exchange union

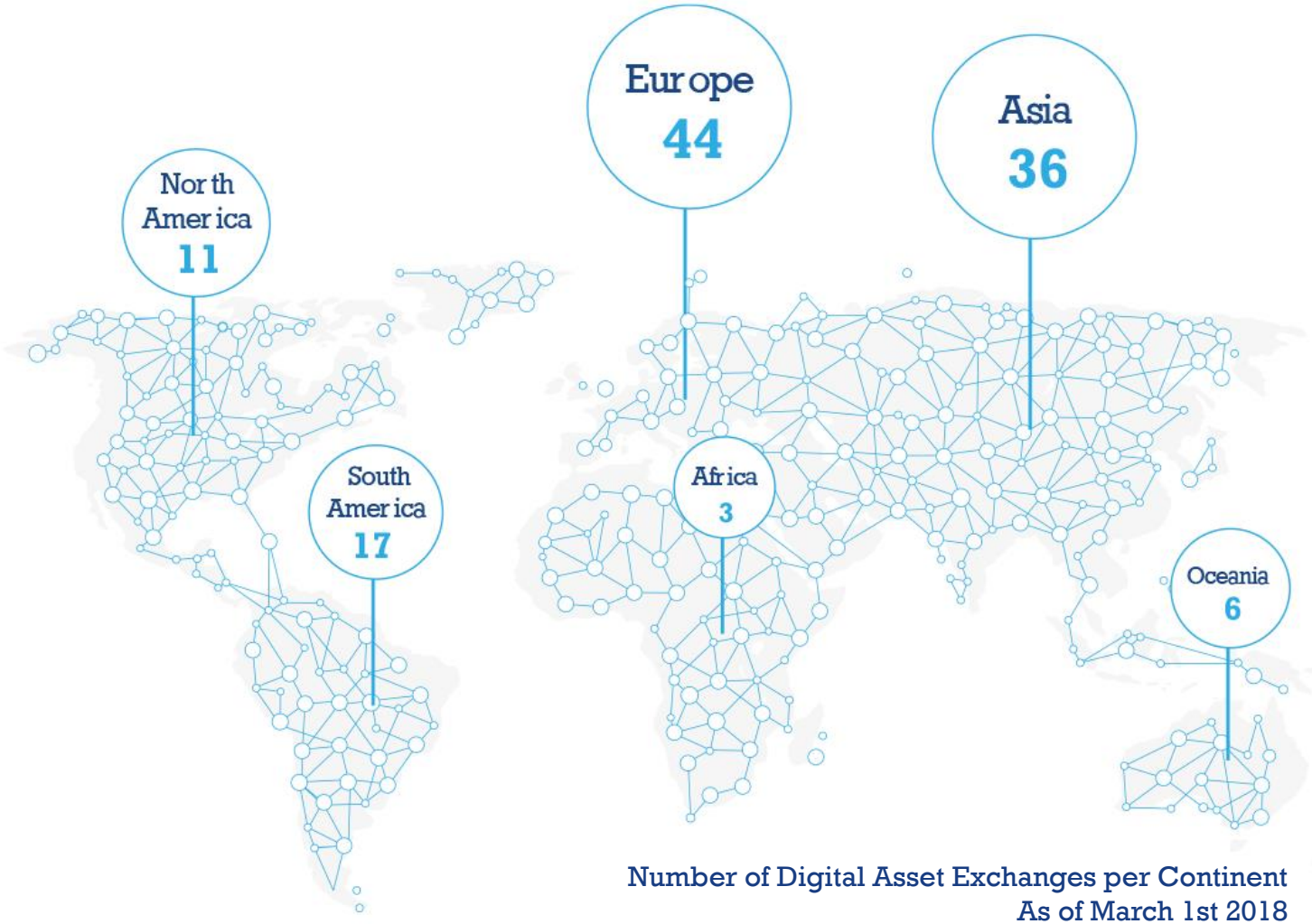
Digital Asset Markets

Types of Digital Assets:
1,500+

Market Capitalization of Digital Assets:
$400bn+

Total 24h Trading Volume:
$17bn+

Number of Digital Asset Exchanges:
100+



Number of Digital Asset Exchanges per Continent
As of March 1st 2018

Industry Pain Points

Exchanges:

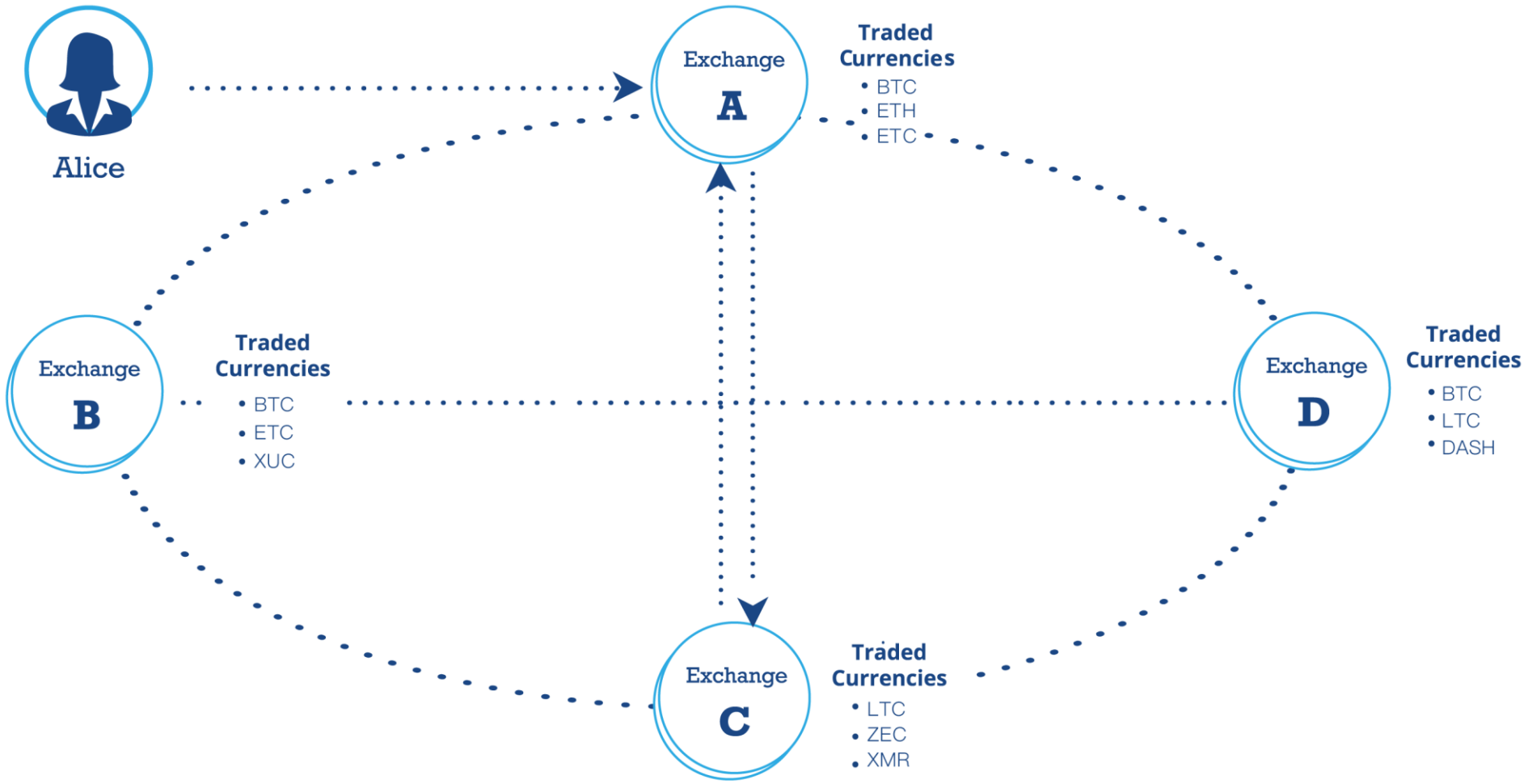
- Are localized and isolated
- Have limited trading pairs
- Struggle to maintain adequate liquidity

Users:

- Encounter real-time price discrepancy
- Face inefficient & costly cross-exchange transactions
- Need to verify multiple accounts on different exchanges (access to liquidity and new trading pairs)

Use Case

Portfolio		
	Before	After
BTC	2	
LTC	0	
ETC	100	



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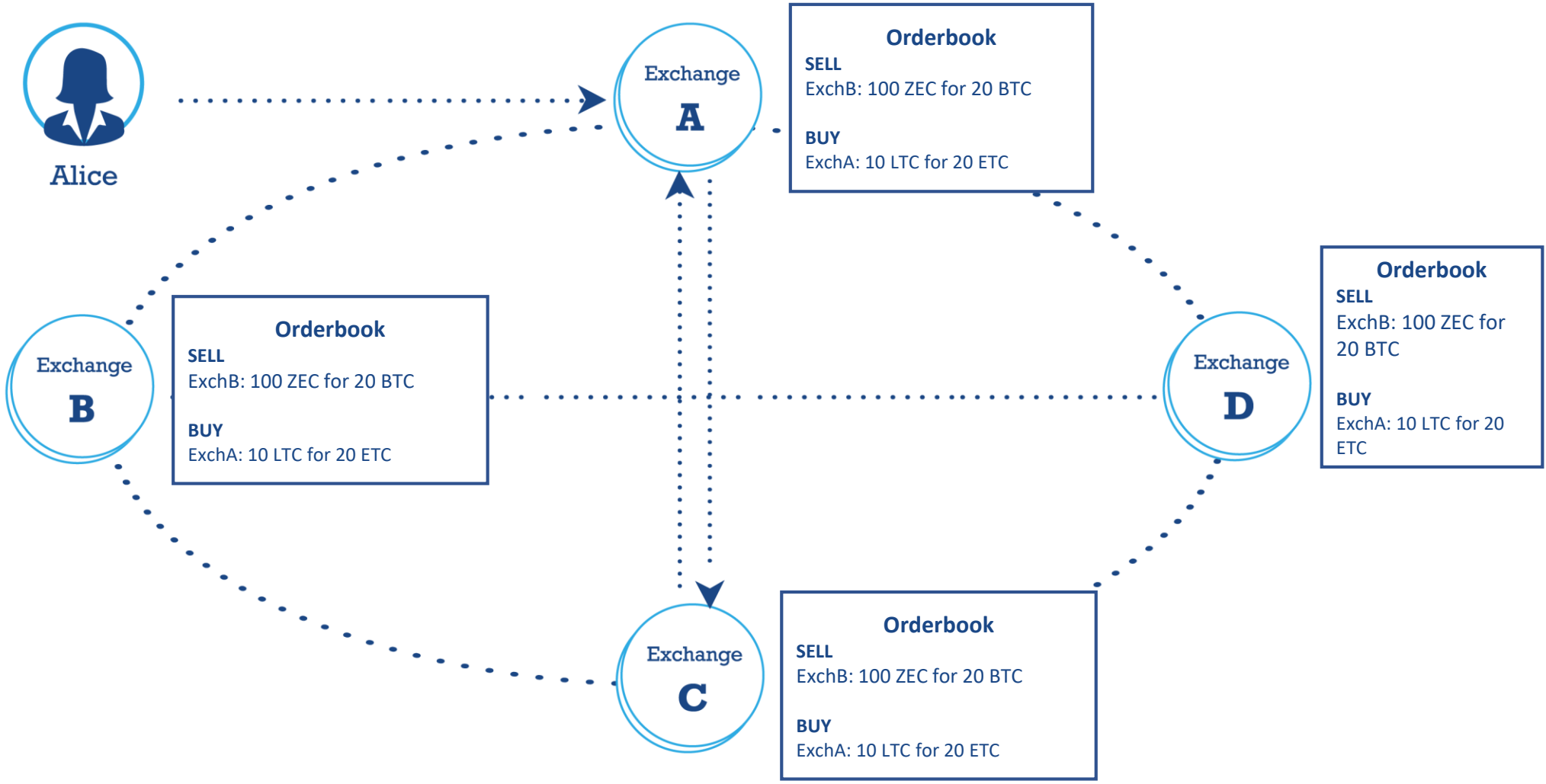

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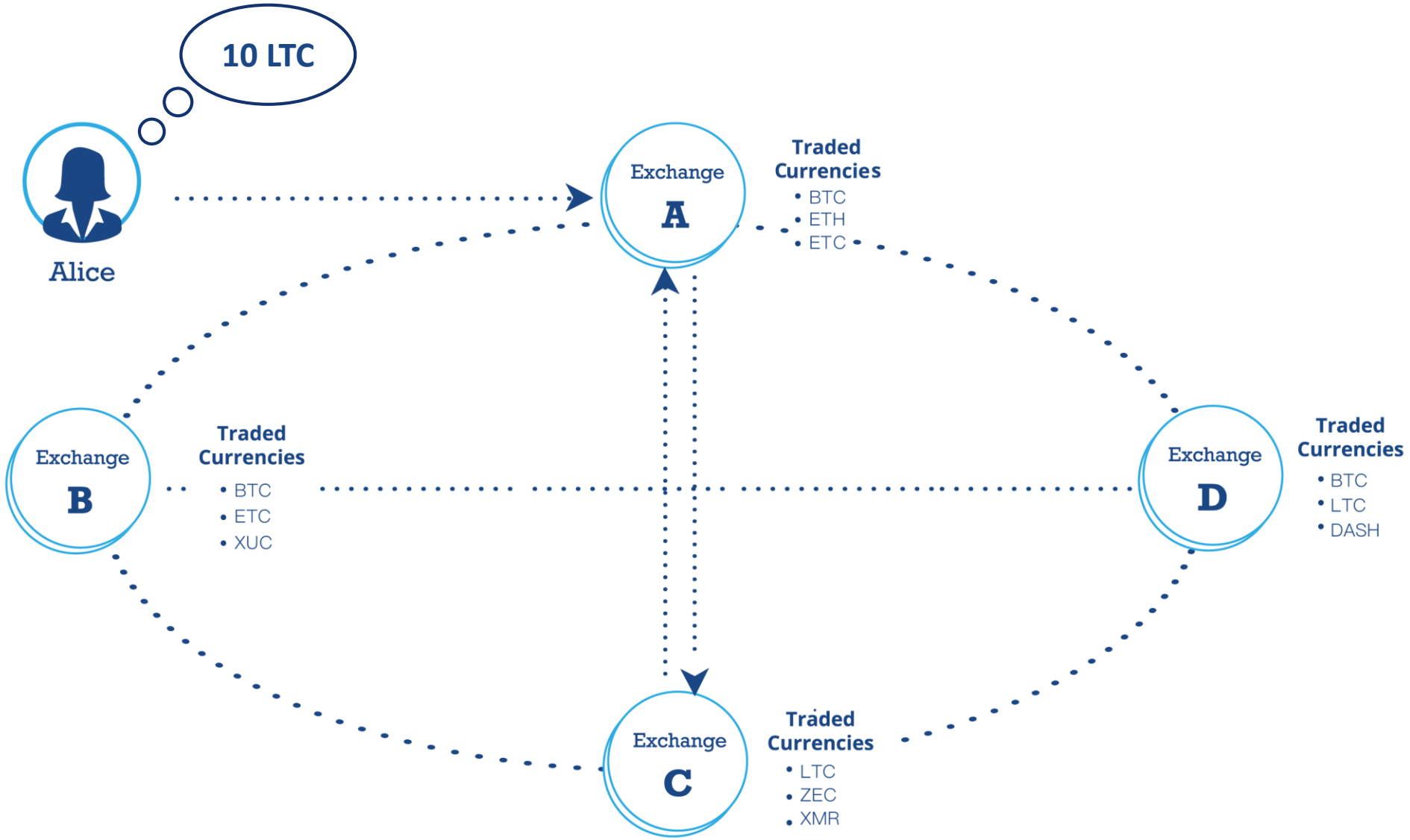

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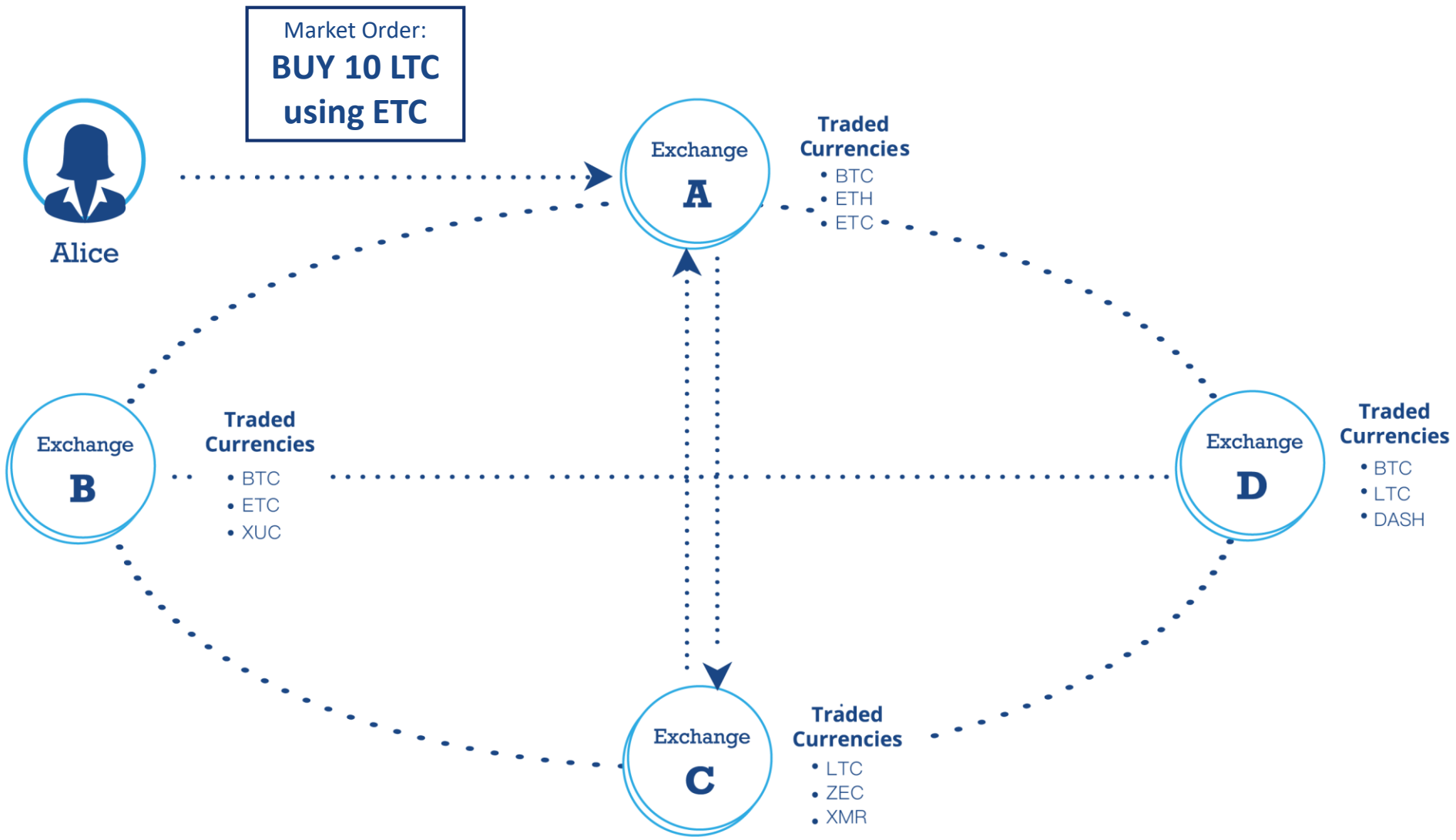

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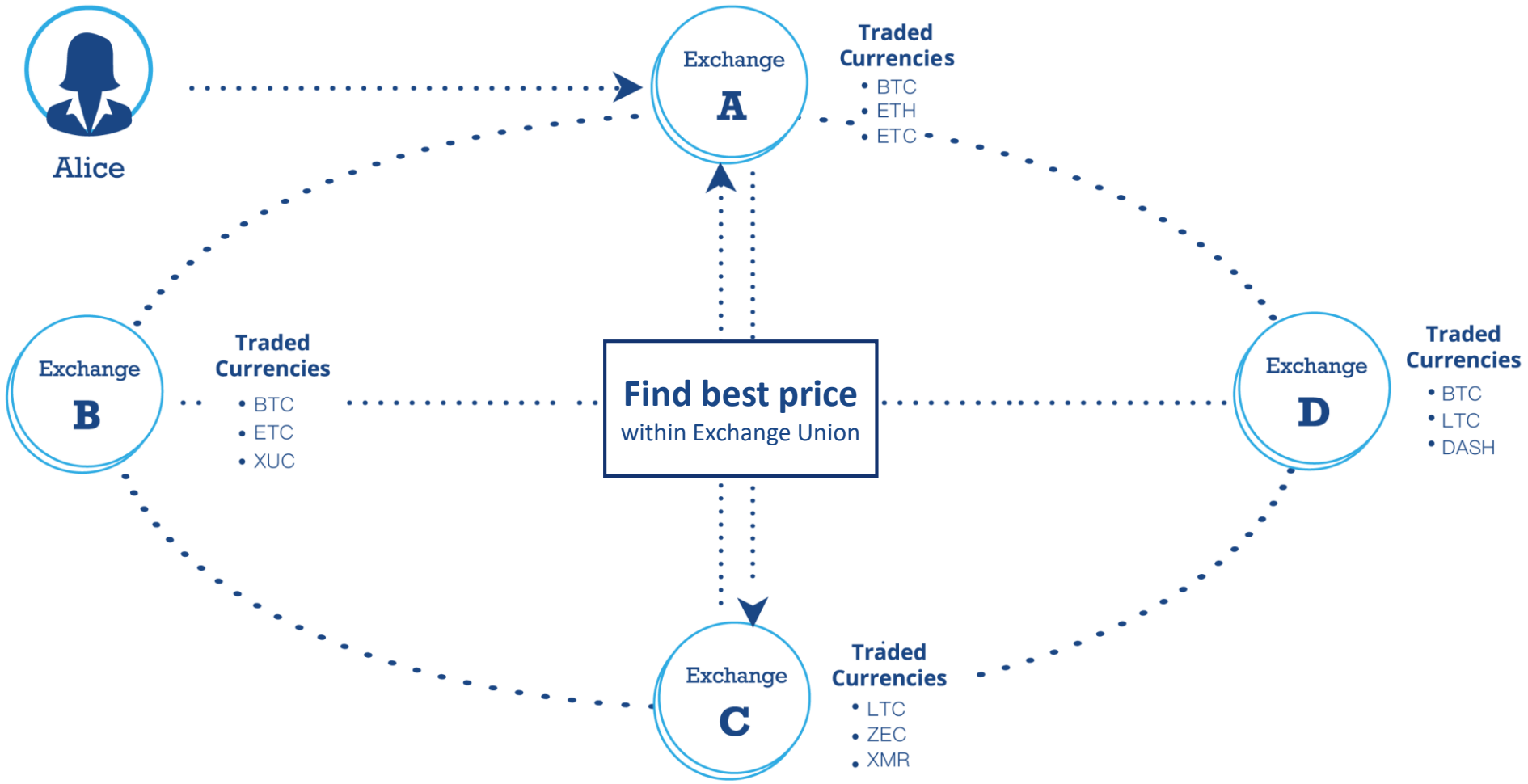

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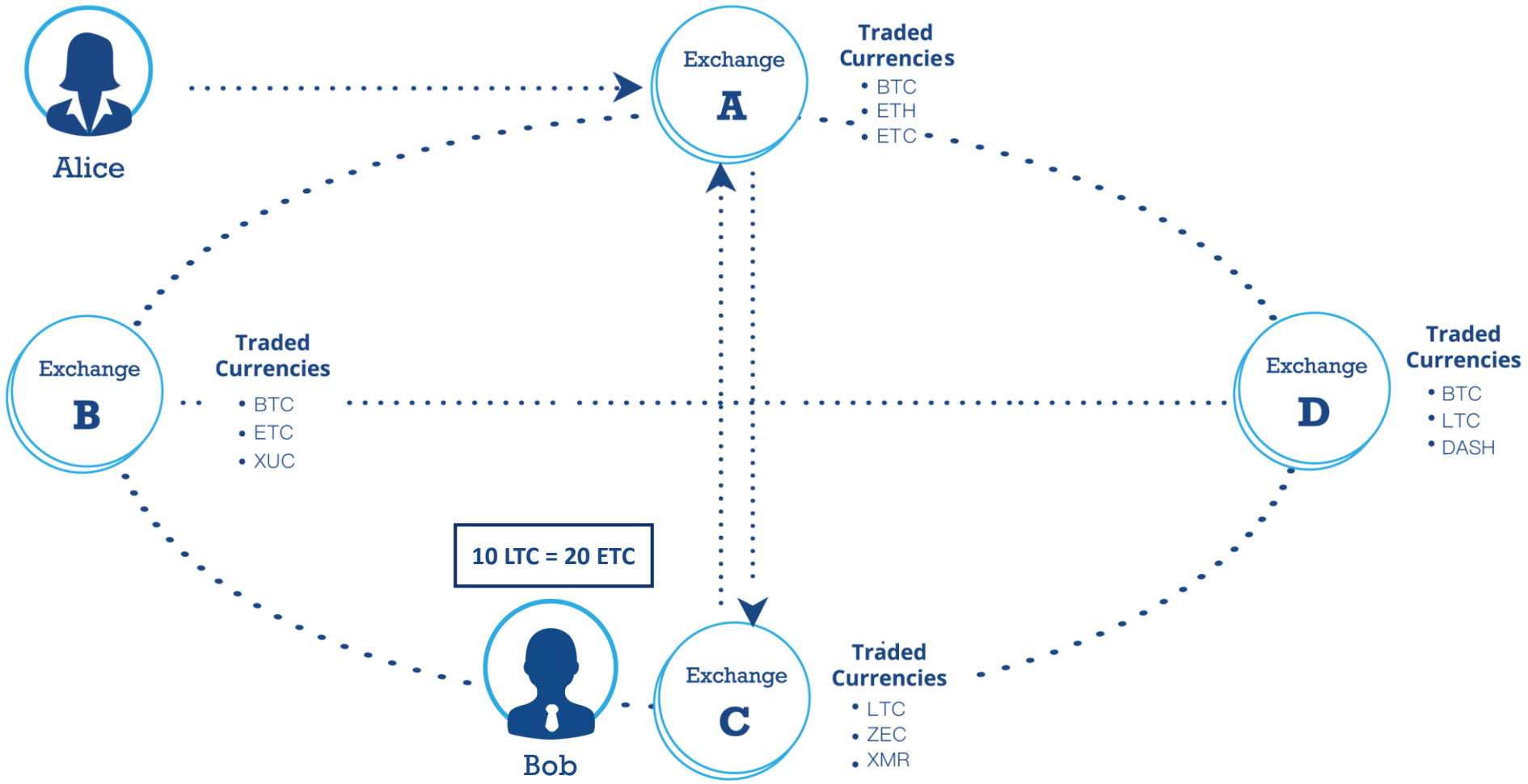

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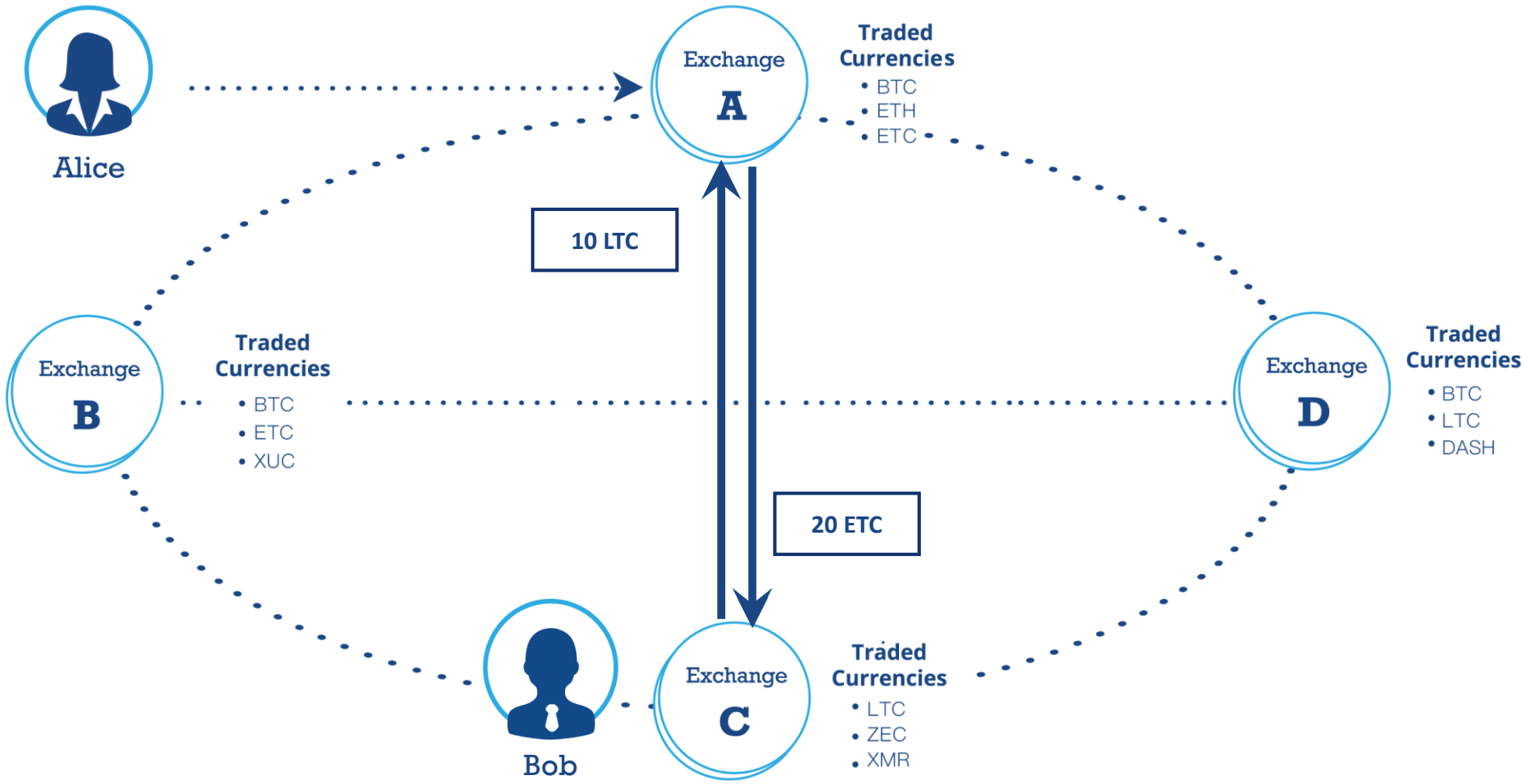

Use Case

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	Before	After
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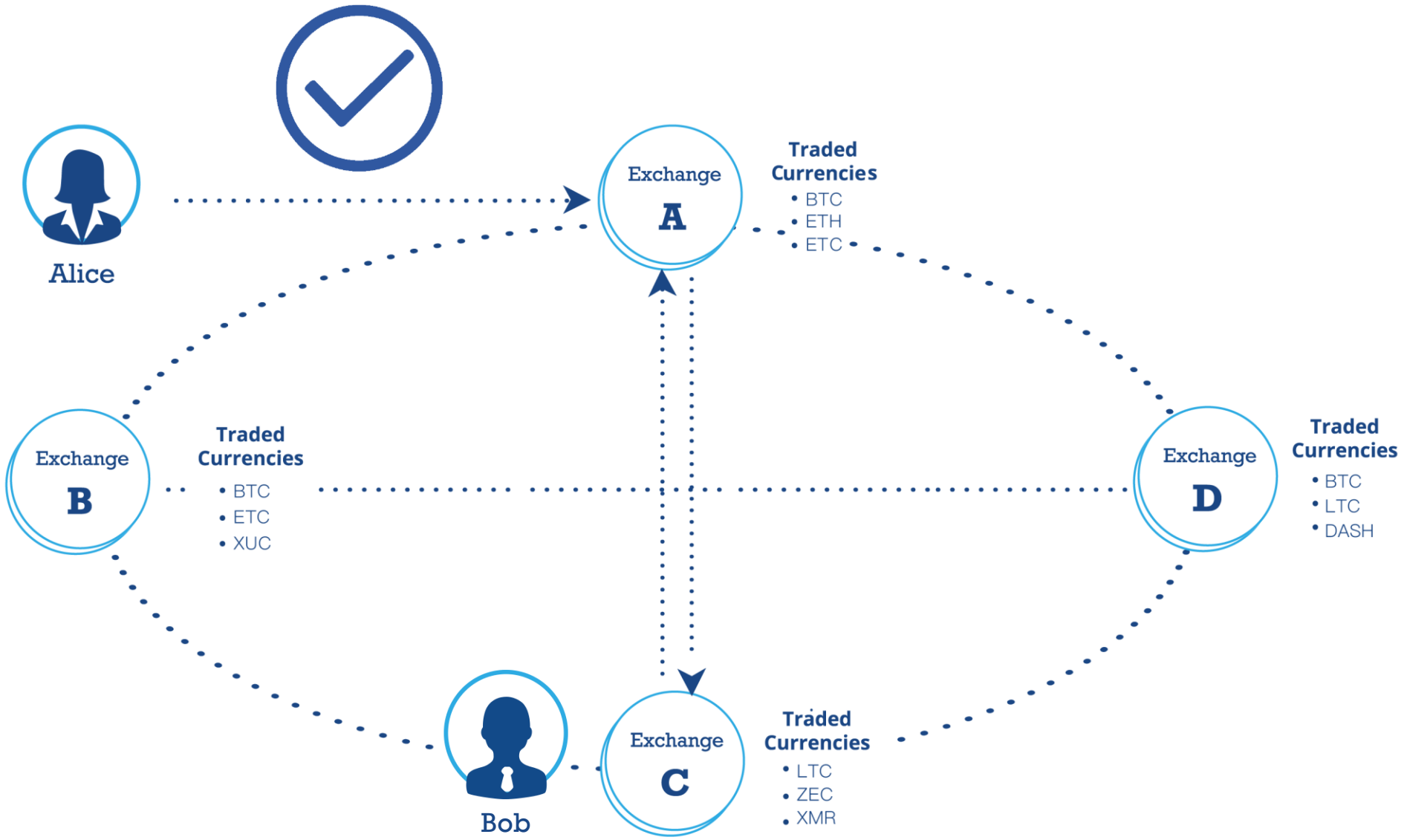
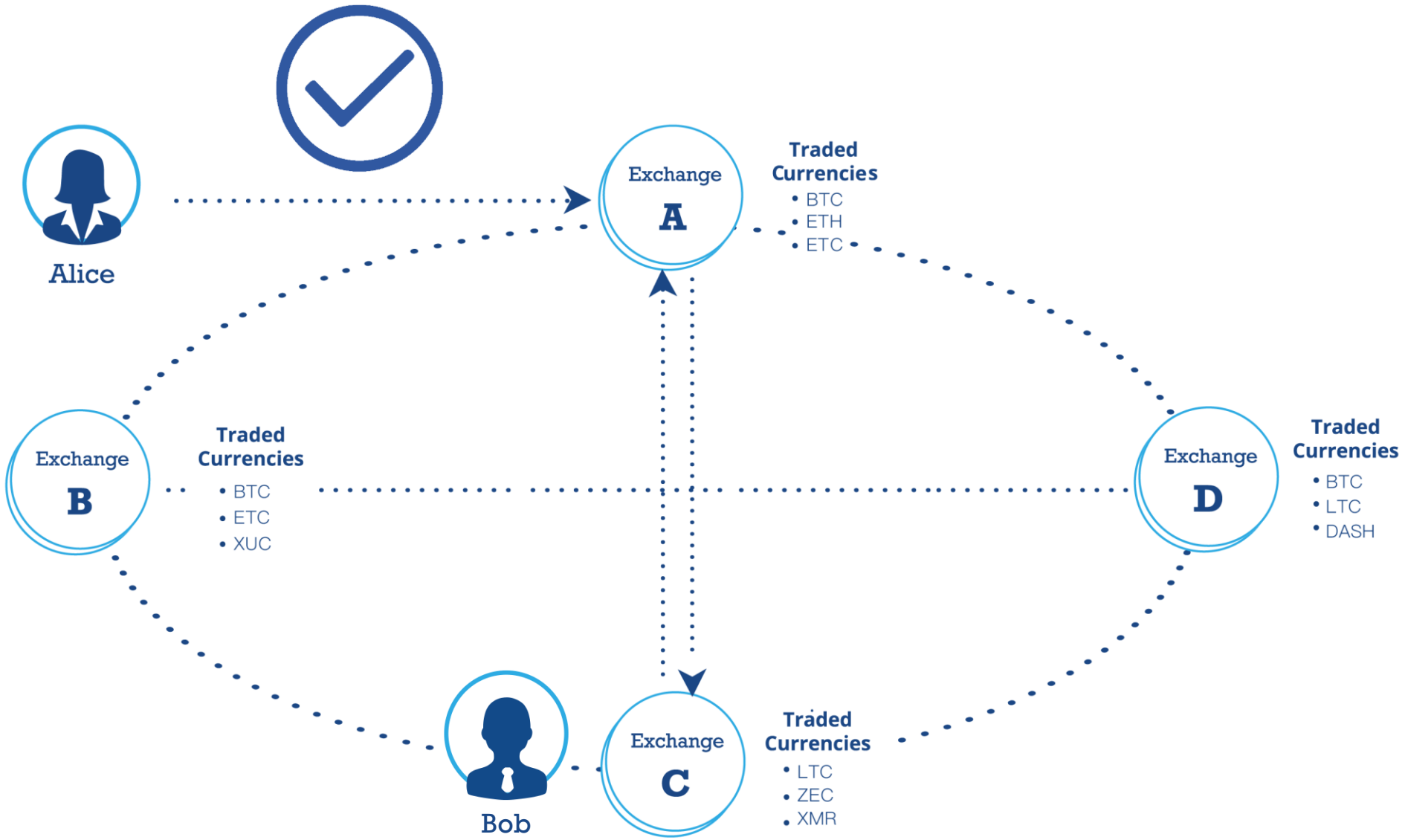


Use Case

Portfolio		
	Before	After
BTC	2	2
LTC	0	10
ETC	100	80



Who benefits?

Exchanges:

- Larger user base
- Increased liquidity
- Increased revenue
  - Keep full maker/taker fee pair on both sides of the trade
  - XUC for providing liquidity
- Robust & trustless trading infrastructure

Users:

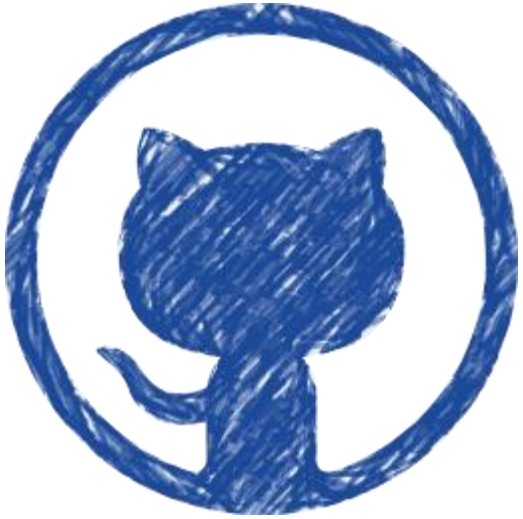
- Tighter spread
- Best price
- All trading pairs
- No need for multiple verified accounts

Vision

*"The first **decentralized network**, which enables **instant and trustless** trades between digital asset exchanges."*

What do we do?

- We build the software for connecting exchanges: **XU Node**
- Open-source
- Currently one of our main tasks: Build a developer community
- Bitcoin → new era of open source development
- We believe the new open-source is self-sustaining
  → Code contribution increases value of project and thus the value of the token
  → For the first time free open-source development pays back!



How do we do?

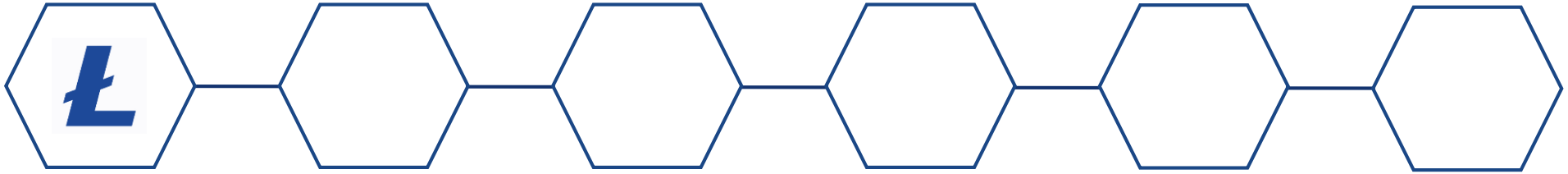
3 Key Technologies

1. Payment Channels
Each trade transfers real digital assets *instantly* between exchanges

2. Atomic Swaps
Trustless trades directly between two exchanges

3. Decentralized Orderbooks
Solving the pain points of digital asset exchanges – *connecting buyer & seller*

Status Quo



Status Quo

Source: https://blog.bitmex.com/the-lightning-network/

1. Payment Channels

Yes, we are talking about Lightning & Raiden!

1. Payment Channels

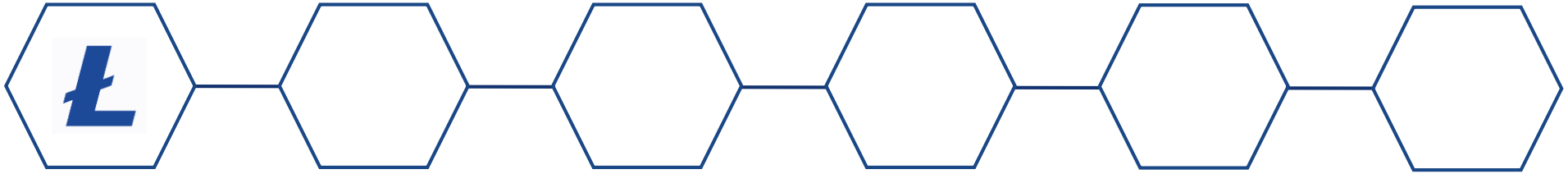
Old idea, obviously Satoshi already came up with the basics:

*One use of nLockTime is **high frequency trades** between a set of parties. They can **keep updating a tx** by unanimous agreement. The party giving money would be the first to sign the next version. If one party stops agreeing to changes, then the last state will be recorded at nLockTime.*

Source: https://lists.linuxfoundation.org/pipermail/bitcoin-dev/2013-April/002417.html

1. Payment Channels

High-level:



1. Payment Channels

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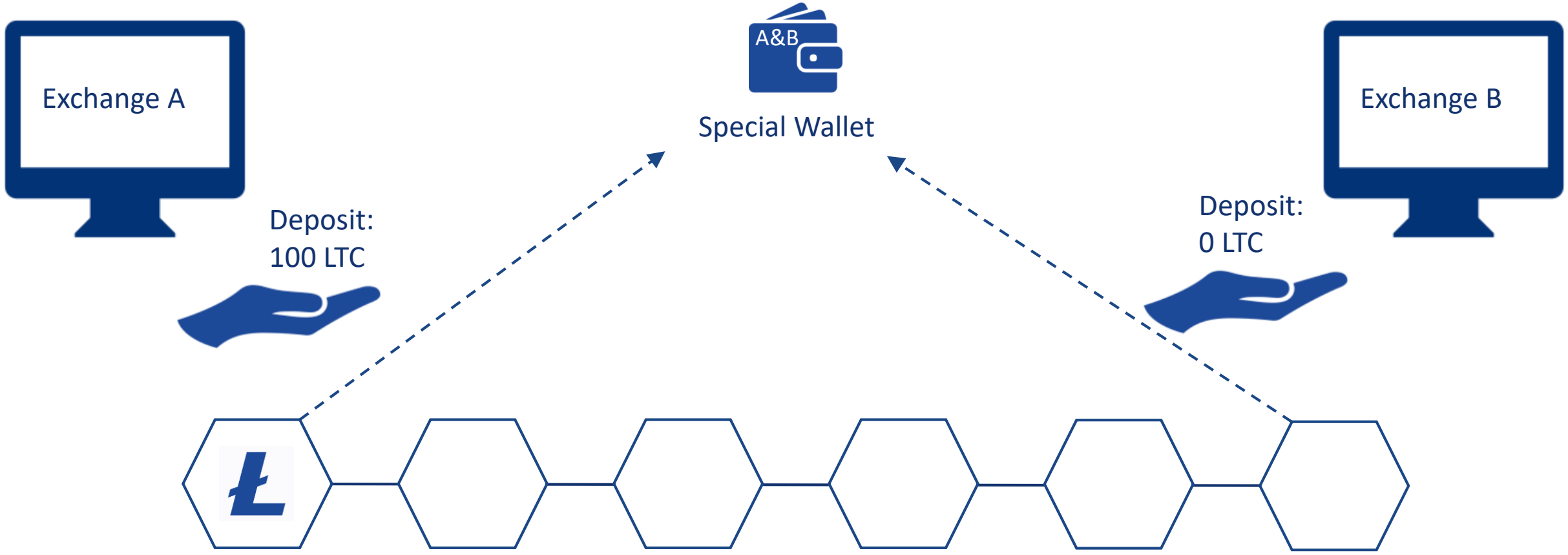

1. Payment Channels

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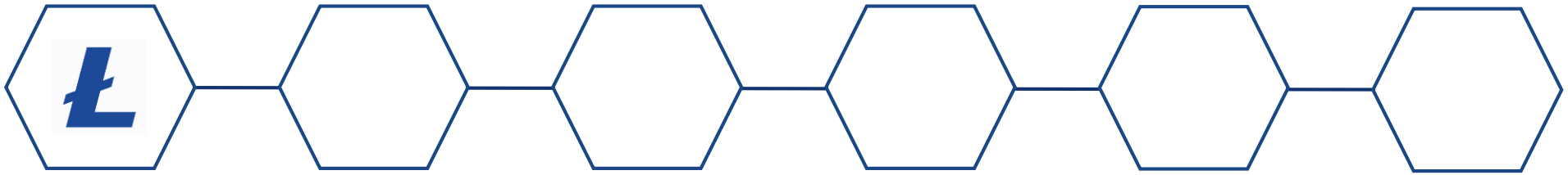

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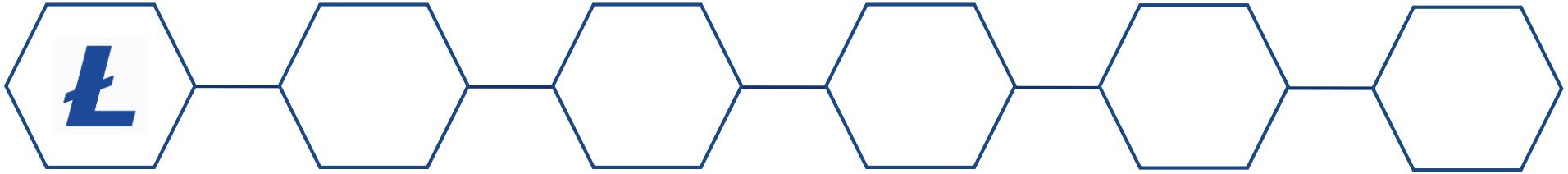

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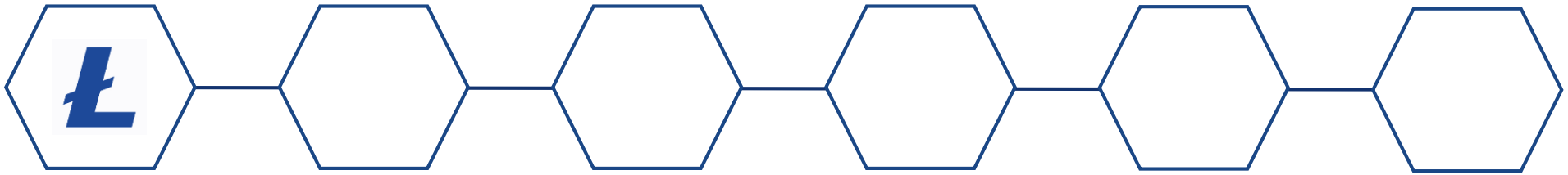
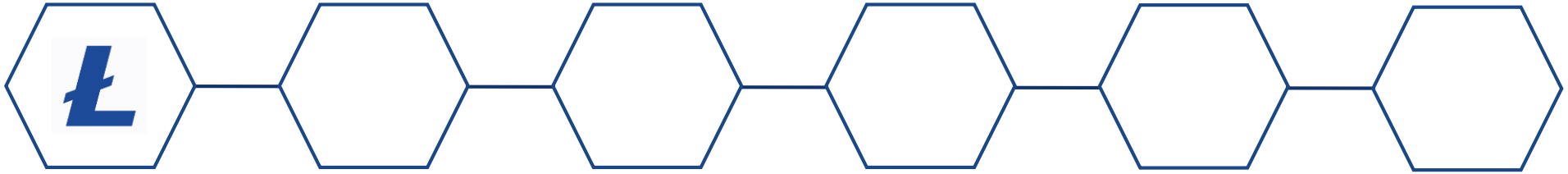


1. Payment Channels

Bi-Directional Channel:



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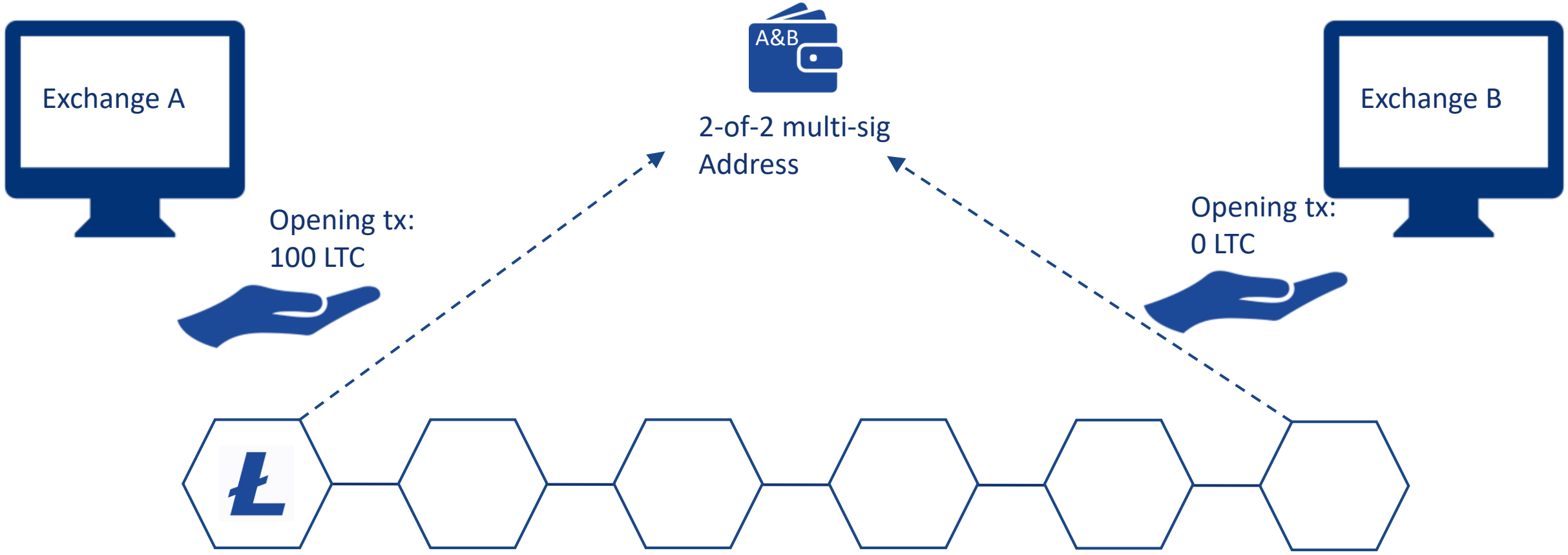
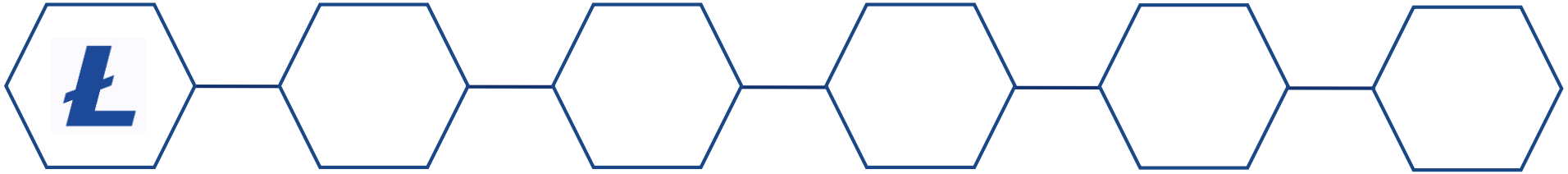


1. Payment Channels

Bi-Directional Channel:

H(a_secret)

H(b_secret)



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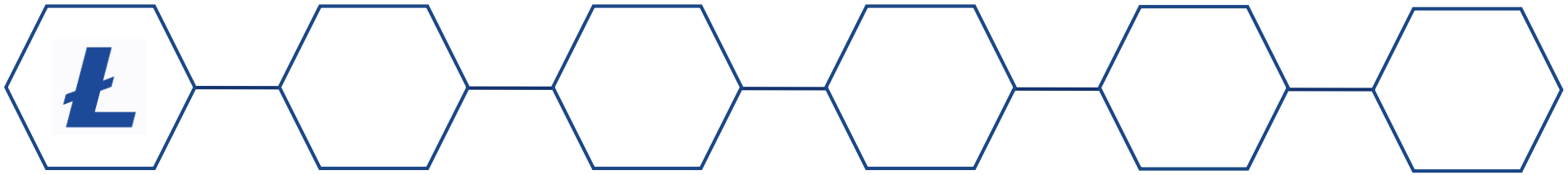

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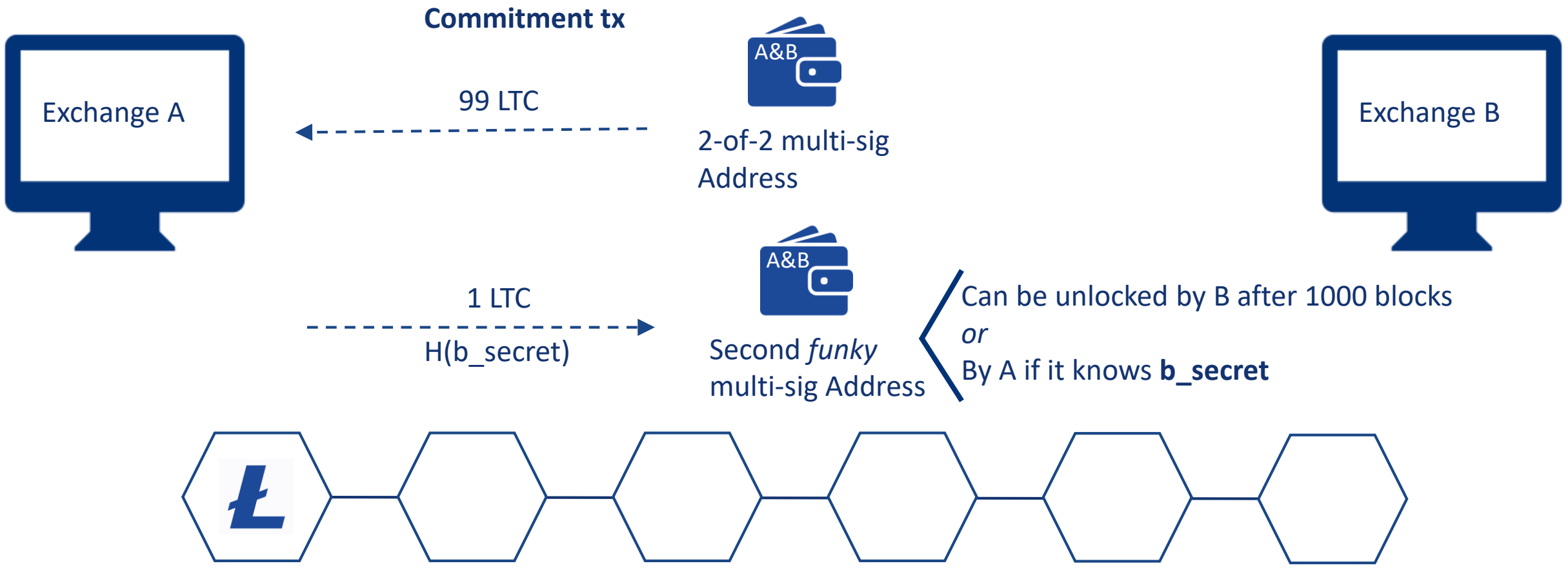

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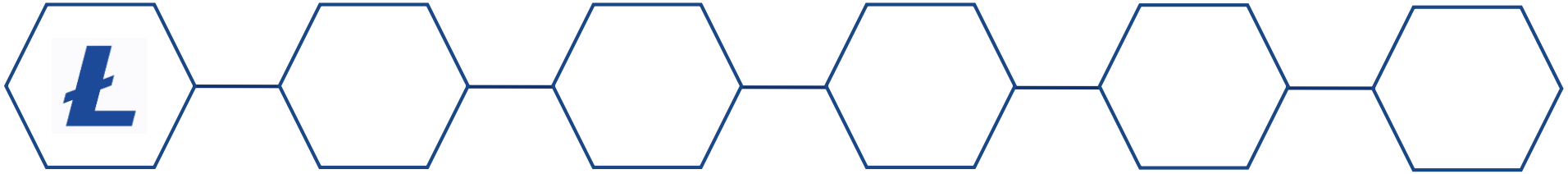

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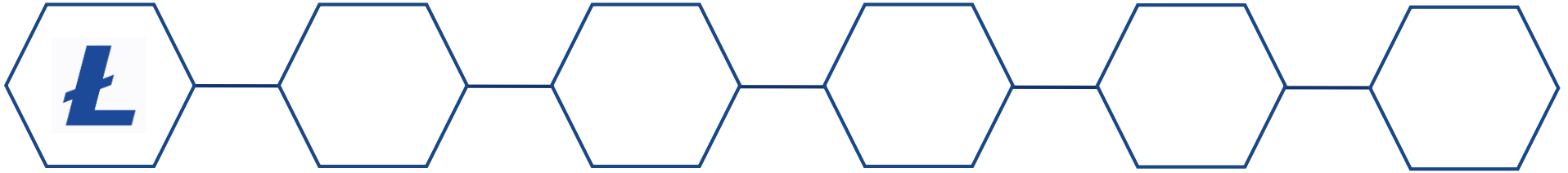

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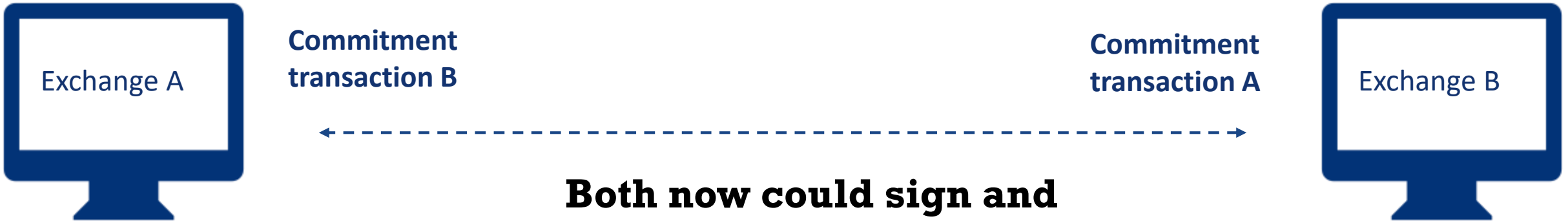
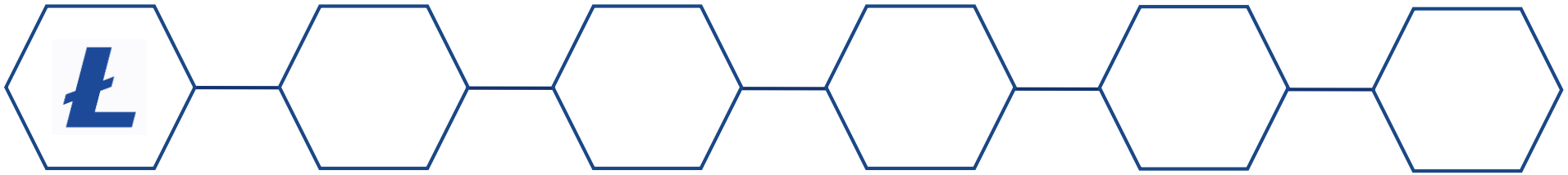


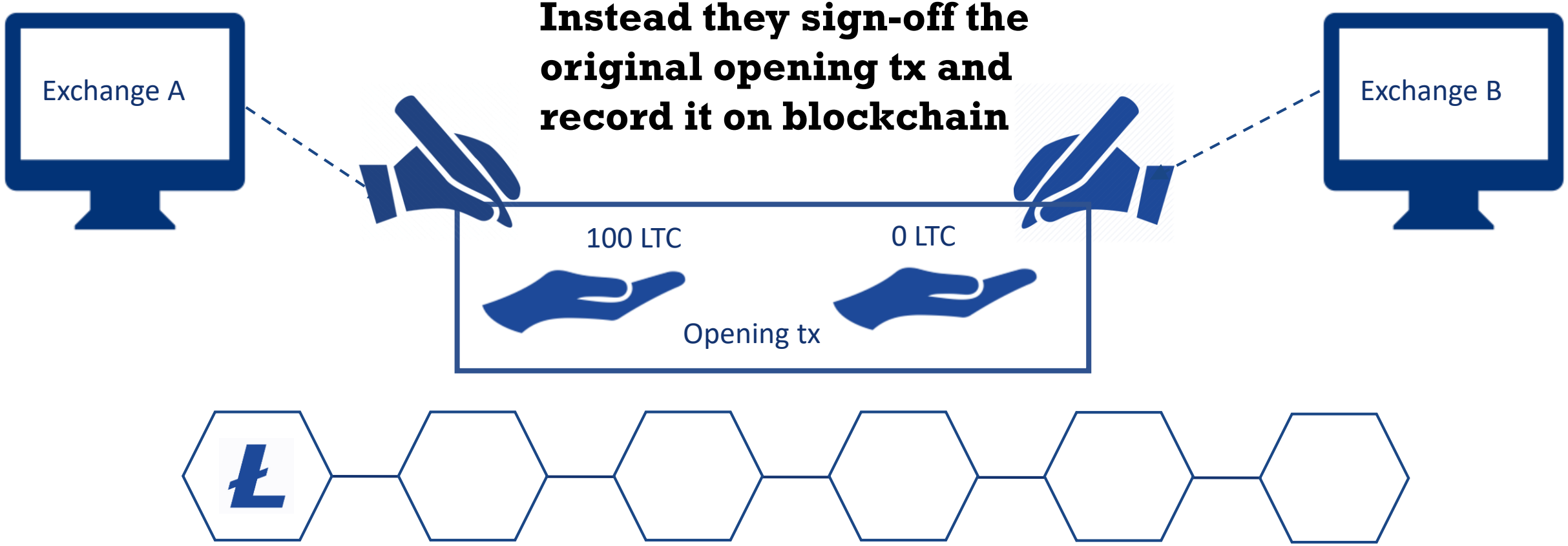
Both now could sign and broadcast these tx, but… they don't



1. Payment Channels

Bi-Directional Channel:

Instead they sign-off the original opening tx and record it on blockchain



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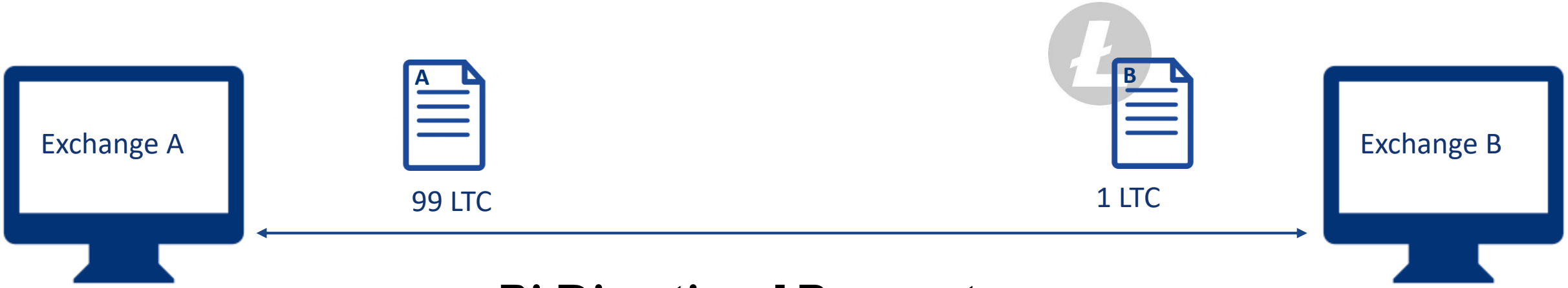
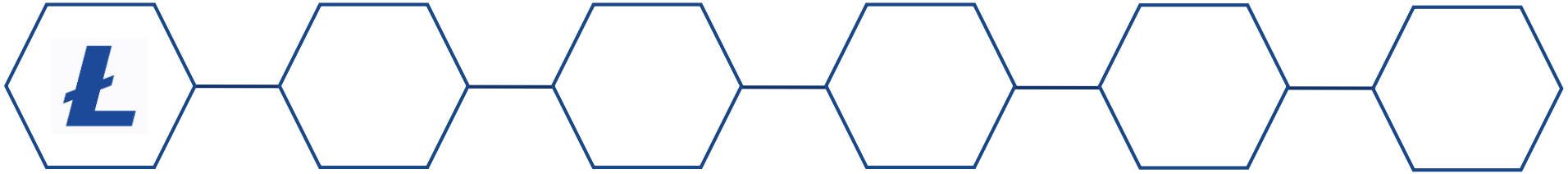


Bi-Directional Payment Channel is now officially open

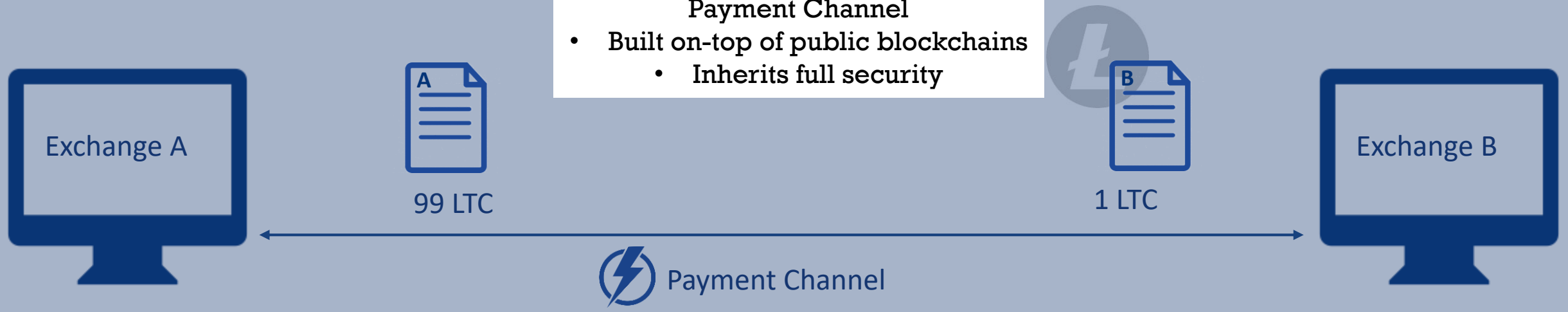


1. Payment Channels

Layer 2

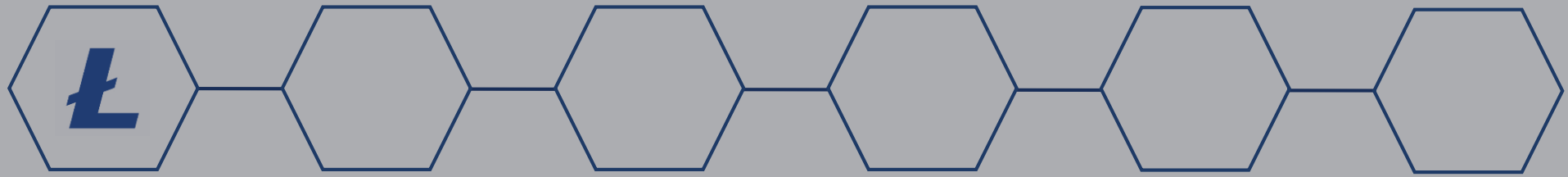
Payment Channel

- Built on-top of public blockchains
- Inherits full security



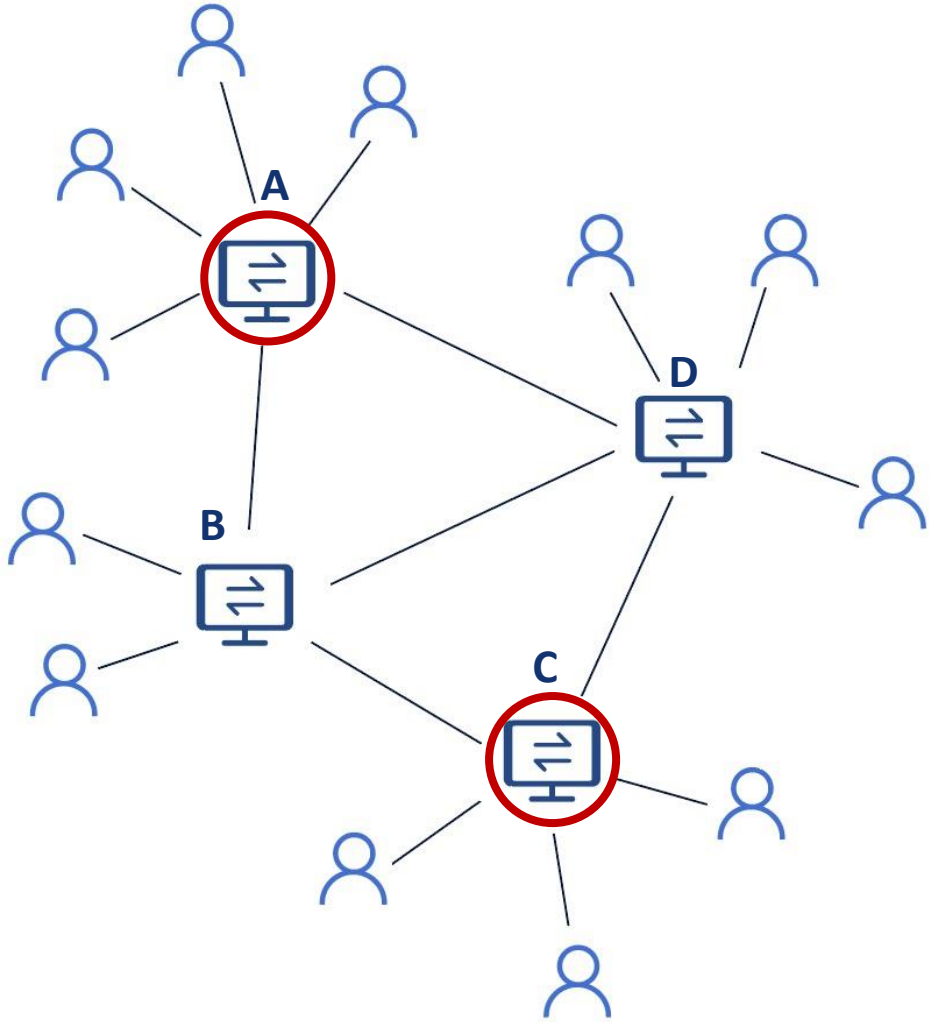
Layer 1

Underlying public blockchain = dispute mediation system



1. Payment Channels

Routing:



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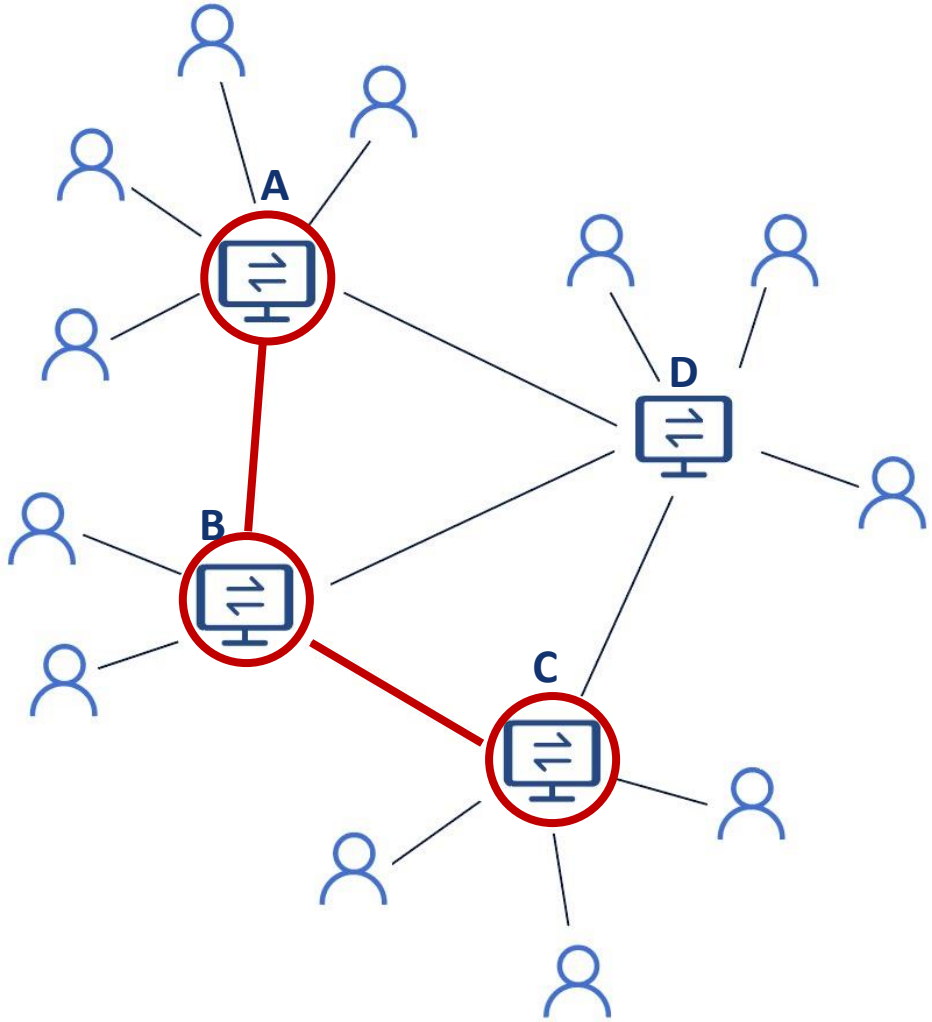

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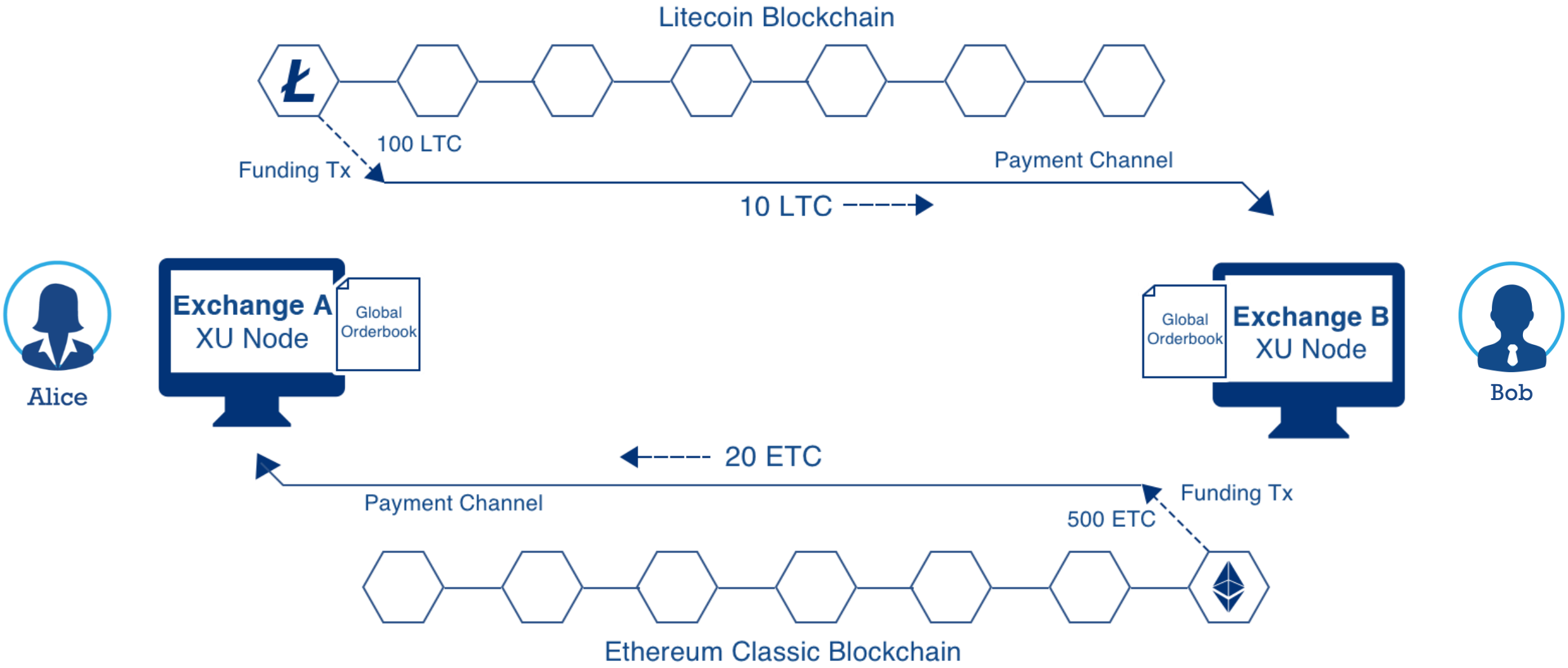
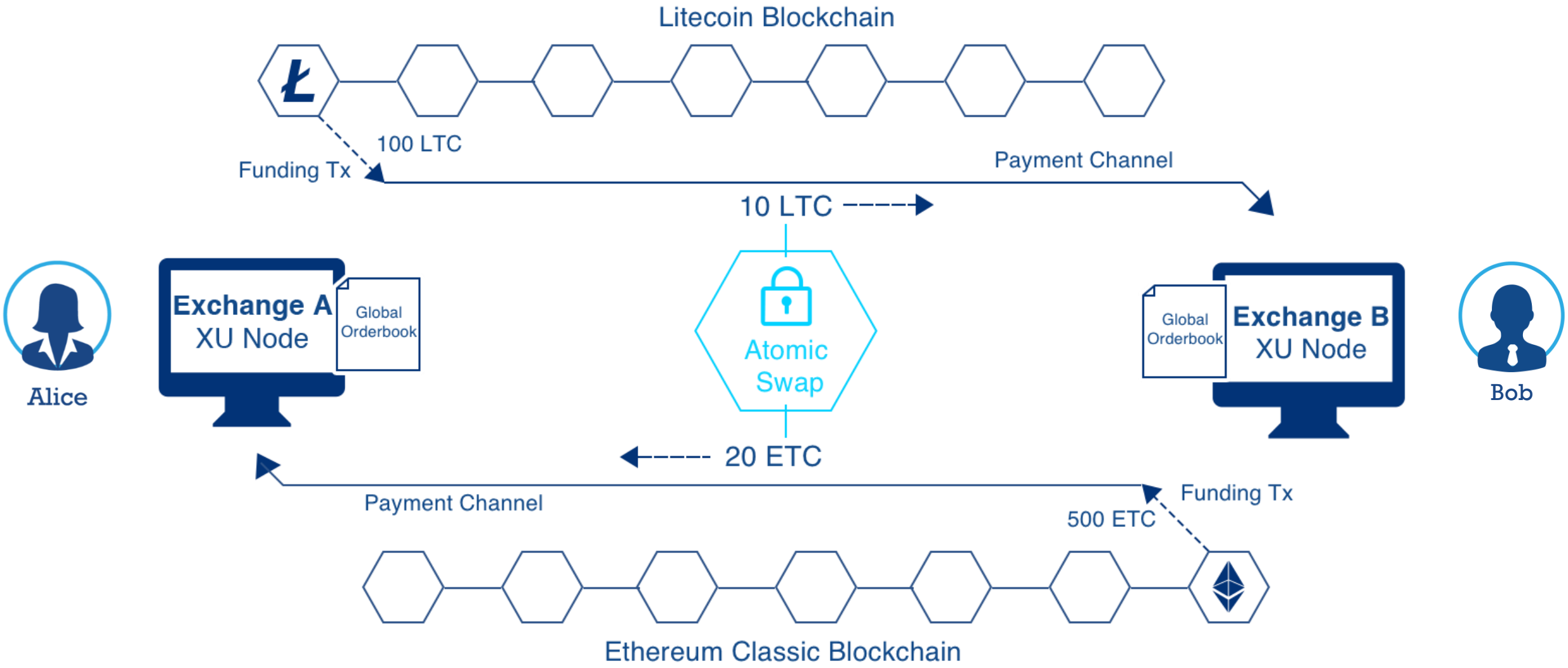


2. Atomic Swaps



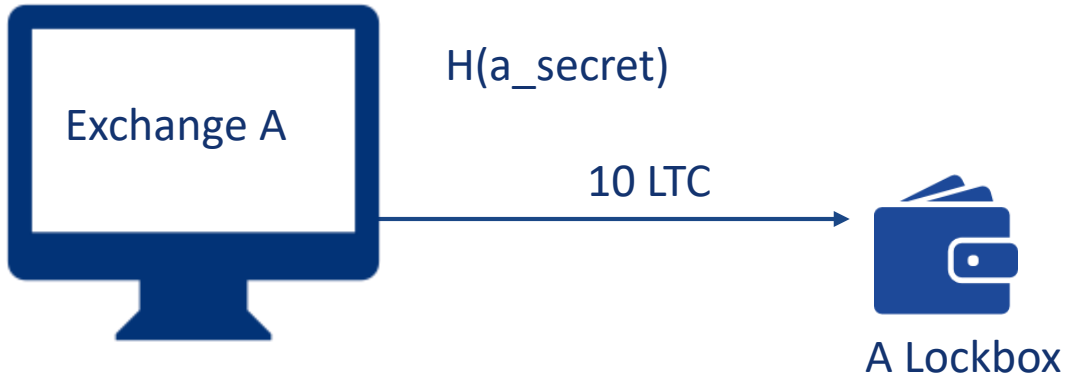
2. Atomic Swaps

- Trustless exchange of two different assets
  - No middleman/escrow service needed
- How: guarantee atomicity
  - Both sides of the trade happen or not at all
  - Technology: Hashed TimeLock Contracts (HTLCs)

2. Atomic Swaps

Lockbox only opens with ‘a_secret’ + B’s signature

2. Atomic Swaps



Lockbox only opens with ‘a_secret’ + B’s signature

HashLock

2. Atomic Swaps

Lockbox only opens with **'a_secret' +** B's signature

Lockbox only opens with **'a_secret' +** A's signature

2. Atomic Swaps

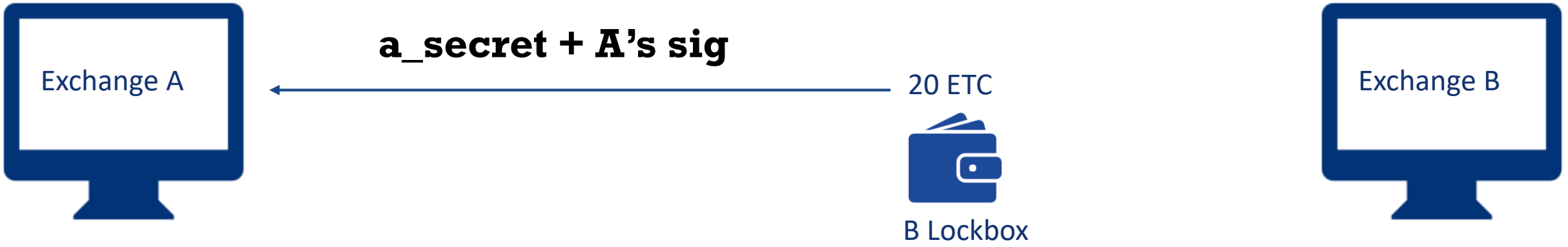
Lockbox only opens with **'a_secret' +** B's signature

Lockbox only opens with **'a_secret' +** A's signature

Both lockboxes need the **same "a_secret"** to be opened!

2. Atomic Swaps

If now A wants to open B's lockbox it has to reveal it's a_secret on the payment channel



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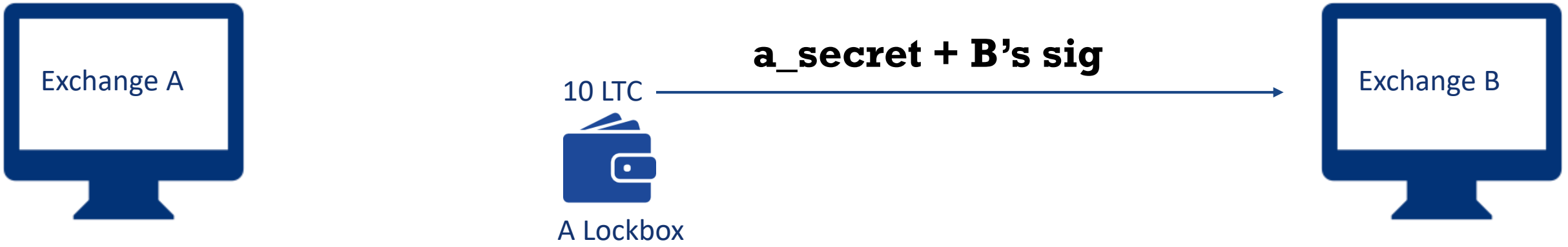

2. Atomic Swaps

20 ETC

10 LTC

2. Atomic Swaps

TimeLock:
If something goes wrong, 10 LTC go back to A and 20 ETC back to B after certain time interval

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If something goes wrong, 10 LTC go back to A and 20 ETC back to B after certain time interval

Hashed TimeLock Contracts
Via BIP199 on Bitcoin and SmartContracts on Ethereum

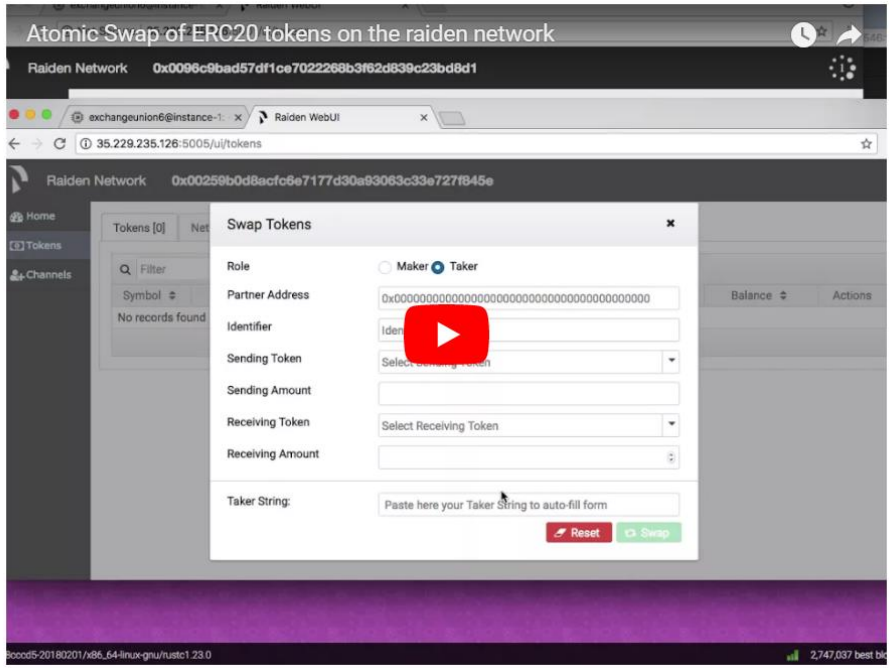
DEMO

Ankur Kumar

Product bro. I also spend lots of time on Xcode on Sketch and reading cool new AI & crypto paper on arXiv. Buy me and I'll bump your fist

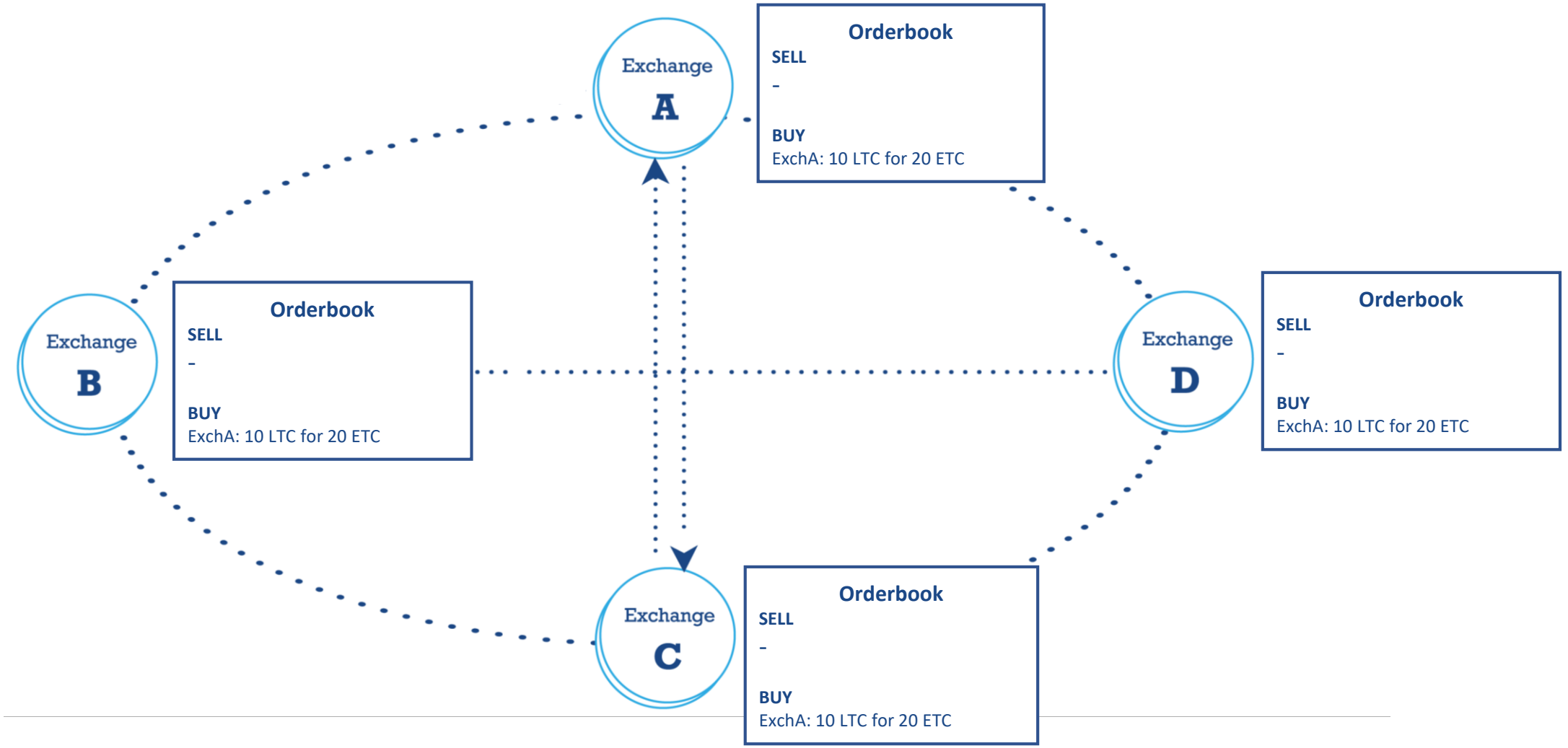
Mar 1 · 2 min read

Atomic Swap of ERC20 Tokens on the Raiden Network



blog.exchangeunion.com

3. Decentralized Orderbook



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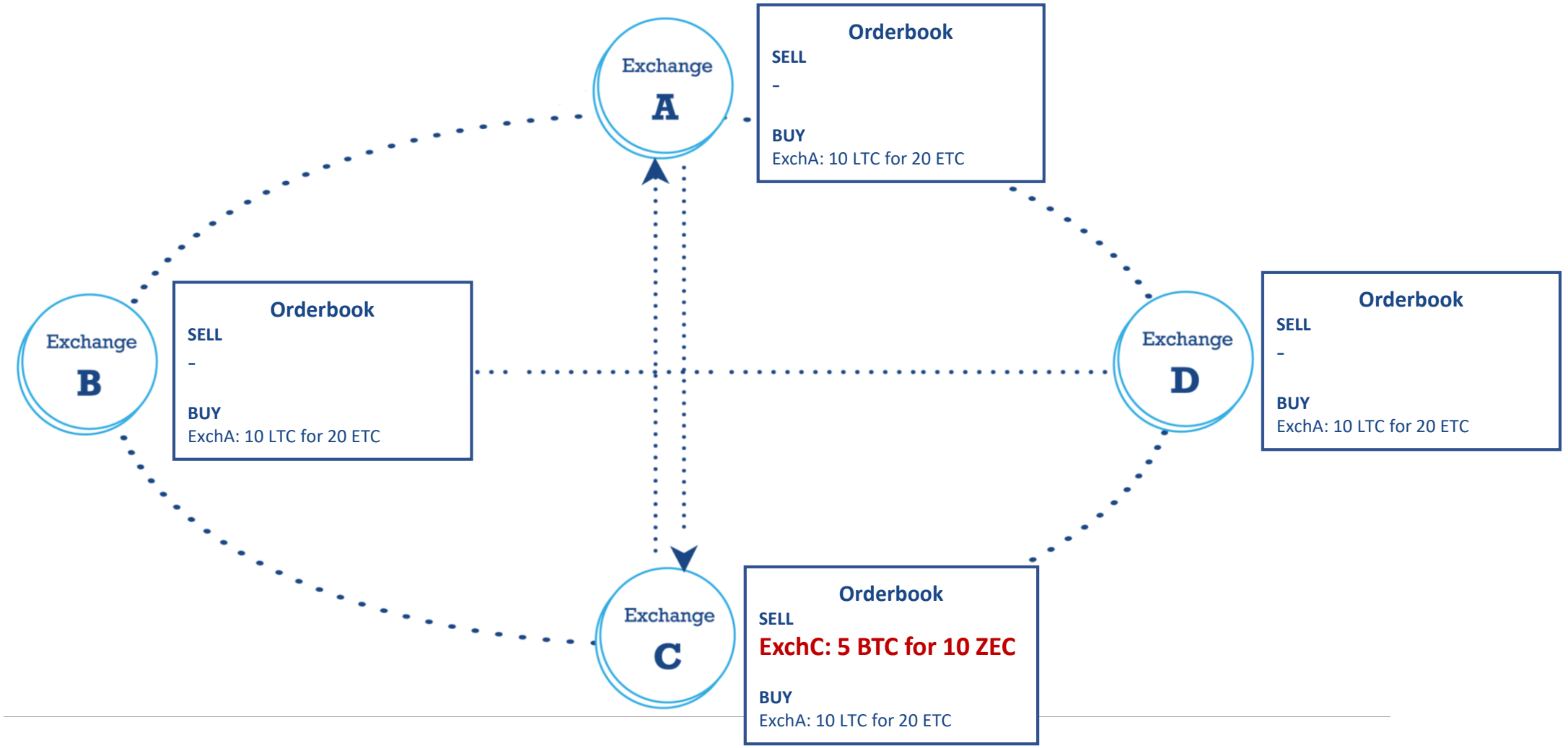

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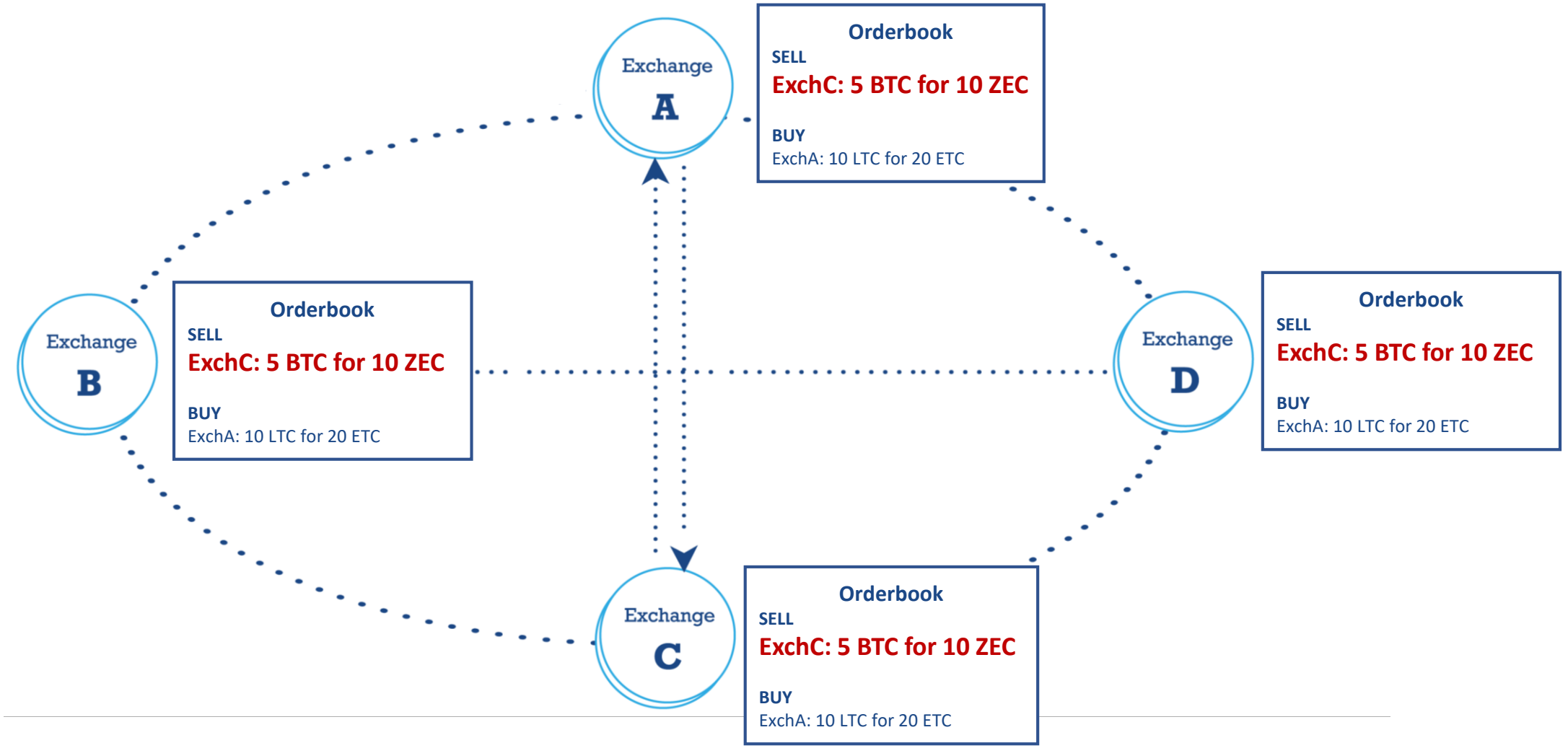


3. Decentralized Orderbook

- XU node software will propagate order updates to peers
  → XUC awarded for relaying orders
  → XUC awarded to market makers / liquidity providers

- Orders may be signed only by known key to prove authenticity

Summary

Exchange Union is not a blockchain

Summary

Exchange Union is not a blockchain, nor an exchange.

Summary

Exchange Union is not a blockchain nor an exchange.

It’s a technology which connects exchanges.

Summary

Open Source & Decentralized

Technology:

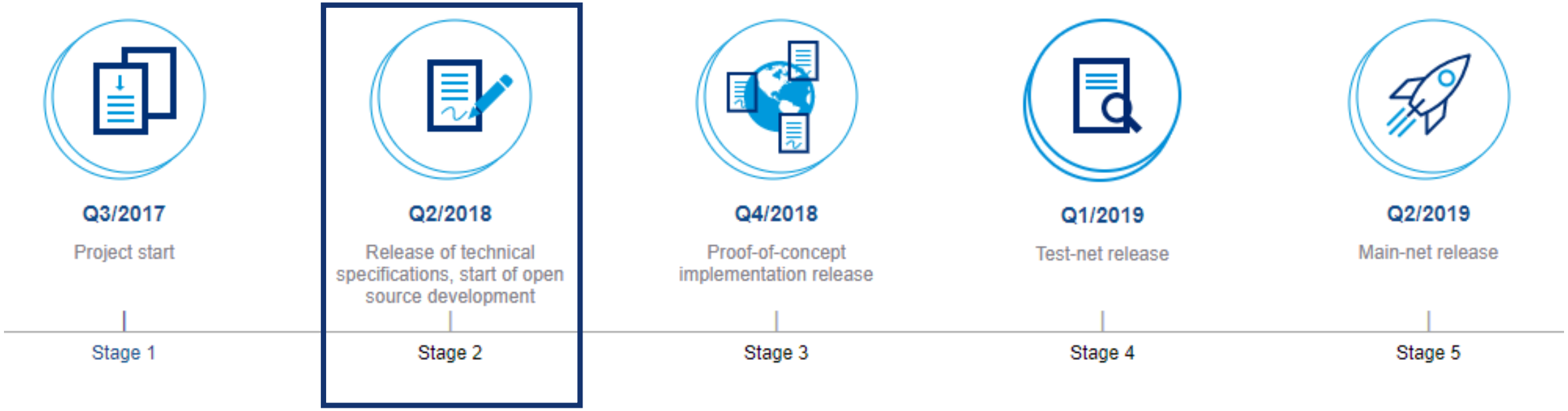
- 1. Payment Channels
- 2. Atomic Swaps
- 3. Decentralized Orderbooks

Benefits:

- Exchanges: increased revenue & liquidity
- Users: trade from one account & best price

XUC is both a fee and an incentive system

Where are we?


Q3/2017
Project start
Stage 1
Q2/2018
Release of technical specifications, start of open source development
Stage 2
Q4/2018
Proof-of-concept implementation release
Stage 3
Q1/2019
Test-net release
Stage 4
Q2/2019
Main-net release
Stage 5

Outlook

Exchange Union is public infrastructure

Enables entire new products:

- Wallets
- Merchant PoS

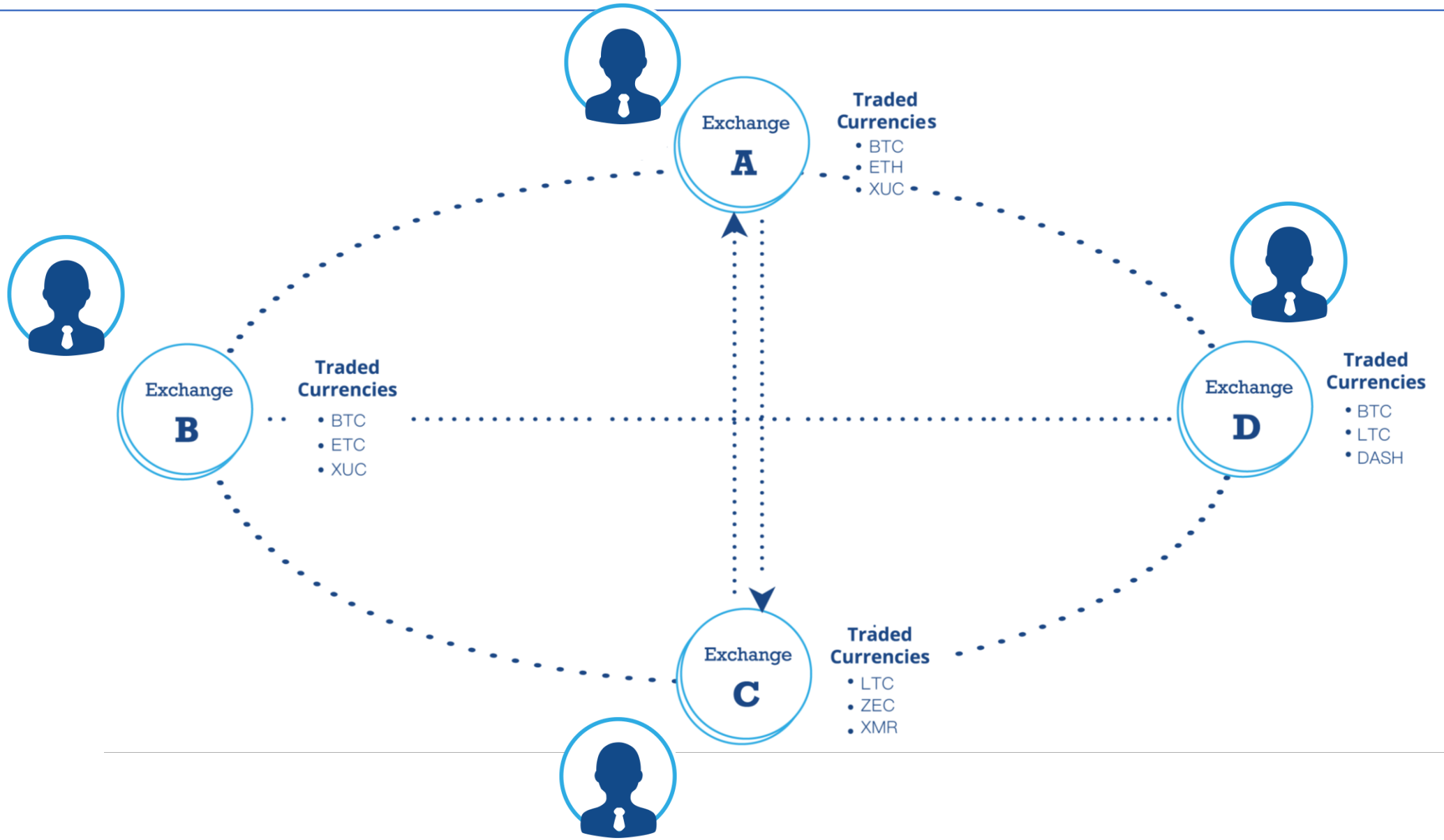
Promotes financial inclusion

exchange union

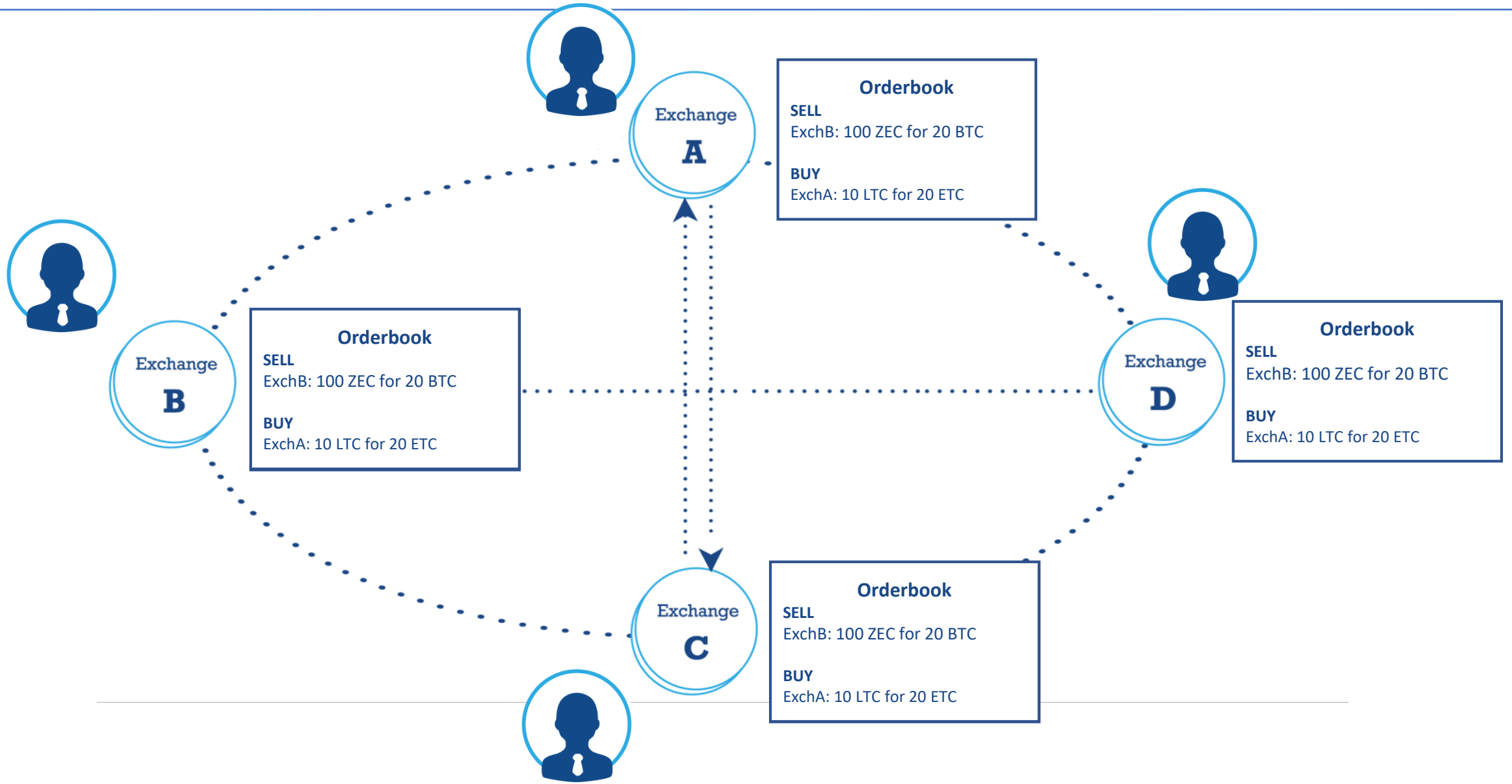
exchangeunion.com

Backup

What does that mean?



What does that mean?



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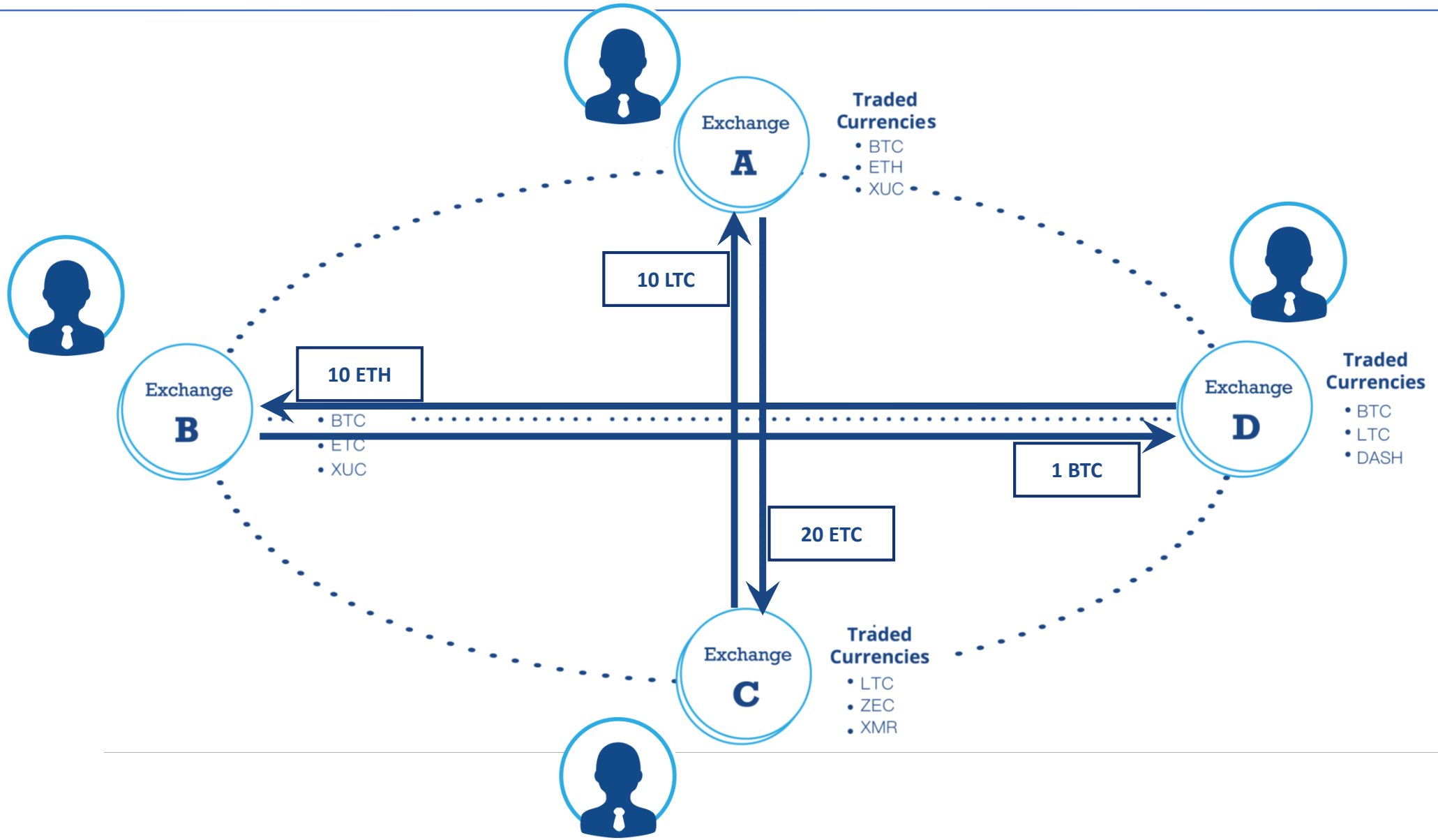

How do we realize this?

XUC

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XUC = Fee & Incentive System

XUC

XUC awards **exchanges & users for providing liquidity**

XUC

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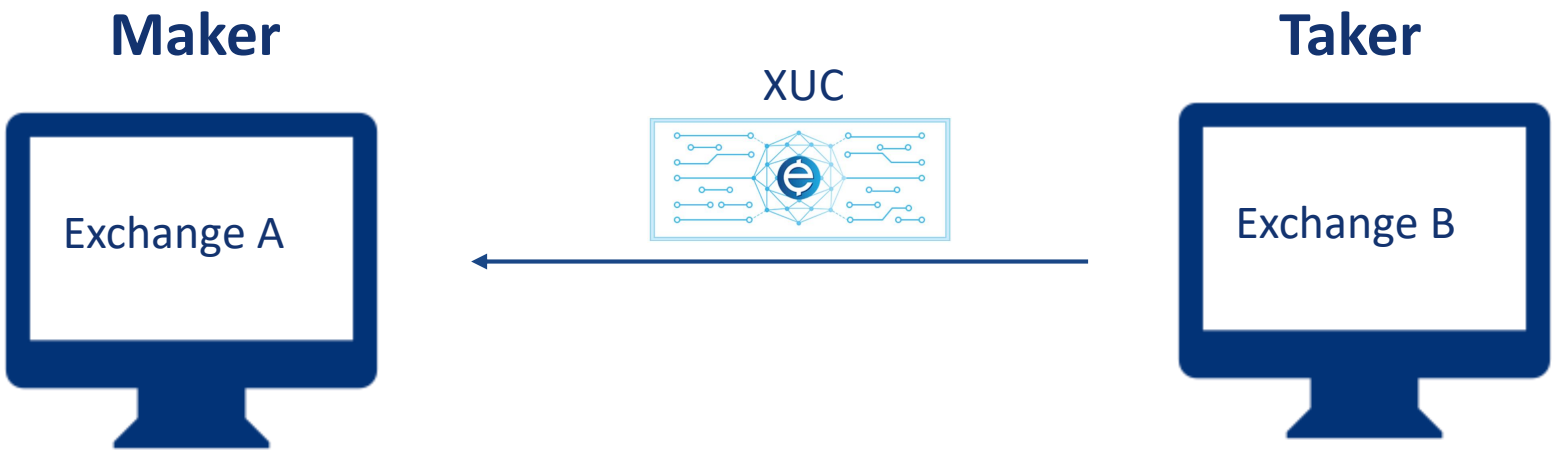
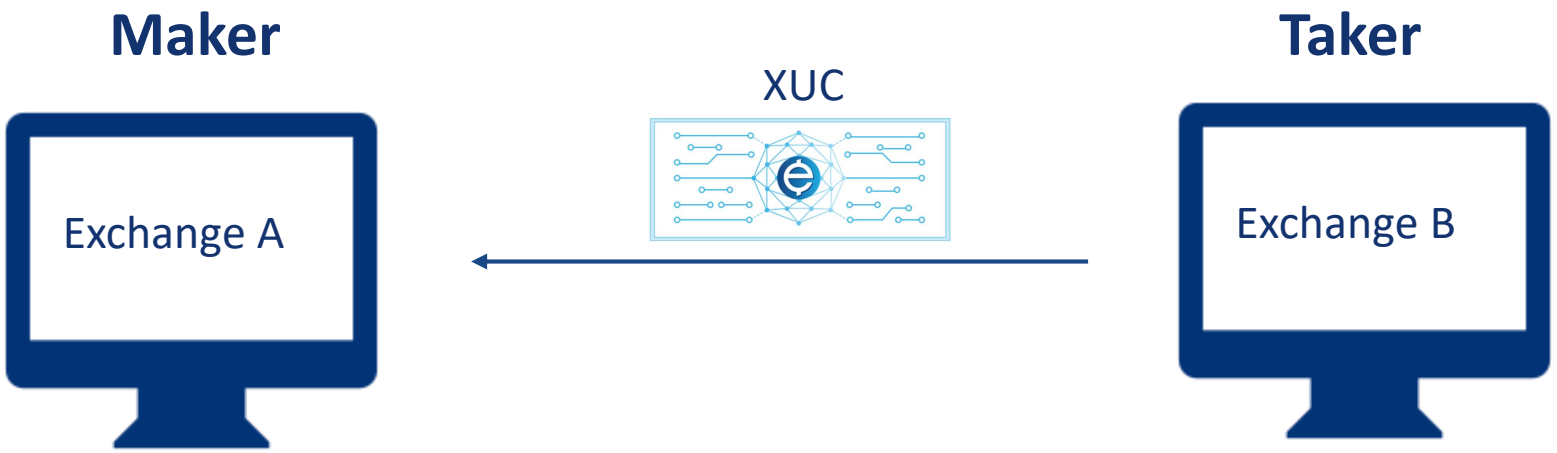


XUC

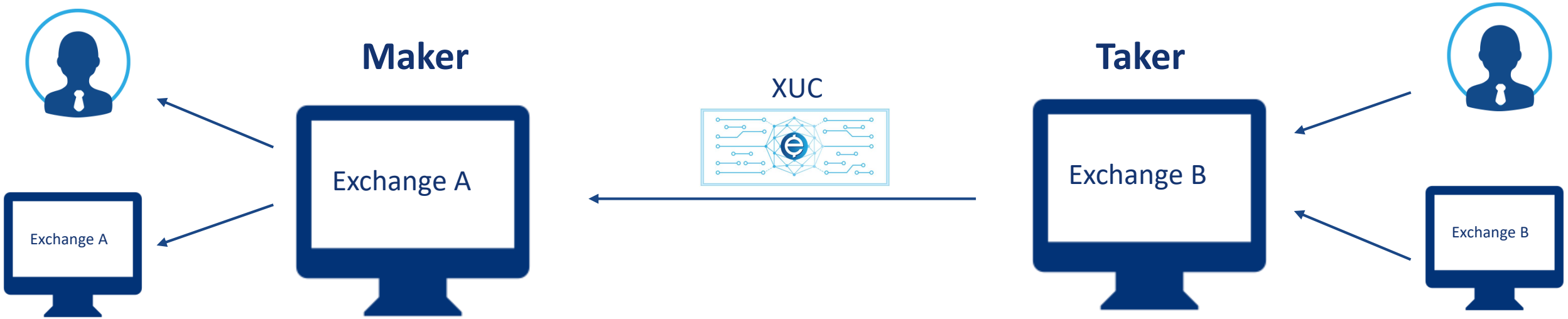
XUC awards **exchanges & users for providing liquidity**



Fee set by maker → fee market

XUC

XUC awards **exchanges & users for providing liquidity**



Fee set by maker → fee market

XUC

XUC awards

Exchanges:

- for providing liquidity
- airdropping XUC to exchange's users

Users:

- for providing liquidity
- for trading certain volume via Exchange Union

Developers:

- for each code contribution, review, testing
  → Very important for the phase we are in right now

XUC

XUC awards

Anyone: for providing services in the union

- Relay Orderbooks (‘SuperNodes’)
- Validate Orderbooks
- Payment channel services (like a watchtower)

XUC

Token Data:

- Total supply: 3 billion
- Current circulation: 65 Million
- Larger parts locked long-term locked or burned
- Max. release amount per month: 5 Million (controlled by smart contract)