



Scalable Blockchain Payments

@meinharrd

Recap

800 blockchains + 1300 tokens

Source: coinmarketcap.com

Cambrian explosion

Mainstream: 0

35m blockchain wallets

Source: Statista

3-4m regular users

Source: University of Cambridge

Killer app?

Speculation

~~Speculation~~ Diversification

Coin/Token/Security/XYZ Offerings

Peer-to-peer venture capital

Programmable money

Programmable money



€300bn industry

Blockchain Trilemma

Decentralisation



Security

Scalability

Decentralisation



Security

Scalability

Choose two!

Scalability

#1 metric: network transactions

On-ledger vs off-ledger

Bitcoin

Ethereum

Ripple

Stellar

Tx/s

Bitcoin

4

Ethereum

20

Ripple

1500+

Stellar

1000+

Tx/s

€/Tx

Bitcoin

4

3.50

Ethereum

20

0.15

Ripple

1500+

0.0004

Stellar


1000+


0.000001

	Tx/s	€/Tx	Time
Bitcoin	4	3.50	3600s
Ethereum	20	0.15	180s
Ripple	1500+	0.0004	4s
Stellar	1000+	0.000001	5s

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Visa	56k	0.09 + 1.5%	<1s	

Off-ledger

Second layer

Lightning networks

Side/child chains



Miiiiillions of tx/s (to ∞)

Complex trust models

Not production-ready

Consensus mechanisms

Delegated Proof-of-Stake (DPOS)

Byzantine Fault Tolerance (BFT)

Fiat tokens

Blockchain versions of EUR, USD etc.

All advantages of blockchain

Low volatility

€4bn+ in fiat tokens

Source: cryptoslate.com

Cryptocurrency for fees

USDx: USD on Stellar, via AnchorUSD

EURT: Euro on Stellar, via Tempo (France)

Bank account gateways

Tether	Omni/Bitcoin
USDC	ERC20/Ethereum
TrueUSD	ERC20/Ethereum

EUR: Negative interest rate

Regulatory uncertainty

IBM and central banks: official fiat tokens

Conclusion

Scalability systems maturing

(D)POS has most traction

We are not quite there yet

Look forward to scalable payments in 2020!

Questions?

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Painted : [alamo-x.deviantart.com](https://www.deviantart.com/alamo-x)