

### Welcome

Justin Ehrenhofer

Finance Management Information Systems

/u/SamsungGalaxyPlayer or sgp\_

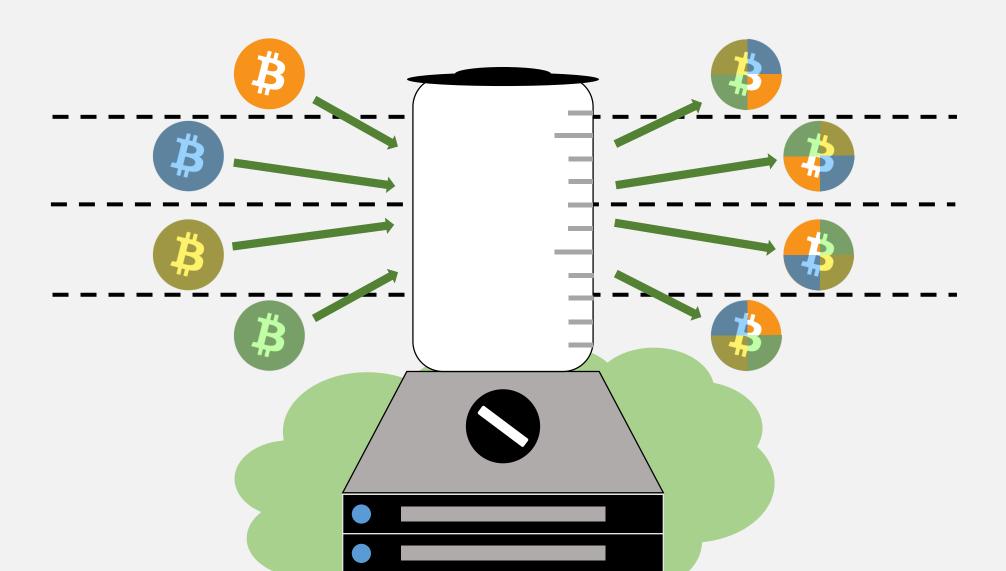
Driven to Discover<sup>SM</sup>



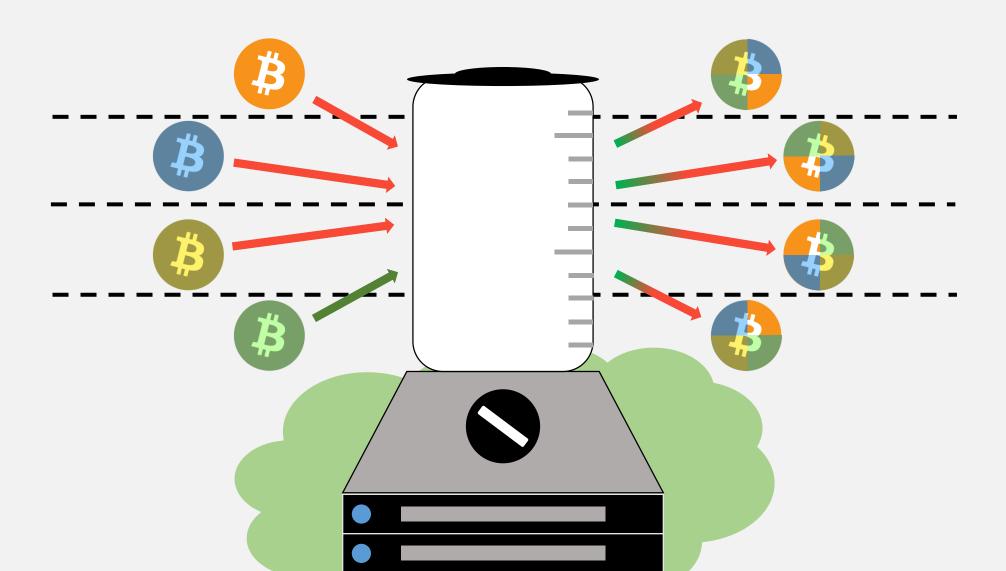




# People Started Adding Tools to Bitcoin



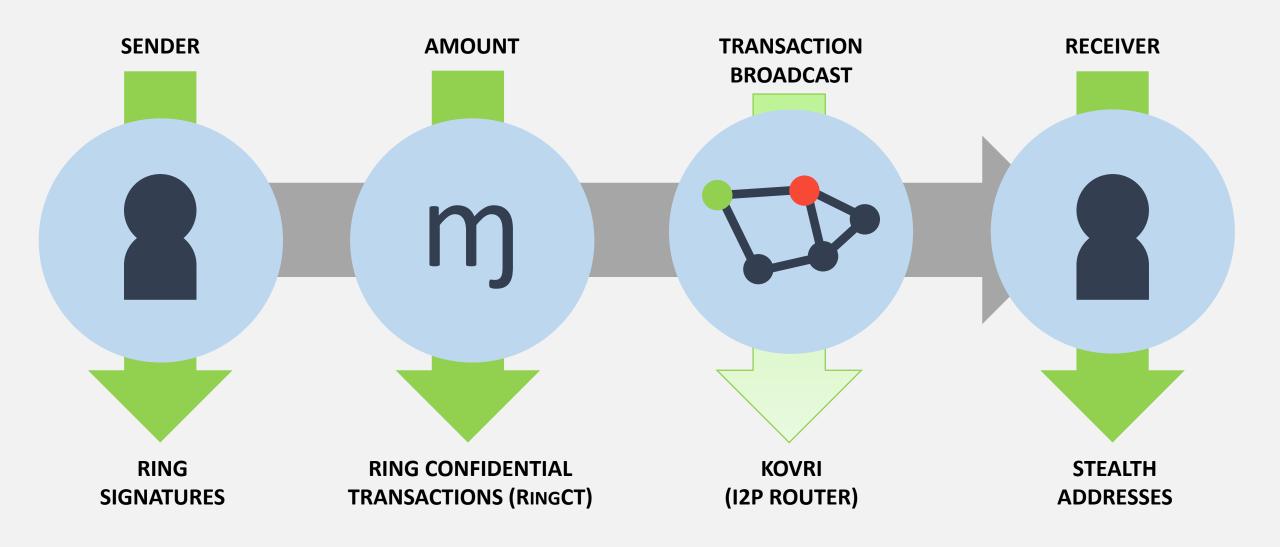
# People Started Adding Tools to Bitcoin



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### The Monero Difference



**BLOCKCHAIN** 

1 (Tx ID e4hn4ifqyd5ed)

8 (Tx ID hng6iwfumwf8)

15 (Tx ID wn3f4diiijffwn)

2 (Tx ID eshgni5lsvnf74)

9 (Tx ID cb8vqfi8dfj65f)

16 (Tx ID 5 f8wnfdmmii)

3 (Tx ID wb4f5hdfdicnd)

10 (Tx ID fnidmfnu3dm8)

17 (Tx ID h8fn5mdfi4w)

4 (Tx ID nh5nogsefwjw)

11 (Tx ID twv8mf8dnfas)

18 (Tx ID n48gfwmfdki)

5 (Tx ID fgwinw3fwtk54)

12 (Tx ID h5o8mfdngkd)

19 (Tx ID fnidmnfdsam)

6 (Tx ID ybwnng8nengf)

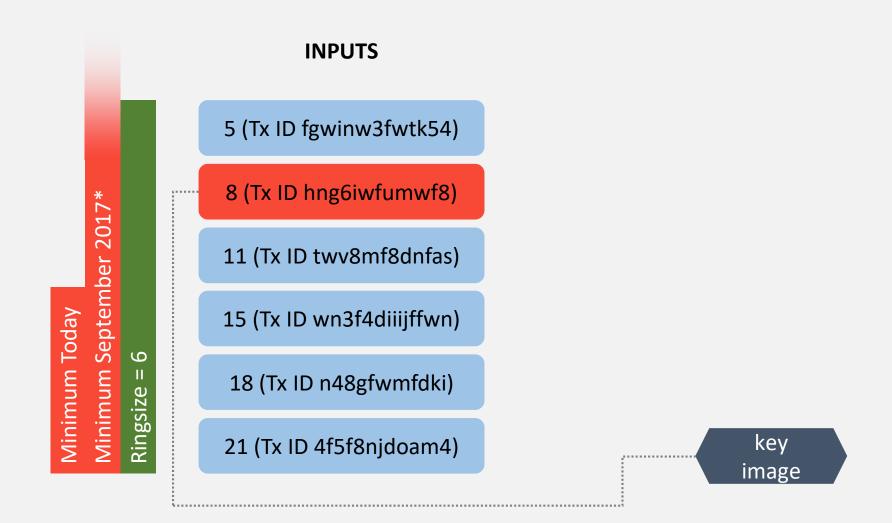
13 (Tx ID 7nr8mrjffijdtm)

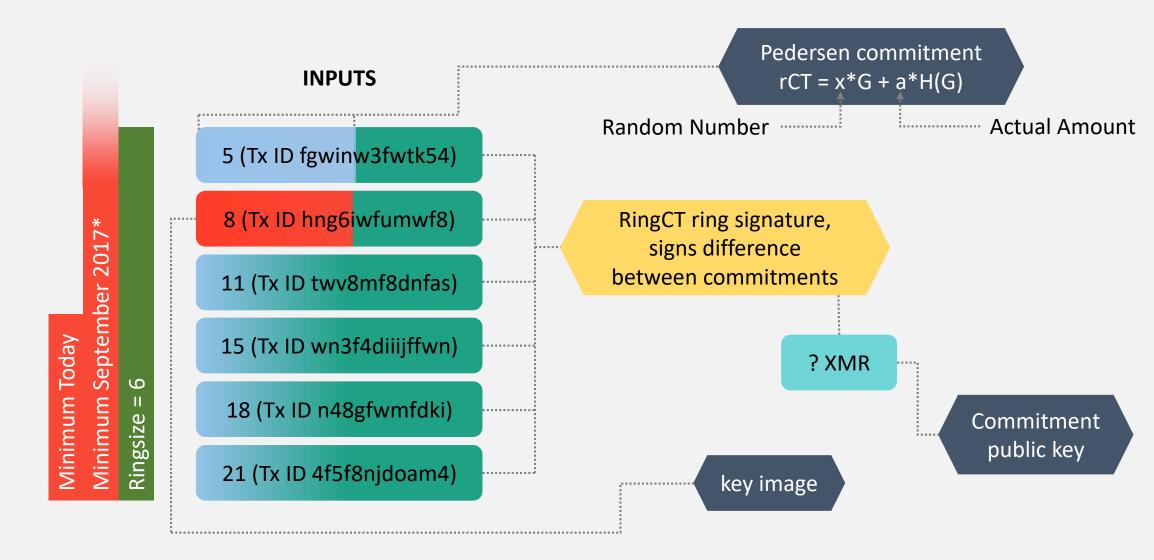
20 (Tx ID t4vn8lf8djer4)

7 (Tx ID e4bgn8flwwrj8)

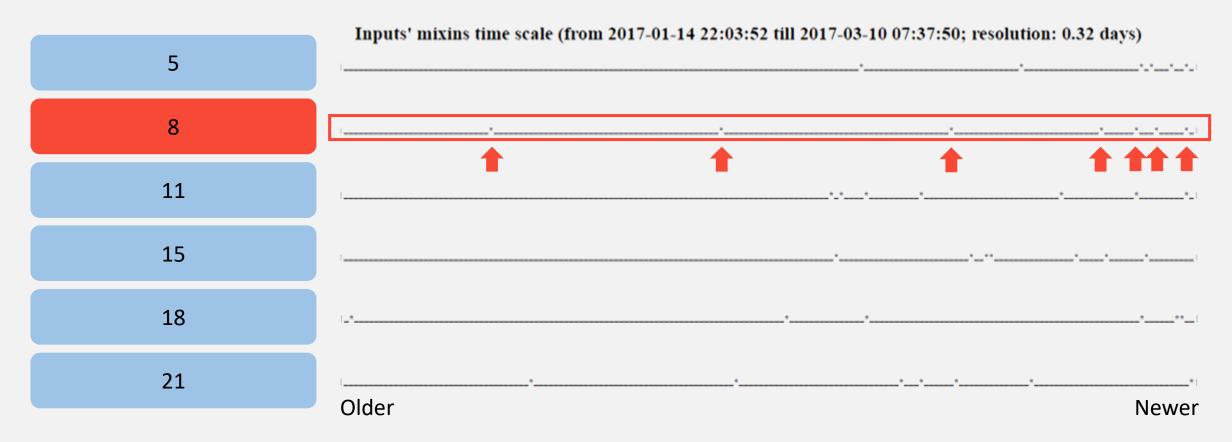
14 (Tx ID f8n8madkrjmd)

21 (Tx ID 4f5f8njdoam4)





#### **INPUTS**



# How Inputs Are Selected

Time Since Last Spent

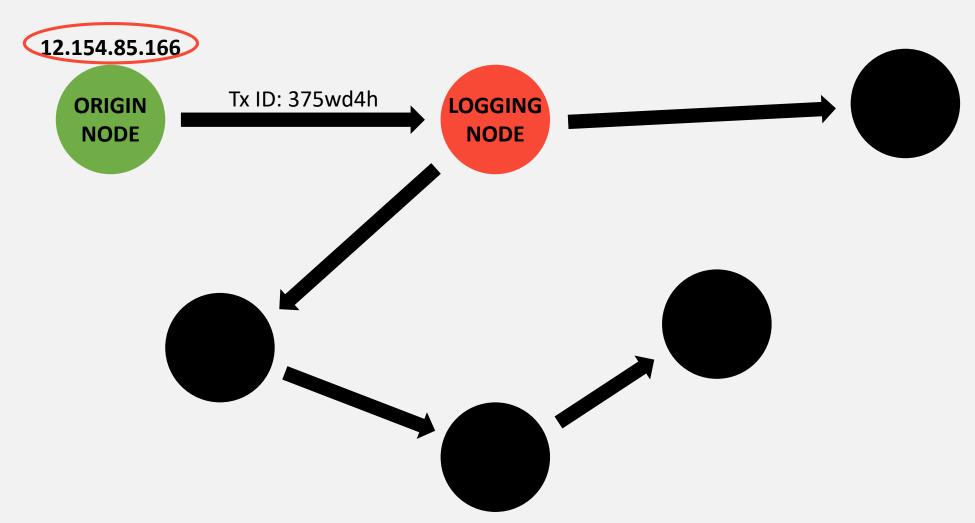
ENTIRE BLOCKCHAIN

AT LAUNCH

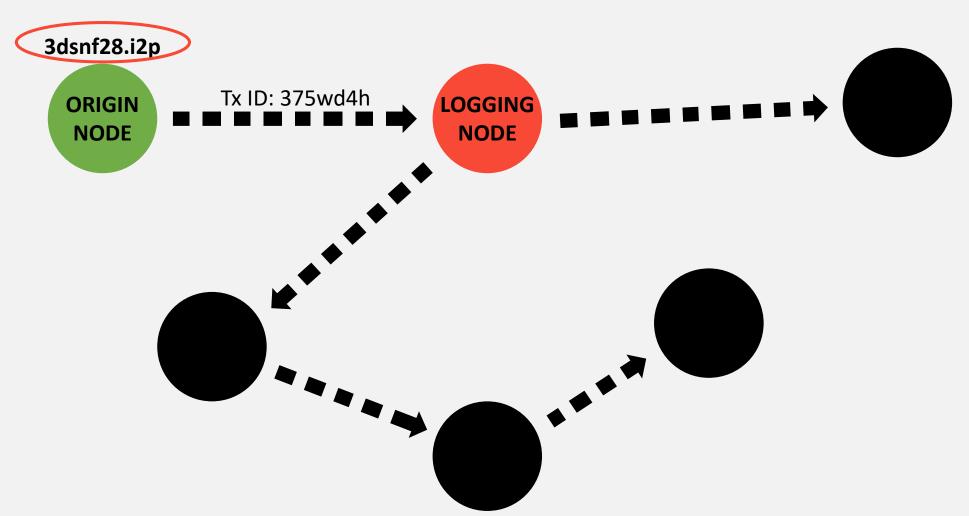
CURRENT (TRIANGULAR DISTRIBUTION)

IDEAL



















-----BEGIN PGP SIGNED MESSAGE----Hash: SHA256

Coming soon!

Until we are up and running, visit:

https://getmonero.org https://github.com/monero-project/kovri

Contact:

ric@spagni.net <u>BDA6 BD70 42</u>B7 21C4 67A9 759D 7455 C5E3 C0CD CEB9

anonimal@mail.i2p 1218 6272 CD48 E253 9E2D D29B 66A7 6ECF 9144 09F1

> ----BEGIN PGP SIGNATURE-----Version: GnuPG v2

iQIcBAEBCAAGBQJWsJidAAoJEGanbs+RRAnxt68QAJm8K9WeVP/1WJ6OCSLa9Cpo uC4h1FrBSTZp0BJ+WHGG9m3IuMmn1jVchFvrHdmtuzP310Oboth+riLb0keGaiM2 r/L+tnqvGmOw4acdS0FDHFLAR9t+rqCWK6YGOzguOAGG15nhRLxTjdUn1ED3n35S SLrKtKAXGj25j9zbTVpPxevmEbjUFdq85LcqVxBSR7a1+QaaWy46xP8Ws4Mo/1it J/rYFpVRaqTXGhG1mMek42cKJ1E0Yqu1b5xcHDEm+H65vNY1chfe3Ljc/96bFYBV 4M5s2/pS9yC1ckJeLtFhi2mXxVe/ZKXTALvffzWH8aVmbYlwXo2ONXyvc2kz2R9b 1PlaRbY0KO0Q4xxsDg+GBiX28Fh2kmpOvvLXNBIOOkbBoSJQD0FoXCRqb7GNiC/c 5qsOX1ZkNHQo8FDLh3+ZCUELsBK6ei35Ezum/xwyoq4kJUV28mABZhyQ4AOWlUjW DSxnQx9efdhIf64k1Y5aZJxJC9U8beY1qov71T/fP9yX15fdmovb7XY8mTT4Jp1T tP41fvmr1tc5r11Q0BeXaGwsBzP+THLEzRTVoQpIoAqhWCVXbU/vUz5/cxMNw8QM ZxsC7yg2gUKv5Fs1HX/WEIW2L1Q1dMW/rnaZs5/hOTsSvTquIwS3Q4zY8Cc5SfNn 94fzWouiMa2wKFVDsfqB

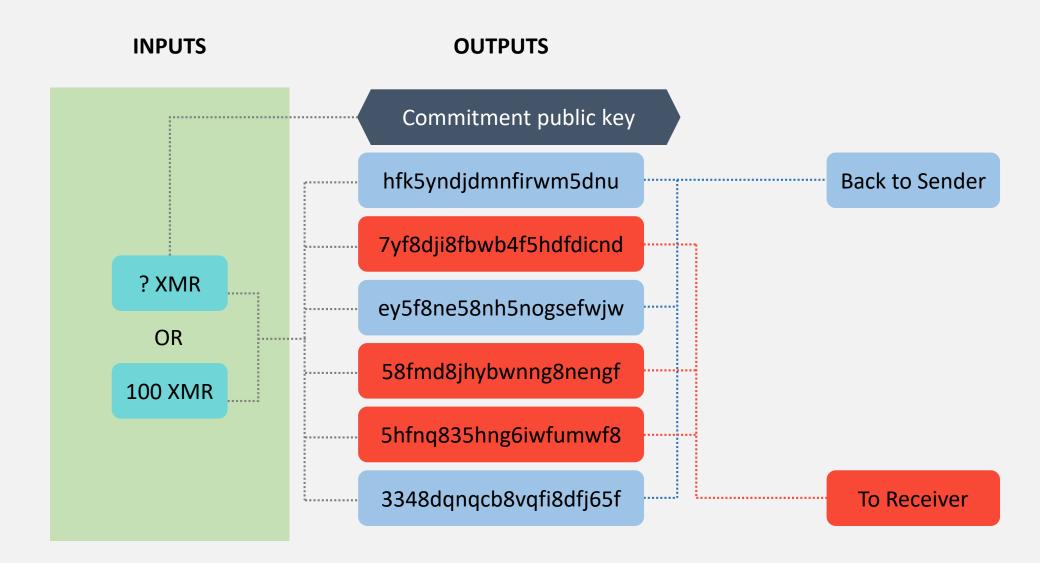
> =LwW1 ----END PGP SIGNATURE-----

**Downloads** 

Releases

Alpha release coming soon

### Stealth Addresses



### Summary

? XMR

5 (Tx ID fgwinw3fwtk54)

8 (Tx ID hng6iwfumwf8)

11 (Tx ID twv8mf8dnfas)

15 (Tx ID wn3f4diiijffwn)

18 (Tx ID n48gfwmfdki)

21 (Tx ID 4f5f8njdoam4)

hfk5yndjdmnfirwm5dnu

7yf8dji8fbwb4f5hdfdicnd

ey5f8ne58nh5nogsefwjw

58fmd8jhybwnng8nengf

5hfnq835hng6iwfumwf8

3348dqnqcb8vqfi8dfj65f

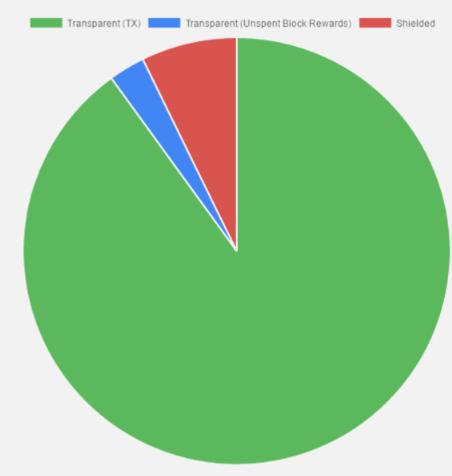
Commitment public key

## **Mandatory Privacy**

### mixins used in transactions (%)

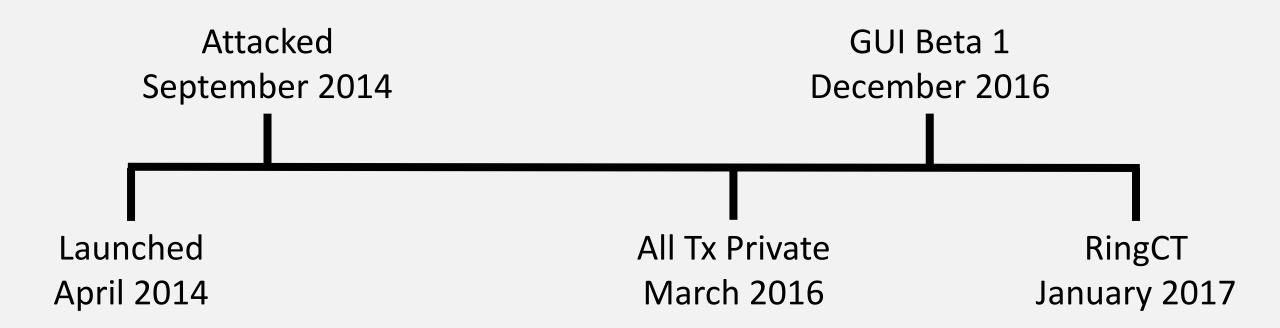
mixin:	none :(	1 - 2	3 - 9
last day	66.74	10.95	20.25
last week	66.11	6.96	24.76
last month	64.47	5.42	28.13
last year	73.04	7.36	18.16

Source: MoneroBlocks.info 24 Feb 2016



Source: zcha.in 15 March 2017

# A Brief History



## Regulatory Compliance and Transparency

(with the View Key)



### **Transparency**

A view key is used to reveal all transactions for a Monero account, or just the key for a single transaction



### **Selected Parties**

View keys can be given to selected parties, or can be made public



### **Charities**

By publishing their view key, charities can invite easy public oversight



**Parents** 

Children can be given their own accounts, and parents can monitor their spending

### **Monero Limitations**



### **Monero Limitations**

Bitcoin (0.3kB)

Monero ringsize 3 (3kB)

Current Blockchain Size on Disk: 13.9GB

Monero with RingCT (12-13kB)

### **Addressing Transaction Size**



- 1. RingCT is brand new; optimizations could reduce transaction sizes by 20%
- 2. Prune non-essential parts of blockchain for 50% size reduction. Sharding possible
- 3. Large hard drives are cheap, and prices continue to fall (even if it can't meet Moore's Law)
- 4. Any real scaling needs to be done off-chain anyway

## **Ongoing Development**











Website Redesign

### Hardfork Schedule

September

September

September 18<sup>th</sup>\*

- Mandatory RingCT
- Minimum ringsize ≥5
- Fluffy blocks
- Improved input selection algorithm

### Thank You!



getmonero.org



/r/Monero



monero.stackexchange.com