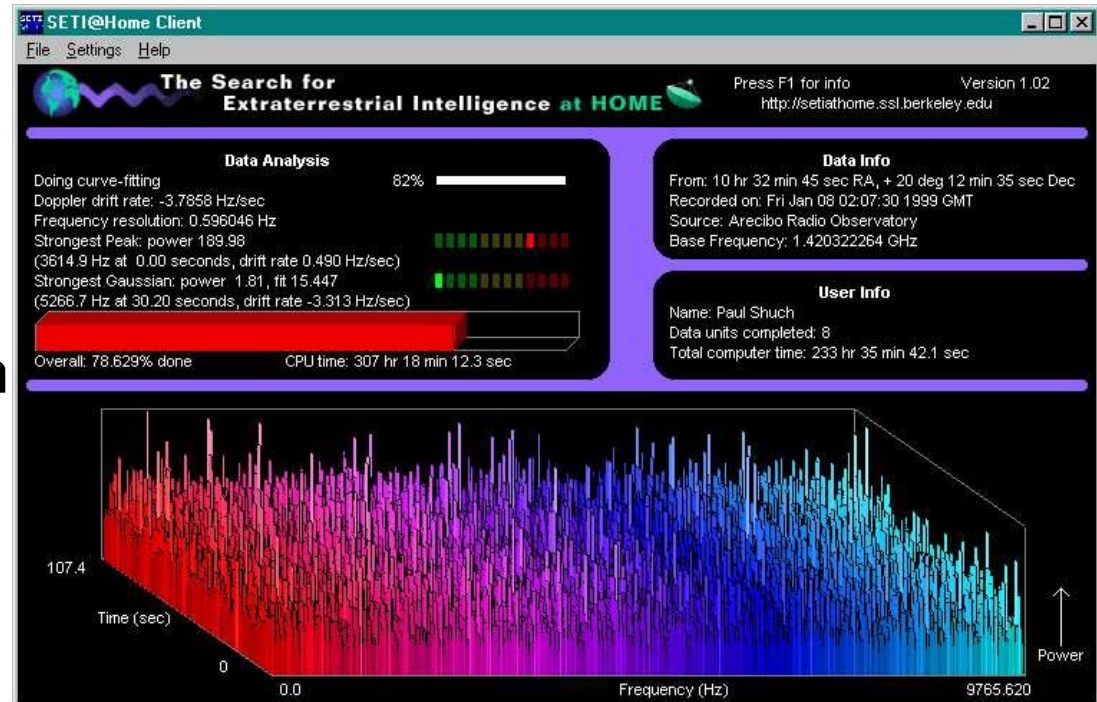
BITCOIN is a dangerous fraud and any employee at JP Morgan found trading the cryptocurrency will be fired, according to boss Jamie Dimon.

January 6, 2018

10 years ago...

4

- I was helping the search for alien lifeforms.
- I should have been mining Bitcoin



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Crypto Currencies 101

5

- A **cryptocurrency** is a digital asset designed to work as a medium of exchange.
- Bitcoin was the first decentralized cryptocurrency created in 2009
- Cryptocurrency transactions are placed into blocks and written to a distributed ledger, the Blockchain.
- The **bitcoin** (abbreviated **BTC** or **XBT**) is the unit that was used in the original Bitcoin wallet software created by Satoshi Nakamoto.

Crypto Currencies 101

6

- Most cryptocurrencies, including bitcoin have 8 decimal places.
- 1 BTC = 1.00000000, 0.00000001 is called a santoshi
- Move towards ISO 4217 compliant codes. (XMR, XBT etc..)
- The process of solving or committing a block of transactions to the blockchain is called **mining**.
- bitcoin's **proof of work** mining does two things:
 - ▣ it ensures that the next block in a blockchain is the one and only version of the truth,
 - ▣ keeps attackers from derailing the system and successfully forking the chain.

What in mining

7

- Change the block to find a SHA-256 hash value beginning with '000'.
- Vary the string by adding an integer 'nonce' and incrementing.
- Finding a match for "Hello, world!" takes us 4251 tries

```
"Hello, world!0"      => 1312af178c253f84028d480a6adc1e25e81caa44c749ec81976192e2ec93
"Hello, world!1"      => e9afc424b79e4f6ab42d99c81156d3a17228d6e1eef4139be78e948a9332
"Hello, world!2"      => ae37343a357a8297591625e7134cbea22f5928be8ca2a32aa475cf05fd42
"Hello, world!4248"   => 6e110d98b388e77e9c6f042ac6b497cec46660deef75a55ebc7cfdcf65cc0
"Hello, world!4249"   => c004190b822f1669cac8dc37e761cb73652e7832fb814565702245cf26eb
"Hello, world!4250"   => 0000c3af42fc31103f1fdc0151fa747ff87349a4714df7cc52ea464e12dc
```

- As difficulty increases the number of required zeros also increases.
- In Bitcoin there should be a new block every 10 minutes.
- It doesn't matter how the nonce changes, most of the time it's just a number counting upwards from 0

Mining rewards

8

- The reward is automatically adjusted so that, every four years, half the amount of bitcoins created in the prior 4 years are created.
- A maximum of 10,499,889 bitcoins were created in the first 4 (approx.) years from January 2009 to November 2012.
- Every four years thereafter this amount halves, so it should be 5,250,000 over years 4-8, 2,625,000 over years 8-12, and so on.
- The total number of bitcoins can never exceed 20,999,839

Mining proof of work

9

- In **proof of work**, miners compete to add the next block (a set of transactions) in the chain by racing to solve a extremely difficult cryptographic puzzle. The first to solve the puzzle, wins the lottery.
- As a reward for his or her efforts, the miner receives newly minted bitcoins – and a small transaction fee.
- The coin value of a block is 50 BTC for each of the first 210,000 blocks, 25 BTC for the next 210,000 blocks, then 12.5 BTC, 6.25 BTC and so on.

Mining hardware evolution

10

CPU Mining

- Early Bitcoin client versions allowed users to use their CPUs to mine.
- The advent of GPU mining made CPU mining financially unviable.
- The option was therefore removed from the core Bitcoin client's user interface.

GPU Mining

- GPU Mining is drastically faster and more efficient than CPU mining
- Uses high performance graphics cards

ASIC Mining

- An application-specific integrated circuit, or *ASIC*, designed and manufactured for a very specific purpose.
- ASICs designed for Bitcoin mining were first released in 2013.
- For the amount of power they consume, they are vastly faster than all previous technologies.


Bitmain mining hardware

11

□ Entry Level mining @ 450GH/s circa 2014

ebay Shop by category Search for anything All Categories Search Advanced

Back to search results | Listed in category: Coins > Virtual Currency > Miners



Bitmain Antminer S3+ 477GH/s ASIC SHA256 Bitcoin Miner used + PSU & Support

Condition: --
Time left: 9d 07h (14 Dec, 2017 16:50:51 GMT)

£102.00 10 bids

Enter your max. bid

Submit bid

Add to Watch list Add to collection

Delivery by Christmas 100% positive Feedback

Collect 102 Nectar points Get Started | Conditions

Postage: £15.00 Standard Delivery | See details
Item location: Weston-super-Mare, United Kingdom
Posts to: United Kingdom

Delivery: Estimated between Mon, 18 Dec. and Tue, 19 Dec.

Payments: PayPal Visa Mastercard American Express Cash on collection


Seller information
deanedwards30 (426 ★)
100% Positive Feedback
Save this seller
Contact seller
See other items

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Bitmain mining hardware

12

□ Mining @ 13.5TH/s circa 2016


 Shop by category ▾

Search for anything

All Categories ▾

Search

[Back to search results](#) | Listed in category: [Coins](#) > [Virtual Currency](#) > [Miners](#)



Mouse over image to zoom

BITMAIN ANTMINER S9 13.5TH/s + 1600W PSU + 180 DAYS WARRANTY - December

Condition: --

Time left: 11h 2m 49s (05 Dec, 2017 20:11:31 GMT)

£1,240.00 31 bids

Enter your max. bid

Submit bid

[Add to Watch list](#) [Add to collection](#)

12 inquiries

100% positive Feedback


Seller information
[energyme_com_au](#) (130 ★)
100% Positive Feedback
[Save this seller](#)
[Contact seller](#)
[See other items](#)

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Slushpool mining pool dashboard

13

2017-12-05 09:15:16 | 1.158 Eh/s | Bitcoin | CNY: 78168.65 | EUR: 9968.24 | GBP: 8814.6 | USD: 11820.09

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Scoring Hash Rate

0

0

2

Workers States

Your Contribution to the Pool

< 0.01 %

Last Share

6 Days 12 Hours

5 minutes

Hour

Day

0.00000000 BTC

Confirmed Reward

0.00000000 BTC

Unconfirmed Reward

0.03010357 BTC

All Times Reward

4 Days 13 Hours

Last Payout

0% to payout

Payout Threshold

0.01010157 BTC

Estimated Reward for Current Block

0.00000000 BTC

Estimated Payout Period

Estimated Daily Reward

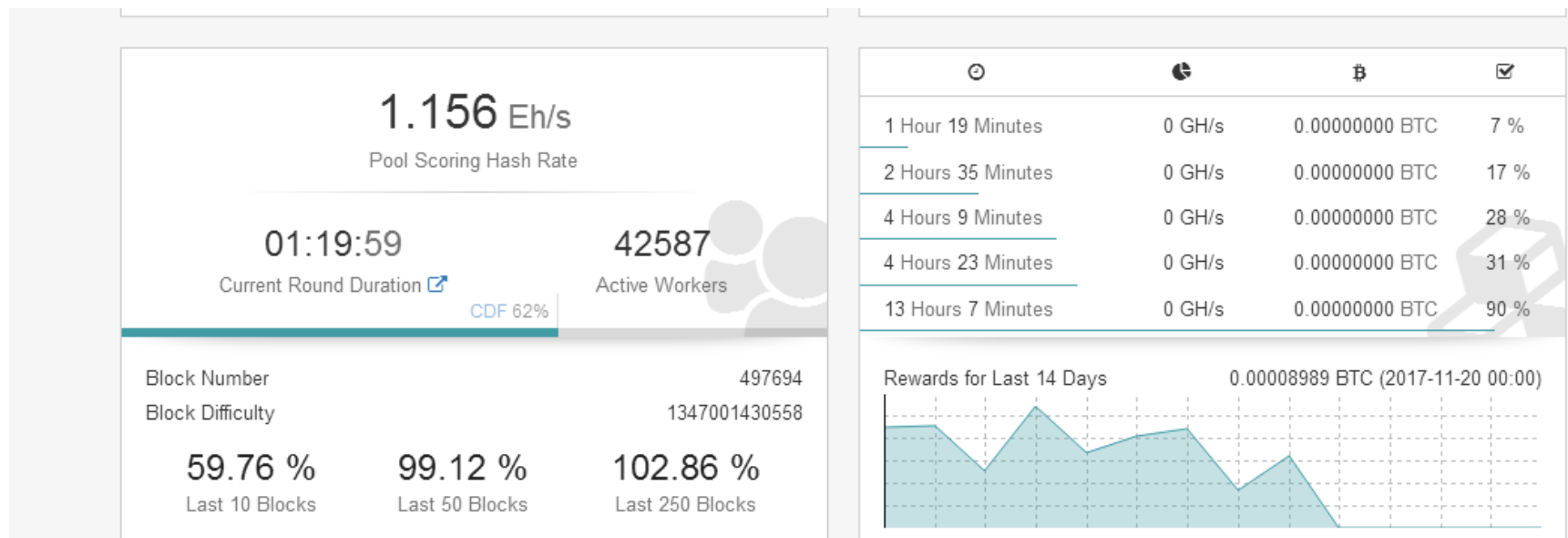
0.00000000 BTC

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Slushpool mining poo dashboard

14

- Showing pool hashrate.. 1.156 Eh/s !!

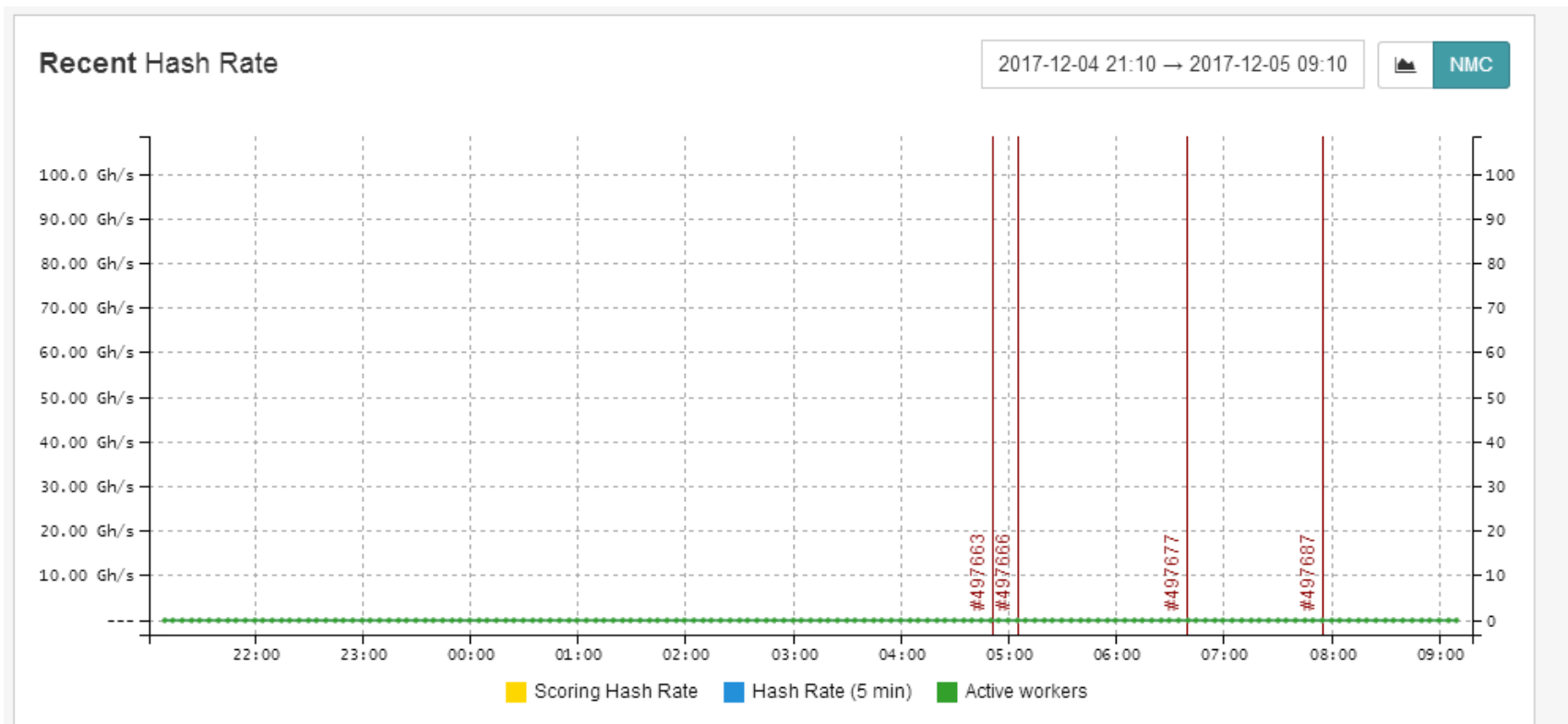


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Slushpool mining pool dashboard

15

□ Showing pool block completion events



Commercial mining

16

- Mining servers on shelves.



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Commercial mining

17

- Shelves in racks..



Commercial mining

18

- Racks in warehouses...



Commercial mining

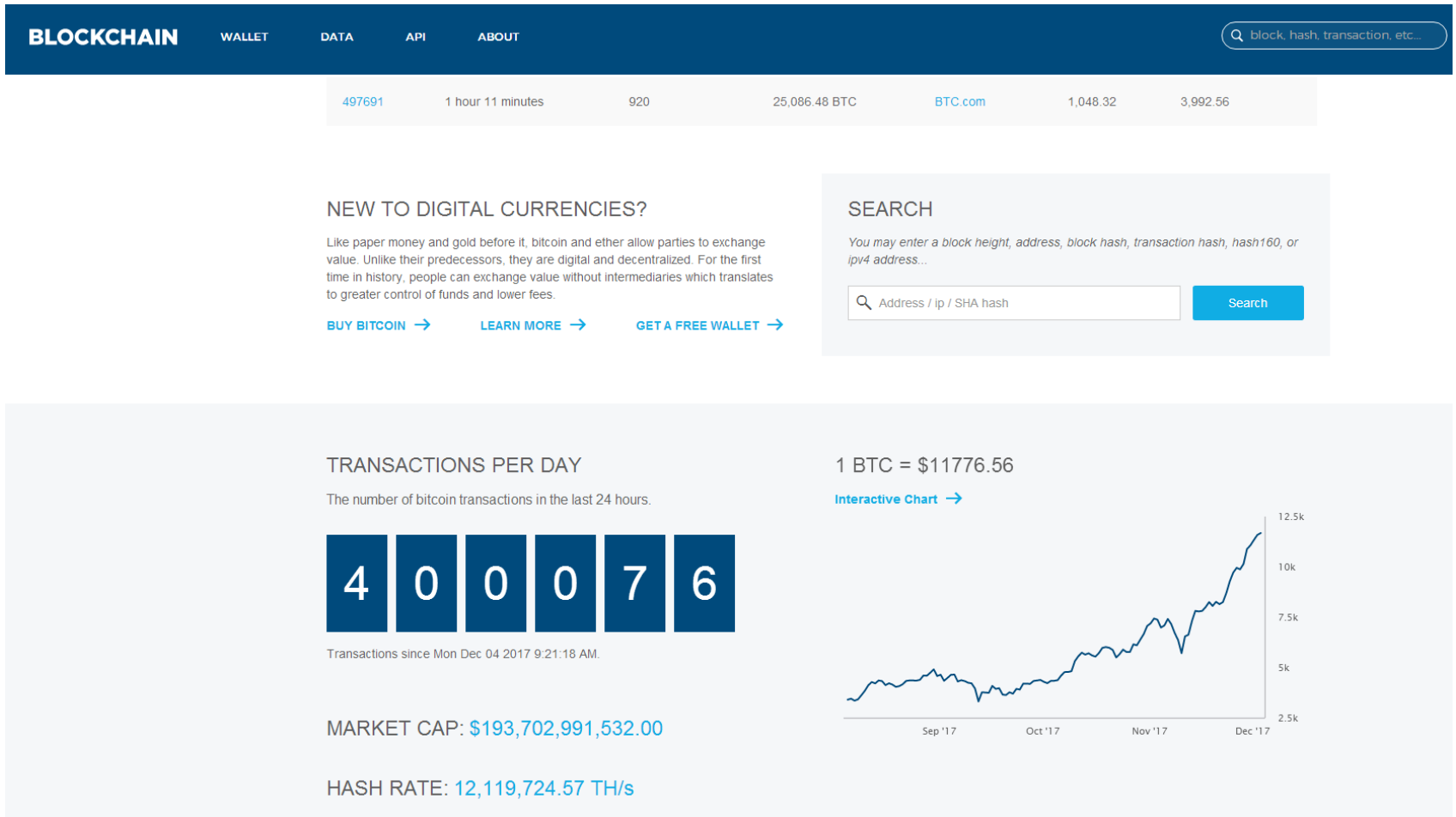
19

- Lots or warehouses..



Bitcoin blockchain stats

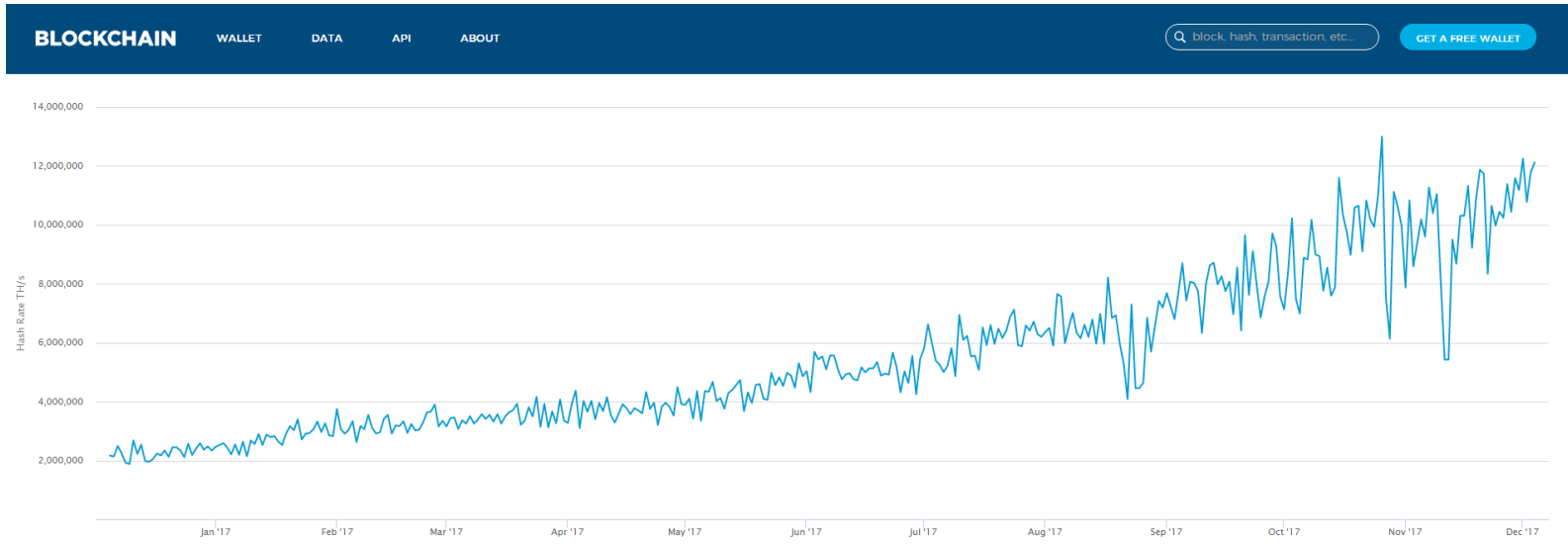
20



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Bitcoin mining hashrate

21



- ❑ 12,000,000 TH/s = 1.2×10^{19} hashes per second 12,000,000,000,000,000,000 (Twelve quintillion.)
- ❑ 1 kH/s is 1,000 hashes per second (sometimes mistakenly written KH/s).
- ❑ 1 MH/s is 1,000,000 hashes per second.
- ❑ 1 GH/s is 1,000,000,000 hashes per second.
- ❑ 1 TH/s is 1,000,000,000,000 hashes per second.
- ❑ 1 PH/s is 1,000,000,000,000,000 hashes per second

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Bitcoin market value

22

Where does the value of Bitcoin stem from? What backs up Bitcoin?

- ❑ Bitcoins have value because they are **useful** and **scarce**.
- ❑ Bitcoins, like dollars, euros and sterling is not backed by anything except the variety of merchants that accept them.
- ❑ If confidence in Bitcoins is lost then it will not matter that the supply can no longer be increased, the demand will fall off with all holders trying to get rid of their coins.

Perhaps is not a science..

23

Fugazi



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Lost bitcoins (estimated @ 25%)

24

'I could have gone around the world or bought a yacht': How throwing out one computer part cost an Australian tech expert \$4.8 MILLION

- A man who spent \$25 on internet currency says he missed out on
- Campbell Simpson threw out hardware with now extremely value
- The tech writer had 1400 Bitcoins which are now worth over \$3
- He says he missed out on incredible wealth because he unknown

By [APRIL GLOVER FOR DAILY MAIL AUSTRALIA](#) [Twitter](#)

PUBLISHED: 01:49, 26 May 2017 | UPDATED: 01:55, 26 May 2017

1,400 BTC \$5.4m

Missing: hard drive containing Bitcoins worth £4m in Newport landfill site

A digital 'wallet' containing 7,500 Bitcoins that James Howells generated on his laptop is buried under four feet of rubbish



The 7,500 Bitcoins on the hard drive were worth around £500,000 when it was thrown in the rubbish. Since then, the value has soared. Photograph: Owen Humphreys/PA

8500 BTC \$93.5m

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Bitcoin exchange hacks

25

- January 2014, Mt Gox was the largest bitcoin exchange in the world, handling over 70% of all bitcoin transactions worldwide.
- The Mt. Gox was hacked, 740,000 BTC \$460 million stolen (6% of all bitcoins at the time)
- Now valued at over \$3 billion (October 2017)
- 200,000 BTC recovered, 650,000 BTC still missing, exchange declares insolvency

- On 7th December 2017 the NiceHash exchange hacked 4,736 BTC, \$64m stolen exchange declares insolvency

Spent bitcoins

26

10,000 BTC \$110m

On May 22, 2010, a developer bought two pizzas using 10,000 units of a then-little-known digital currency called bitcoin.

Today, 10,000 bitcoins are worth more than \$20 million (£15.4 million).

Bitcoin is going nuclear. Its price is tearing upward, with each bitcoin worth \$2,128 (£1,638) — a little shy of its all-time-high of \$2,185 (£1,682) reached earlier Monday morning.

Just a year ago, it was trading at just \$443 (£341), after deflating



Laszlo Hanyecz bought these pizzas for 10,000 bitcoins on May 22, 2010. Laszlo Hanyecz

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New Billionaires

27



- ❑ The Winklevoss twins, famously known for suing Mark Zuckerberg
- ❑ Bitcoin billionaires, Cameron and Tyler Winklevoss won \$65 million from the Facebook lawsuit, and invested \$11 million of their payout into Bitcoin (@\$120) in 2013.
- ❑ The twins amassed one of the largest portfolios of Bitcoin in the world equating to 1% of the entire currency's dollar value equivalent.

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Richest bitcoin wallets

28

Balance	Addresses	% Addresses (Total)	Coins	\$USD	% Coins (Total)
0 - 0.001	13471918	56.43% (100%)	2,385 BTC	27,933,309 USD	0.01% (100%)
0.001 - 0.01	4464268	18.7% (43.57%)	18,211 BTC	213,290,587 USD	0.11% (99.99%)
0.01 - 0.1	3646277	15.27% (24.87%)	114,507 BTC	1,341,121,332 USD	0.69% (99.88%)
0.1 - 1	1603480	6.72% (9.6%)	516,022 BTC	6,043,713,590 USD	3.09% (99.19%)
1 - 10	536864	2.25% (2.89%)	1,437,608 BTC	16,837,432,299 USD	8.6% (96.1%)
10 - 100	134303	0.56% (0.64%)	4,427,781 BTC	51,858,687,899 USD	26.5% (87.5%)
100 - 1,000	16271	0.07% (0.08%)	3,787,504 BTC	44,359,688,267 USD	22.67% (61%)
1,000 - 10,000	1561	0.01% (0.01%)	3,388,496 BTC	39,686,461,650 USD	20.28% (38.33%)
10,000 - 100,000	112	0% (0%)	2,755,280 BTC	32,270,161,717 USD	16.49% (18.05%)
100,000 - 1,000,000	2	0% (0%)	260,872 BTC	3,055,367,737 USD	1.56% (1.56%)

Addresses richer than

1 USD	100 USD	1,000 USD	10,000 USD	100,000 USD	1,000,000 USD	10,000,000 USD
17,242,820	6,445,514	2,464,046	767,367	167,592	20,665	1,979

[Bitcoin UTXOs cumulative chart](#)

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Bitcoin mining electricity consumption

29

- Bitcoin mining could provide power for 2.4 million Americans or 6.1 million Britons.
- If bitcoin miners were one country, it would be ranked 61st in the world based on electricity consumption, comparable to Morocco or Slovakia.

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Bitcoin mining uses more electricity than 159 countries

Published time: 3 Dec, 2017 09:03 [Get short URL](#)



© Drahoslav Ramik / Global Look Press

The surge of interest in bitcoin has triggered not only skyrocketing prices and endless debate on whether it's bubble, but also an enormous increase in electricity consumption all over the world.

According to Digiconomist's Bitcoin Energy Consumption Index, as of November 20th bitcoin's current estimated annual

Altcoins

30

- As of 27 November 2017 over 1324 cryptocurrency specifications exist (and growing)
- Vitalik Buterin, Ethereum's founder and chief scientist, predicts that 90% of token startups will fail
- 9 of 10 startups fail in business too.





















Coin market Capitalisation

31

□ <https://coinmarketcap.com/>

Cryptocurrencies: **1324** / Markets: **7070**

Market Cap: **\$337,252,294,275** / 24h Vol: **\$13,441,623,702** / BTC Dominance: **55.9%**

#	Name	Market Cap	Price	Volume (24h)	Circulating Supply	Change (24h)	Price Graph (7d)
1	 Bitcoin	\$189,063,627,728	\$11,308.20	\$6,670,670,000	16,719,162 BTC	-2.17%	
2	 Ethereum	\$44,387,298,910	\$461.76	\$1,019,530,000	96,127,173 ETH	-3.45%	
3	 Bitcoin Cash	\$25,657,821,316	\$1,523.86	\$868,458,000	16,837,388 BCH	-5.68%	
4	 Ripple	\$9,650,928,367	\$0.249876	\$128,904,000	38,622,870,411 XRP *	-3.85%	
5	 IOTA	\$6,398,840,050	\$2.30	\$782,988,000	2,779,530,283 MIOTA *	42.88%	
6	 Dash	\$5,822,979,421	\$753.03	\$181,177,000	7,732,743 DASH	-5.12%	
7	 Bitcoin Gold	\$5,347,161,158	\$320.43	\$176,090,000	16,687,611 BTG	-4.54%	
8	 Litecoin	\$5,303,176,760	\$97.99	\$351,335,000	54,121,283 LTC	-4.65%	
9	 Cardano	\$3,428,958,787	\$0.132254	\$68,620,100	25,927,070,538 ADA *	-2.92%	
10	 Monero	\$3,008,655,805	\$194.95	\$68,308,700	15,433,120 XMR	-5.26%	

Mining – proof of stake

32

- The most common alternative to proof of work is proof of stake.
- In this type of consensus algorithm, instead of investing in expensive computer equipment in a race to mine blocks, a 'validator' invests in the coins of the system.
- Note the term validator. That's because no coin creation (mining) exists in proof of stake. Instead, all the coins exist from day one, and validators are paid strictly in transaction fees.
- In proof of stake, your chance of being picked to create the next block depends on the fraction of coins in the system you own.
- A validator with 300 coins will be three times as likely to be chosen as someone with 100 coins.

CryptoKitty, shows Ethereum limitations

33



Kitten number 23 was first traded for over \$4,000 on Dec. 2. Two days later, it was sold on for over \$32,000. Yesterday, a user named It's All About The Money paid about \$63,000 for it, and it's now one of the most expensive cats for sale in that user's stable. It's on offer for 240.12 ether, or about \$106,000 at current prices.

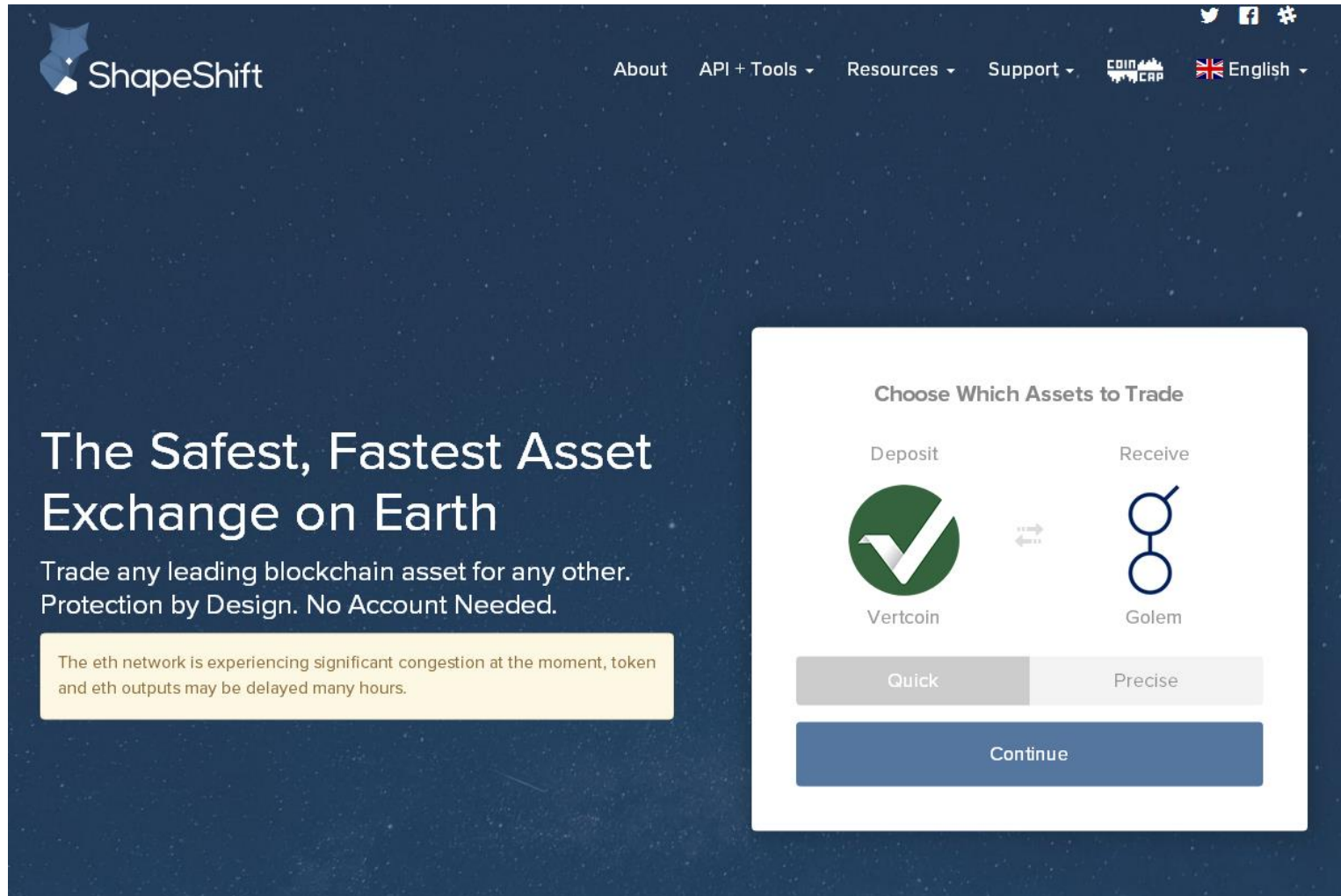
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- Kitten number 23, yours for \$106,000



Shapeshift, anonymous exchange

35



The image shows the Shapeshift website interface. The header includes the Shapeshift logo, navigation links (About, API + Tools, Resources, Support), and social media icons. The main content area features the headline "The Safest, Fastest Asset Exchange on Earth" and the subtext "Trade any leading blockchain asset for any other. Protection by Design. No Account Needed." A yellow warning box states: "The eth network is experiencing significant congestion at the moment, token and eth outputs may be delayed many hours." On the right, a trade selection modal is displayed with the title "Choose Which Assets to Trade". It shows a "Deposit" of Vertcoin (green circle with a white checkmark) and a "Receive" of Golem (blue circle with a white 'G'). A double-headed arrow indicates the trade direction. Below the asset selection, there are two buttons: "Quick" and "Precise", and a large blue "Continue" button at the bottom.

ShapeShift

About API + Tools Resources Support COIN CAP English

The Safest, Fastest Asset Exchange on Earth

Trade any leading blockchain asset for any other.
Protection by Design. No Account Needed.

The eth network is experiencing significant congestion at the moment, token and eth outputs may be delayed many hours.

Choose Which Assets to Trade

Deposit Receive

Vertcoin Golem

Quick Precise

Continue

Shapeshift, select assets

36

Search by asset name or symbol

×



Bitcoin



FirstBlood



Aragon



Basic Attention Token



Bancor



Bitcoin Cash



Blackcoin



Clams



Dash



Decred



Digibyte



district0x



Dogecoin



Edgeless



Ether



Ether Classic

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Shapeshift, make an exchange

37


<

Instant Rate 1 BTC = 114.68313517 LTC

Deposit Min	Deposit Max	Miner Fee
0.00001730 BTC	0.43070514 BTC	0.001 LTC



→



Your Litecoin Address (destination address)

Your Bitcoin Refund Address

☐ I agree to Terms

Reusable Address? ☐

Start Transaction

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Poloniex

38

← → ↺ 🏠 https://poloniex.com/exchange#btc_eth ☆ ☰

POLONIEX EXCHANGE MARGIN TRADING LENDING Sign in or Create an Account to start trading. 🔔

ETHEREUM EXCHANGE
ETH/BTC

Last Price
0.03960000


24hr Change
-2.84%

24hr High
0.04113232

24hr Low
0.03914697

24hr Volume: 2914.17683899 BTC / 72509.63973522 ETH

High: 0.07829816 Low: 0.03750016



Zoom: 6h 24h 2d 4d 1w 2w 1m All Candlesticks: 6min 15min 30min 2-hr 4-hr 1-day

BUY ETH

Price: BTC

Amount: ETH

Total: BTC

[Sign In](#) or [Create an Account](#) to trade.

STOP-LIMIT [What's this?](#)

Stop: BTC

Limit: BTC

Amount: ETH

Total: BTC

[Sign In](#) or [Create an Account](#) to trade.

SELL ETH

Price: BTC

Amount: ETH

Total: BTC

[Sign In](#) or [Create an Account](#) to trade.

MARKETS [show ★ only](#) 🔍 Filter (Ctrl+F)

BTC	ETH	XMR	USD
Coin	Price	Volume	Change ▼ Name
★ XMR	218.46630000	3365543.962	+10.60 Monero
★ STR	0.09530106	4497999.187	+4.20 Stellar
★ BTC	11605.58772825	60846853.295	+2.70 Bitcoin
★ LTC	100.83554748	5023295.903	+1.87 Litecoin
★ BCH	1535.00000000	13887826.147	+1.79 Bitcoin Cash
★ DASH	750.01010101	2131450.920	-0.13 Dash
★ ETH	459.50000003	13836768.389	-0.20 Ethereum
★ ETC	28.52000000	3257749.207	-0.80 Ethereum Classic
★ XRP	0.24099928	3585011.588	-0.95 Ripple
★ ZEC	315.91241521	2271464.822	-1.89 Zcash
★ REP	34.98700589	1030343.235	-3.88 Augur
★ NXT	0.43400000	8411320.800	-5.66 NXT

NOTICES 🔔

On Nov 21, 2017, the following will be delisted: SJCX, NOTE, and NAUT.
Posted by SweetJohnDee at 2017-11-07 20:35:10

STORJ/BTC market added
Posted by busoni@poloniex at 2017-10-27 02:36:57

Notice about Bitcoin Gold: <https://poloniex.com/press-releases/2017.10.24-Notice-About-Bitcoin-Gold/>
Posted by busoni@poloniex at 2017-10-24 05:55:12

GAS/BTC and GAS/ETH Gas markets added
Posted by SweetJohnDee at 2017-09-14 18:50:44

OMG/BTC and OMG/ETH OmiseGO markets added
Posted by Withasmile at 2017-09-12 08:35:09

January 6, 2018

← → ↻ 🏠 <https://yobit.net/en/> 🔔 ☆ ☰

YObit.net Trade Market InvestBox Dice FreeCoins Wallets ICO CoinsInfo AddCoin Support PM Registration Login EN RU CN

BALANCES

Currency	Amount
BTC	0.00000000
LTC	0.00000000
DASH	0.00000000
DOGE	0.00000000
YOVI	0.00000000
ETH	0.00000000
LSK	0.00000000
Est. BTC:	0.00 BTC

MARKET

TOP	BTC	ETH	DOGE	WAVES	USD	RUR
Name	Price	Ch.	Vol.			
YOVI	0.02052200	+ 0.2%	0.3			
DASH	0.06470755	- 2.3%	963.9			
WAVES	0.00064200	+ 14.7%	429.4			
ETH	0.03950000	- 3.6%	413.5			
ZEC	0.02711683	- 3.9%	353.3			
BCC	0.13219033	- 0.7%	249			
LTC	0.00866600	- 0.9%	193.2			
BTCCRED	0.00003921	+ 18.3%	191			
BTC	\$11698.00	+ 1.8%	186			
BTCHM	0.00000610	+ 219.4%	110.8			
BTC	R728000.00	+ 1%	70			
BTCCRED	\$0.46	+ 9.6%	49.2			
UNIT	0.00004000	+ 189.5%	46.6			
LIZA	0.00026001	- 0.2%	39.4			
YOBIK	0.01270014	- 0.7%	37.3			
XPD	0.00001210	+ 770.6%	34			
LBTC	0.00000215	+ 667.9%	33.3			
BTCCRED	R28.31	+ 15.1%	25.5			
ETH	\$463.09	- 1.3%	24.6			
ONX	0.00003750	- 10.4%	24.4			
VOYA	0.00025251	+ 83.2%	23.7			
BTG	0.02577110	- 5%	22.9			
BTCHM	\$0.07	+ 199.6%	20.8			
BTCHRY	0.00000010	+ 900%	19.7			

DASH / BTC Last: 0.06534044 24High: 0.06742059 24Low: 0.06448422 24V: 965.69 BTC

12 Hours 24 Hours 7 Days 1M 6M Order Book

CHAT EN RU DE CN AR

- Shinkudo: i am log in but when i create ticket it said you need to log in first but i am log in.
- Wassem L1: what about agt?
- ishuz11: looks nice
- JSpike: Wassem, for the number of coins it can be a good deal buy project not alive so far i noticed
- marcbrooks L1: vbx dead?
- JSpike: For AGT
- Paroman91 L1: what time for ticket wait?
- Wassem L1: next is agt i think
- ishuz11: btcr potential?

BUY 0.06534195 0.00000000 BTC

Balance: 0.00000000 DASH

Amount: 1.00000000 DASH

Price: 0.06554999 BTC

Total: 0.06554999 BTC

Fee (0.2%): 0.00013109 BTC

Total+Fee: 0.06568108 BTC

Buy

SELL 0.06470776 0.00000000 DASH

Balance: 0.00000000 DASH

Amount: 1.00000000 DASH

Price: 0.06513393 BTC

Total: 0.06513393 BTC

Fee (0.2%): 0.00013026 BTC

Total+Fee: 0.06500367 BTC

Sell

TRADE HISTORY

Time	Price	DASH
10:49:40	BUY 0.06534044	27.7662000
10:48:20	SELL 0.06470755	0.02000000
10:46:39	BUY 0.06534122	16.94000000
10:45:03	SELL 0.06470755	0.29837677
10:45:03	SELL 0.06500000	0.00500000
10:45:03	SELL 0.06513393	0.0004854
10:45:03	SELL 0.06534196	0.44710383
10:45:03	SELL 0.06534196	0.01912886
10:45:02	SELL 0.06534196	0.28010000
10:45:52	BUY 0.06554908	4.62000000
10:45:49	BUY 0.06554999	0.00840361
10:42:20	SELL 0.06513400	0.0082197
10:42:19	SELL 0.06513400	0.00188282
10:41:06	BUY 0.06554694	21.5976860
10:38:36	BUY 0.06555943	26.48800000
10:35:54	BUY 0.06555664	7.83860000
10:33:04	BUY 0.06555933	40.04000000
10:30:08	BUY 0.06555832	41.8556240
10:27:14	BUY 0.06555935	23.10000000
10:24:35	BUY 0.06555774	8.96661770
10:22:20	SELL 0.06557876	0.00461144
10:21:49	SELL 0.06513393	0.02717648
10:21:49	SELL 0.06542704	0.00778852
10:21:46	BUY 0.06557877	8.79521300
10:21:37	BUY 0.06542732	0.00156253
10:21:33	BUY 0.06542732	0.00177080
10:21:32	BUY 0.06542731	0.00156253
10:21:14	BUY 0.06542706	0.01662212
10:21:11	BUY 0.06542705	0.03063184
10:21:04	BUY 0.06542704	0.00778852
10:20:59	BUY 0.06542703	0.00315473
10:19:11	BUY 0.06547560	6.00711570

SELL ORDER

Price	DASH	BTC
0.06534195	0.03113350	0.00203432
0.06534196	0.15000000	0.00980129
0.06554999	0.29837677	0.01955859
0.06555000	0.00648800	0.00042528
0.06555997	0.00393896	0.00025823
0.06555999	0.81882632	0.05368224
0.06558149	0.00276097	0.00018106
0.06558377	0.00276097	0.00018107
0.06563392	0.00300000	0.00019690
0.06563393	0.29950000	0.01965736
0.06570993	0.02717648	0.00178576
0.06576327	0.29697226	0.01952986
0.06576328	0.03672996	0.00241548
0.06581745	0.00731228	0.00048127

BUY ORDER

Price	DASH	BTC
0.06470776	0.36674610	0.02373131
0.06470775	0.02505752	0.00162141
0.06470771	0.16118166	0.01042969
0.06470770	0.01588547	0.00102791
0.06470734	0.00785938	0.00050855
0.06469204	0.03805852	0.00246208
0.06468711	0.00199328	0.00012893
0.06467713	0.77366889	0.04999999
0.06448423	0.00600000	0.00038690
0.06448422	0.02530072	0.00163149
0.06448367	0.00164806	0.00010627
0.06441387	0.00806115	0.00051924
0.06437011	0.10000000	0.00643701
0.06437010	48.5630000	3.12600516

DICE GAME ? @

BTC Price

0.01 0.02 R < 48 R > 52

[Twits @YobitExchange](#)

Korbit

40

The screenshot shows the Korbit website homepage. At the top, there's a navigation bar with the Korbit logo, links for Chart, Trade, More, Sign In, and a Register button. The main heading is "Korea's First Bitcoin Exchange". Below this is a registration form with an "E-mail address" input field and a "Create Account" button. The background features a world map. Below the registration form, there are two tables listing various cryptocurrencies with their prices and 24-hour changes. At the bottom right, the 24-hour volume is displayed.

Currencies	Price (₩)	Change (24h)
Bitcoin	13,932,500	4.20% ▲
Bitcoin Cash	1,843,500	3.39% ▲
Ethereum	550,350	1.41% ▲
Ethereum Classic	34,220	0.15% ▲
Ripple	287	0.35% ▼
Bitcoin Gold	540,000	0.56% ▲

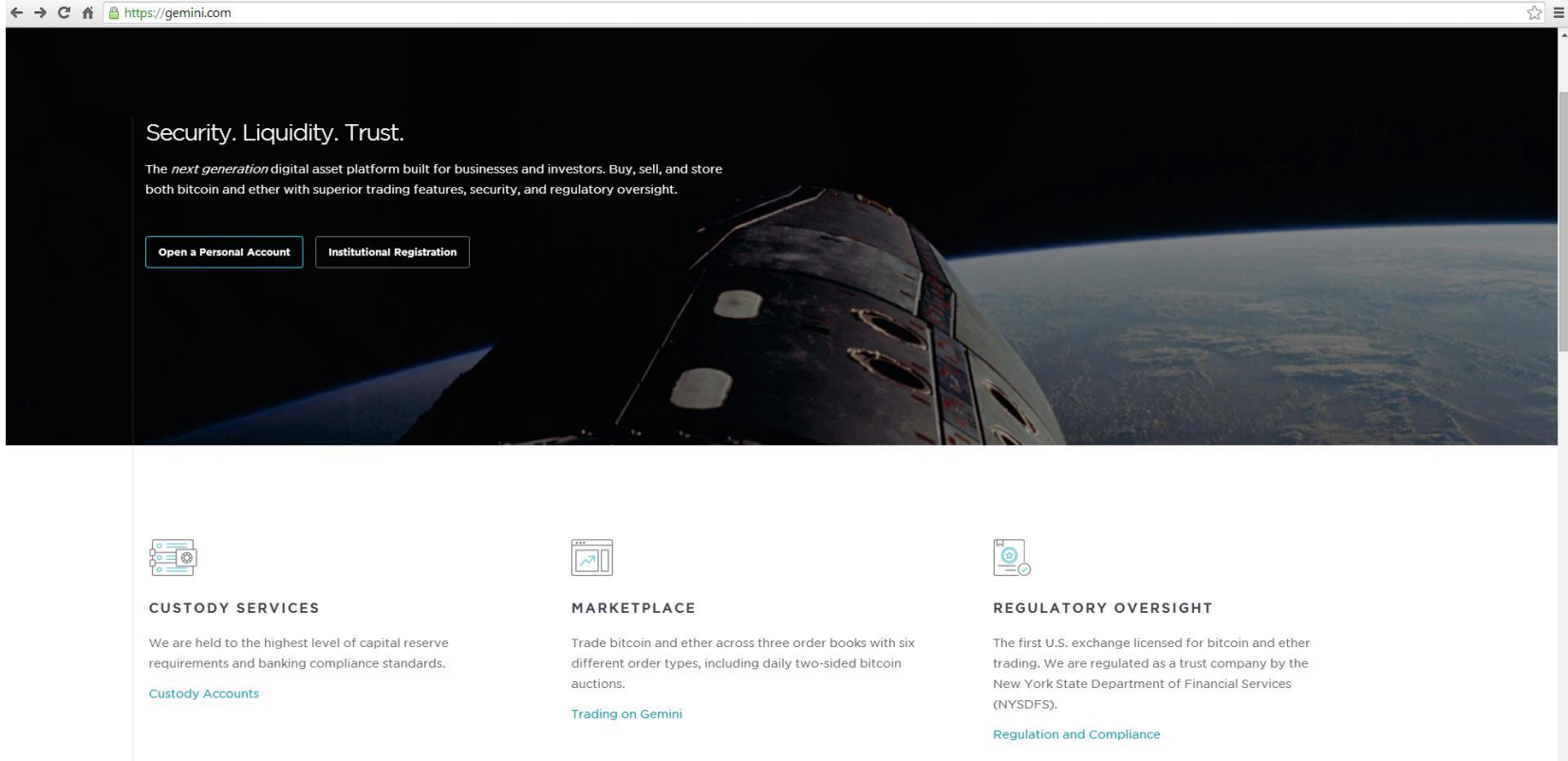
Currencies	Price (₩)	Change (24h)
Litecoin	120,926	2.25% ▲
Dash	900,022	0.10% ▼
Monero	260,520	12.71% ▲
Zcash	378,395	1.78% ▼
Steem	1,716	6.99% ▲
Augur	42,087	4.42% ▼

24 Hour Volume (₩) 132,677,711,400

January 6, 2018

Gemini (the Winklevoss exchange)

41




← → 🏠 🔒 <https://gemini.com> ☆ ☰

Security. Liquidity. Trust.

The *next generation* digital asset platform built for businesses and investors. Buy, sell, and store both bitcoin and ether with superior trading features, security, and regulatory oversight.


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CUSTODY SERVICES

We are held to the highest level of capital reserve requirements and banking compliance standards.


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MARKETPLACE

Trade bitcoin and ether across three order books with six different order types, including daily two-sided bitcoin auctions.

[Trading on Gemini](#)



REGULATORY OVERSIGHT

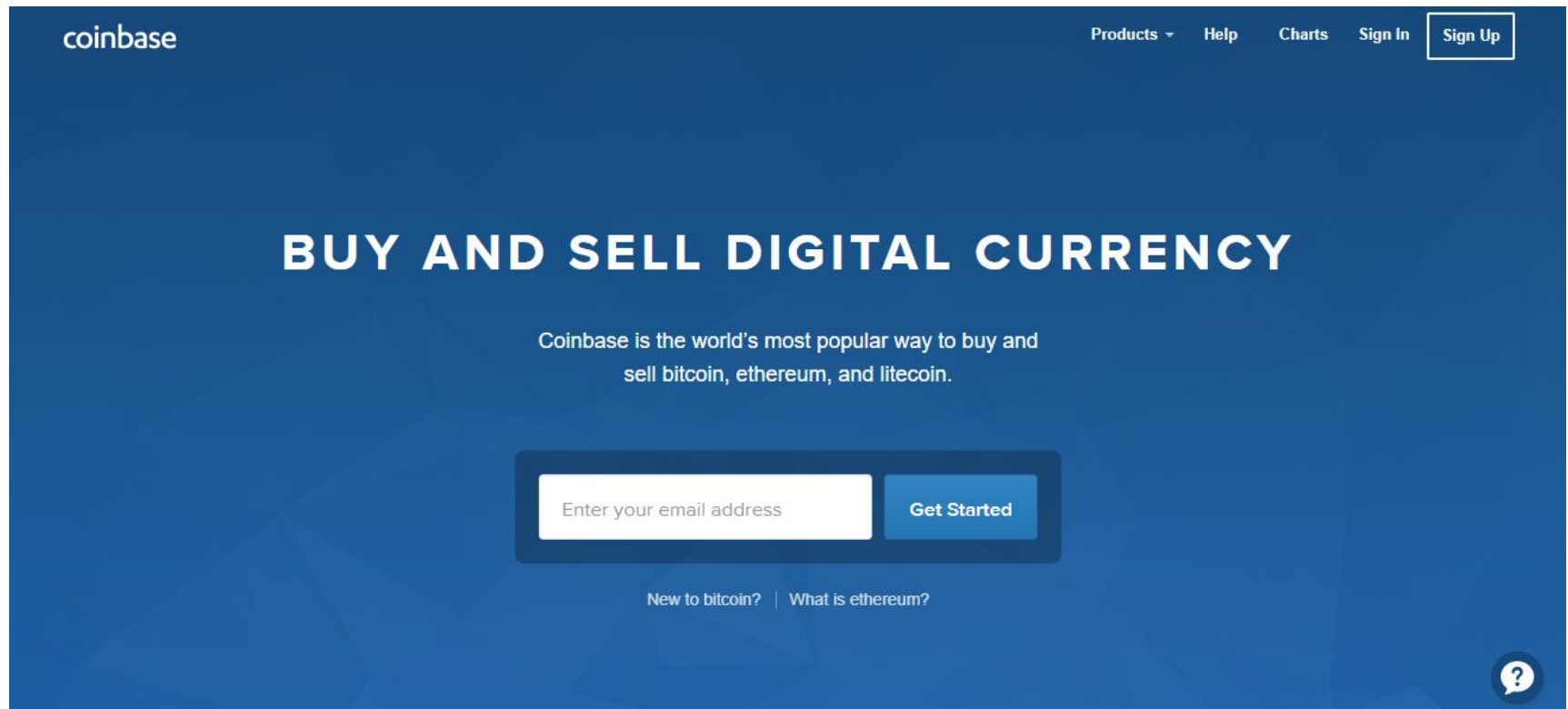
The first U.S. exchange licensed for bitcoin and ether trading. We are regulated as a trust company by the New York State Department of Financial Services (NYDFS).

[Regulation and Compliance](#)

January 6, 2018

Coinbase, easy trusted trading

42



January 6, 2018

GDAX, use your Coinbase credentials

43

Minor Service Outage

GDAX

Help API Fees Careers

Sign inCreate Account

The Most Trusted Digital Asset Exchange

GDAX offers institutions and professionals the ability to trade a variety of digital currencies like Bitcoin, Ethereum, and more on a regulated U.S. based exchange.

Create AccountView Exchange

MARGIN TRADING

BUYING POWER: 6,750.00 USD

BALANCE: 1000.00 USD, 1.2118 BTC

BUYSELL

MARKETLIMIT

Amount: 2 BTC USD

PLACED BUY ORDER

ORDER BOOK

0.85851645	1058.41
1.45110000	1058.40
0.10000000	1058.39
0.02000000	1058.38
19.00000000	1058.27
0.85851645	1058.26
0.45110000	1058.25
0.10000000	1058.24
0.02000000	1058.23
19.00000000	1058.22
0.85851645	1058.21
1.45110000	1058.20
0.10000000	1058.19
0.02000000	1058.18
19.00000000	1058.17
0.85851645	1058.16
1.45110000	1058.15
0.10000000	1058.14
0.02000000	1058.13
19.00000000	1058.12
0.85851645	1058.11
1.45110000	1058.10
0.10000000	1058.09
0.02000000	1058.08
19.00000000	1058.07
0.85851645	1058.06
1.45110000	1058.05

PRICE CHART

TRADE HISTORY

0.85851645	1058.41	17:40:57
1.45110000	1058.40	17:40:57
0.10000000	1058.39	17:40:57
0.02000000	1058.38	17:40:57
19.00000000	1058.27	17:40:57
0.85851645	1058.26	17:40:57
0.45110000	1058.25	17:40:57
0.10000000	1058.24	17:40:57
0.02000000	1058.23	17:40:57
19.00000000	1058.22	17:40:57
0.85851645	1058.21	17:40:57
1.45110000	1058.20	17:40:57
0.10000000	1058.19	17:40:57
0.02000000	1058.18	17:40:57
19.00000000	1058.17	17:40:57
0.85851645	1058.16	17:40:57
1.45110000	1058.15	17:40:57
0.10000000	1058.14	17:40:57
0.02000000	1058.13	17:40:57
19.00000000	1058.12	17:40:57
0.85851645	1058.11	17:40:57
1.45110000	1058.10	17:40:57
0.10000000	1058.09	17:40:57
0.02000000	1058.08	17:40:57
19.00000000	1058.07	17:40:57
0.85851645	1058.06	17:40:57
1.45110000	1058.05	17:40:57
0.85851645	1058.41	17:40:51
1.45110000	1058.40	17:40:51
0.10000000	1058.39	17:40:51

OPEN ORDERS

Size	Price (BTC)	Price (USD)	Max (USD)	Time	Product	Status
1.00	0.21423214	1058.22	0.00	17:39:01	BTC/USD	Open

2.74%
GBP
BTC

13,813.14 EUR
Volume: 3,704 BTC

ETH/EUR -1.19%
829.99 EUR
Volume: 16,431 ETH

LTC/EUR 18.87%
250.00 EUR
Volume: 62,389 LTC

BTC/USD 3.13%
16,500.01 USD
Volume: 20,013 BTC

BCH/USD 2.39%
2,446.91 USD
Volume: 17,112 BCH

January 6, 2018

Dead Coins

44

- ❑ Over 400 and counting, Coins with Market cap of zero. Parody, Scams and failed projects
- ❑ deadcoins.com

The screenshot shows the homepage of the 'Dead Coins' website. The header features the title 'Dead Coins' in blue and yellow text with a skull icon, followed by the tagline 'A Curated list of cryptocurrencies forgotten by this world.' in red. A blue button labeled '+ Add a Dead Coin' is in the top right. Below the header are three filter buttons: 'Scams' (purple border), 'Hacks' (pink border), and 'Parody' (green border). The main content area has two columns: 'Coin' and 'Summary'. The first entry is for '1CRedit', showing a blue '1CR' icon, '0 Comments', and a summary stating: 'The developers released cloned Codecanyon games and stop development after this, apparently it was scam.'

Coin	Summary
1CRedit 0 Comments	The developers released cloned Codecanyon games and stop development after this, apparently it was scam.

January 6, 2018

Bitcoin

45

- ❑ The first cryptocurrency
- ❑ Proof of work
- ❑ SHA256
- ❑ Max coins 21m
- ❑ Market cap > \$252B
- ❑ Block time 10 mins



Bitcoin cash

46

- ❑ 8MB block size (8x bitcoin size)
- ❑ Proof of work
- ❑ SHA256
- ❑ Max coins 21m
- ❑ Market cap \$23B
- ❑ Block time 10 min



Litecoin

47

- Script algorithm, in attempt to mitigate against ASIC mining.
- Max Coins 84m
- Market Cap \$5.3B
- Block time 2.5 mins



Monero

48

- ❑ Algorithm CryptoNight, uses ring signatures.
- ❑ Max coins **Infinite**
- ❑ Block time 2 mins
- ❑ Market Cap \$4.5B



January 6, 2018

Ripple

49

- ❑ Forex based coin
- ❑ Recently leveraged by American Express
- ❑ Max coins 99B
- ❑ Market Cap \$8.8B
- ❑ Blocktime 3.5s



January 6, 2018

Stellar lumens

50

- ❑ Developing economy coin
- ❑ Initially remittances and now currency exchange
- ❑ Recently leveraged by IBM (British pounds and Fijian dollars) 7 more currencies in roadmap.
- ❑ Max coins 103B XLM
- ❑ Market Cap \$2.8B
- ❑ Block time < 10s

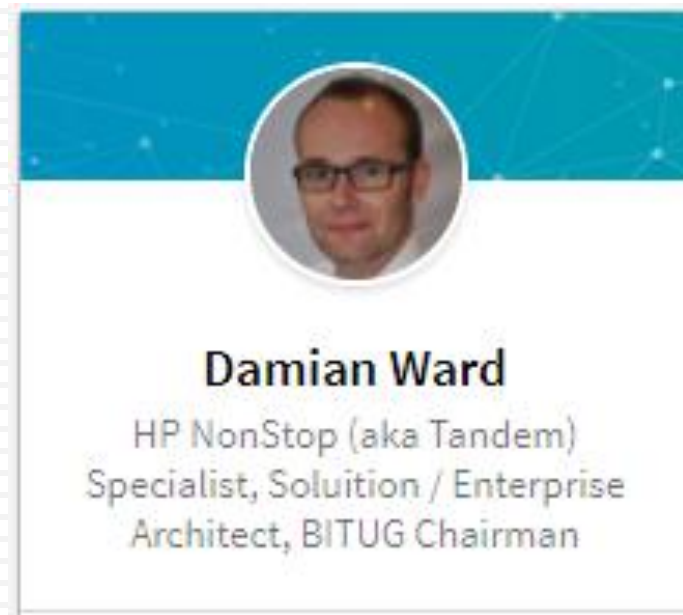


STELLAR

51

Thankyou... Questions...

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January 6, 2018