Twitter Thread by XRPatience

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1/20 Bitcoin is too slow and expensive for payments. We all know this. To solve this problem, the Lightning network is being built on top of Bitcoin's blockchain. Will it be the end of XRP?

(Video version @ https://t.co/7zJCuKrpqx)

A thread. ■

2/20 On a normal day outside a bull run, Bitcoin takes ~10 mins to transfer, at a cost of about $0.50. Any time network activity ramps up, those times and fees multiply. Bitcoin's Proof of Work system is painfully slow and can only handle 7 transactions per second.

3/20 To attempt to solve this problem, the Lightning Network is being developed. It's a 2nd layer network that sits on top of Bitcoin's blockchain. It's been in the works since 2015. Yes, 6 years. Do you know anybody who uses it? Me, either, but I'll get to that.

4/20 Lightning works by opening "channels" between parties. Those parties can perform as many Bitcoin transactions as needed and then close the channel. Because the transactions aren't written to the Bitcoin blockchain until the channel is closed, it's much faster.

5/20 Individual payment channels between various parties combine to form a network of lightning nodes that can route transactions among themselves. The resulting interconnections between various payment channels is the Lightning Network.

6/20 For example, say Alice opens a channel at a coffee shop and deposits $100 worth of bitcoin there. Her transactions there are instant. Now say Bob has a channel with a grocery store and also buys coffee from the shop Alice does.

7/20 Alice's connection to the coffee shop lets Bob buy coffee from there, too, and Bob's connection to the grocery store lets Alice buy groceries there as well. But if Bob closes his channel to the grocery store Alice will have to open another channel there.

8/20 This creates a web of channels between various parties that can all interact with each other. Like with Bitcoin, nodes are required and node operators set the fees they demand for processing the transactions. (example taken from linked article)
https://t.co/wDYUrbJfTB

9/20 So Bitcoin now has a payment layer that's ultra fast and solves the high fees and slow transaction time problems, allowing Bitcoin to become a huge payment processing platform and removing the need for other tech like XRP... right? Um, no.

10/20 As of Jan 18, 2021 the total locked value in the Lightning network is $38 million, a whopping 0.006% of Bitcoin's market cap. After 6 years of development, very few people are using it. That's because Lightning has a lot of problems.

11/20 First of all, it leads to centralization. Today banks and financial institutions are the centralized payment hubs. By having more open connections with others, Lightning nodes for prominent businesses may become similar hubs or centralized nodes in the network.

12/20 If one of those hubs were to experience a failure it could crash a significant portion of the Lightning network, maybe even the entire network. May as well stick with using banks if it's going to be centralized anyway.

13/20 Lightning is cheaper than banks right now, but in 2019 a study concluded that "participation is economically irrational" and "either traffic or transaction fees must increase by orders of magnitude to make payment routing economically viable."
https://t.co/6MBfT7DmMC

14/20 Another thing hindering adoption is that the Lightning software has been considered too difficult for the average user and many apps are custodial (you have to deposit your Bitcoin with them: not your keys, not your crypto). And then there are the security issues...

15/20 Lightning currently has multiple possible attack vectors. Joost Jager, an independent Bitcoin and Lightning Network engineer details one of these attack vectors in this thread, stating "Lightning is great, but can't say it is battle-tested."
https://t.co/EiOqxKKfMP

16/20 Jager describes only one of multiple security problems. Antoine Riard and Gleb Naumenko published a paper detailing a "time-dilation attack" making it "possible to steal the total channel capacity by keeping a node eclipsed for as little as 2 hours."
https://t.co/SpcuE0TZPU

17/20 Then there's the "Pinning Attack" outlined by Riard, who states "currently deployed LN peers aren’t secure against [certain Pinning Attack] scenarios," and that one particular scenario "requires heavy, long-term work at the base layer" to fix it.
https://t.co/b09Rr9iSD5

18/20 Compare all of those issues with XRP. The XRPL is decentralized, battle tested and in use by hundreds of financial institutions, its fees are fixed and extremely low (0.00001 XRP, currently a tiny fraction of a penny), and the XRPL is highly secure.

19/20 One last thought. If you have to bolt onto Bitcoin to make it work for payments because the Bitcoin blockchain itself can't handle it, then how is Bitcoin any different from the current broken system that is being patched to keep it working?

20/20 SUMMARY: Lightning promised to be the payments solution for Bitcoin. 6 years later it's a potentially centralized, difficult to use network with security holes and almost nonexistent adoption outside of "script kids". XRP however, is established, decentralized and secure.

See video versions of my explainer threads at my YouTube channel:
https://t.co/Twb95p83gE

More XRP explainer threads:
https://t.co/4DikZmD84I

> 1/XRP benefits explainer threads.
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> There's lots of confusing tech-talk articles that explain XRP, Flare, concepts like Proof Of Work, Proof of Stake, etc.
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> I attempt to break down how it all works and where it's all going in simple language. \U0001f447
> pic.twitter.com/WAxvknjzdq
>
> — XRPatience (@xrpartisan) January 8, 2021

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