

Swap Limit Orders

Briefing Book

SWAP LIMIT ORDERS

- 1 Central Limit Order Book
- 2 No custody, p2p settlement

Order book		Index price		Details 	
◎ Websocket is connected		29,100.27  USDt			
Amount	Bid	Offer	Amount		
0.02500000	28,245.71	30,000.00	0.10000000		
0.00196078	28,500.00	31,200.00	0.10000000		
0.02500000	28,600.00	31,300.00	0.03431978		
0.25126000	28,650.10	32,000.00	0.02000000		
0.19600000	28,700.80	31,200.00	0.15000000		
0.00196078	29,000.00	32,300.00	0.02000000		

Custody and settlement risks – the problem



Alice and Bob wish to engage financially without assuming risks



Neither wants to rely on third party custodial services

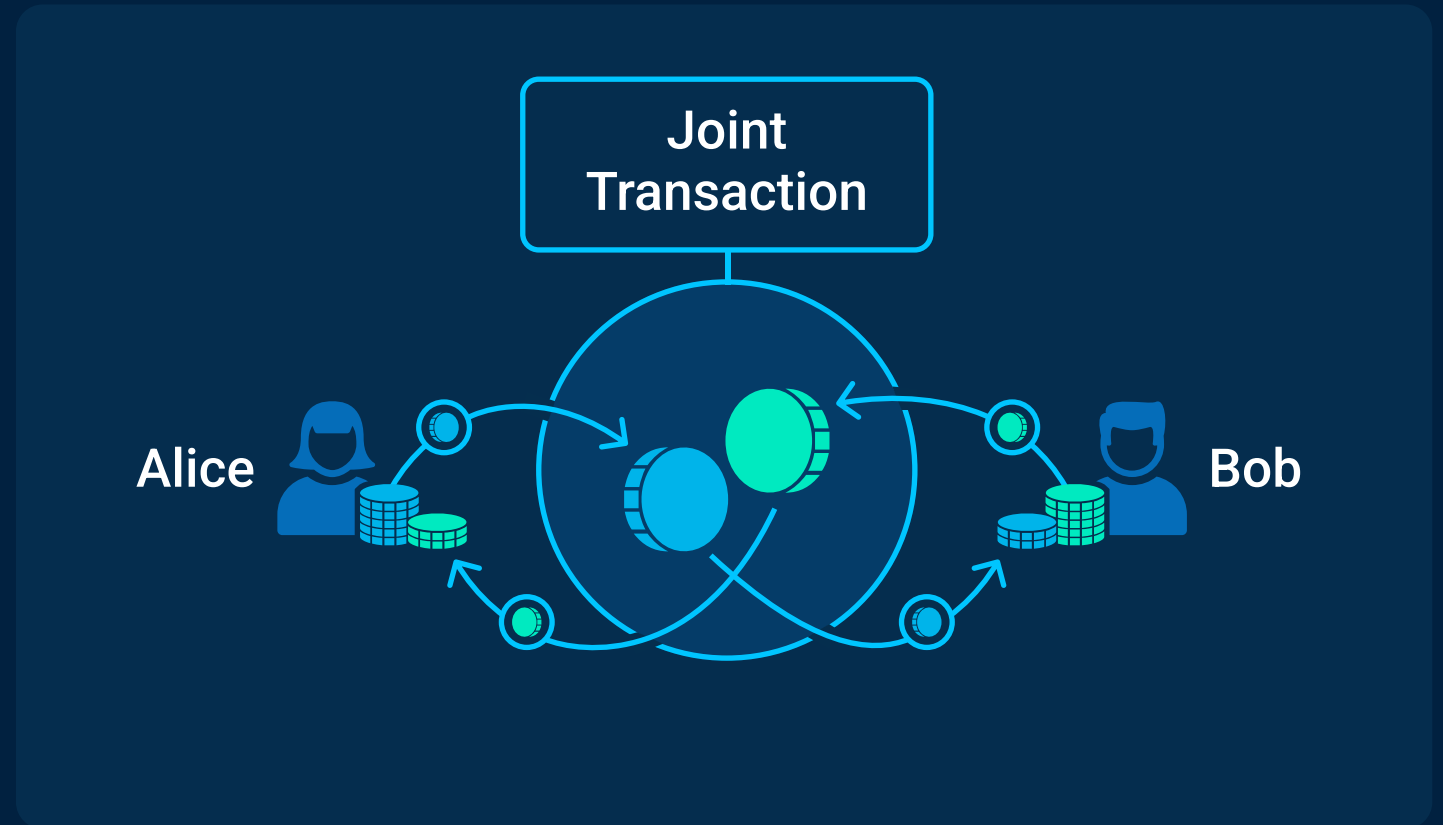


They have agreed to terms, but are unsure how to conclude (settle) the exchange directly between themselves



Swaps - the solution

- 1 Alice and Bob create a joint transaction (swap) where each party adds their own inputs and outputs
- 2 Once Alice and Bob have created and reviewed the transaction, they each add their signatures
- 3 The joint transaction (swap) delivers Alice's inputs to Bob and Bob's inputs to Alice
- ✓ Alice and Bob swapped assets without trusting each other or requiring a trusted third party



SideSwap – our offering



Swap Order Books for public dissemination of swap proposals



Swap processes ensuring integrity of each party



Wallet (key management tools) supporting Swap Limit Orders



Peg-in/out service assisting users moving between the bitcoin mainchain and the Liquid sidechain

Our swap model

- ✓ Offers both Offline (2-step) and Online (3-step) swaps
- ✓ Any asset, including AMP securities, may be offered for sale via our Swap Markets
- ✓ For AMP securities and high-volume assets, we offer dedicated order books
- ✓ All swaps are done against LBTC
- ✓ Swaps are “blinded”, i.e. confidential



Swap model security

SideSwap manages the messaging flow between Makers and Taker

It ensures that neither party may see or receive the other party's signed inputs (possible with Segregated Witness transaction types)

Removing the signature from a transaction prevents the counterparty from being able to "save" the swap proposal and completing and broadcasting the swap at a later date

Offline Swaps (2-step swaps)

PROS

- Maker can create a pre-signed transaction and go offline
- Makers may use cold wallets (hardware and offline wallets) to create swap proposals

CONS

- The input must be for the exact amount, without change, and may require a preceding transaction
- Swap proposal price and volume updates will require that a new transaction is created and signed

M Maker makes

Maker creates a transaction with one input and one output

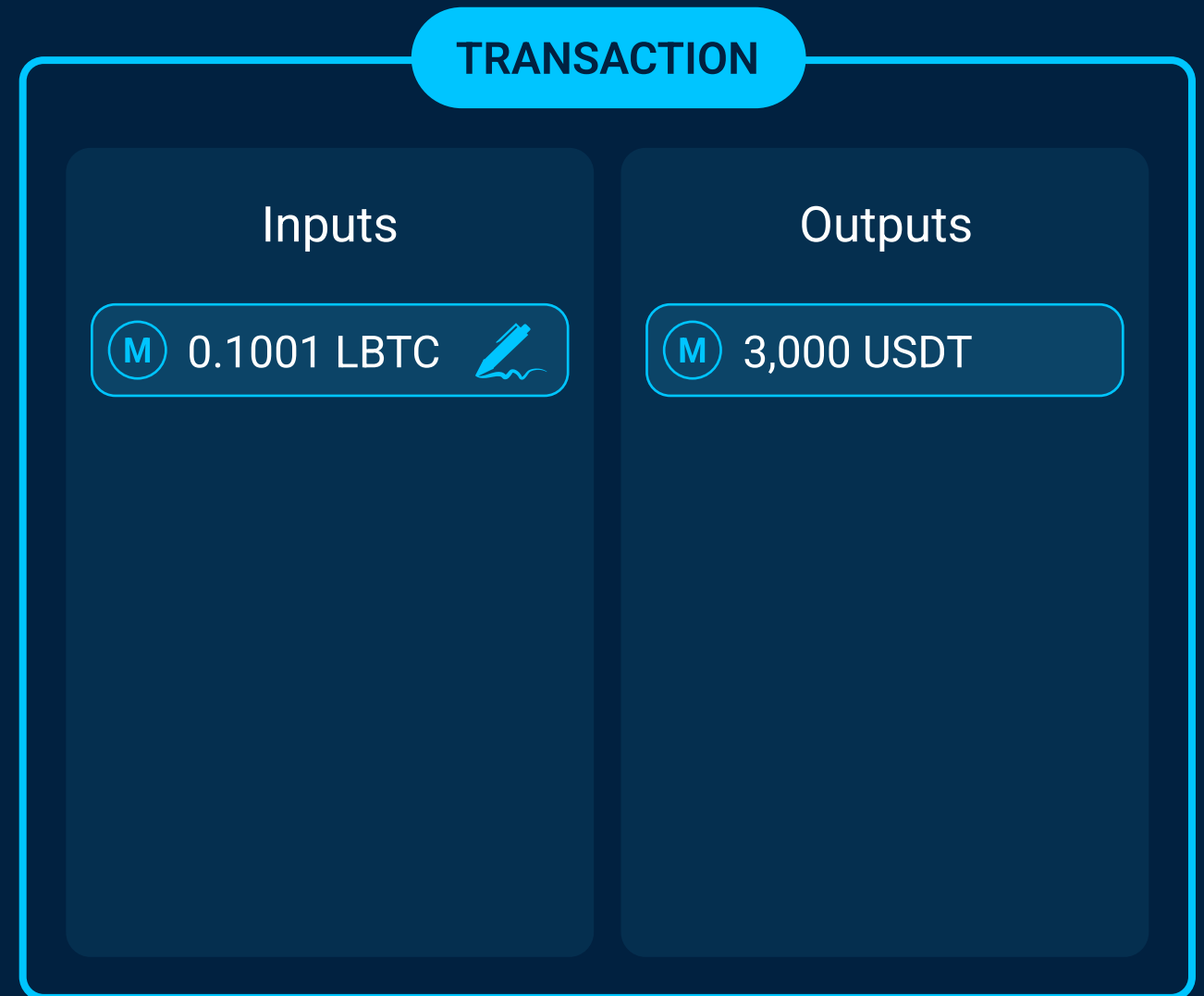
M The input is the delivered asset

M The output is the received asset

The Maker signs their input with

 **SIGHASH_SINGLE | SIGHASH_ANYONECANPAY**

Delivers the swap proposal to SideSwap for public listing



s SideSwap

- Reviews the transaction
- Monitors the inputs for spentness
- Adds a swap fee output (0.1%)
 - *s* includes network fee of about 600 sats
- Removes the Maker input signature
- Publishes the swap proposal in our Swap Limit Order Book

The order is now live







Order is now live

Order book

● Websocket is connected

Index price
29,100.27  USDt

Details 

Amount	Bid	Offer	Amount
0.02500000	28,245.71	30,000.00	0.10000000
0.00196078	28,500.00	31,200.00	0.10000000
		32,000.00	0.03431978

T Taker

Reviews the transaction

T Adds one or more inputs delivering an amount equalling, or exceeding, 3000 USDT

T Adds an USDT output for the change amount


T Adds an output to receive LBTC as payment

 Hashes the transaction and signs the USDT inputs

Delivers the signed swap proposal to SideSwap for broadcast



S SideSwap

- Reviews the transaction
-  Adds the Maker signature
- Broadcasts the transaction

TRANSACTION

Inputs	Outputs
(M) 0.1001 LBTC 	(M) 3,000 USDT
(T) 2,000 USDT 	(S) 0.0000194 LBTC
(T) 1,200 USDT 	(T) 200 USDT
	(T) 0.0999 LBTC

Online Swaps (3-step swaps)

PROS

- Makers can update price and volume without signing a new transaction
- Suitable for programmatic trading
- Multiple inputs are permitted

CONS

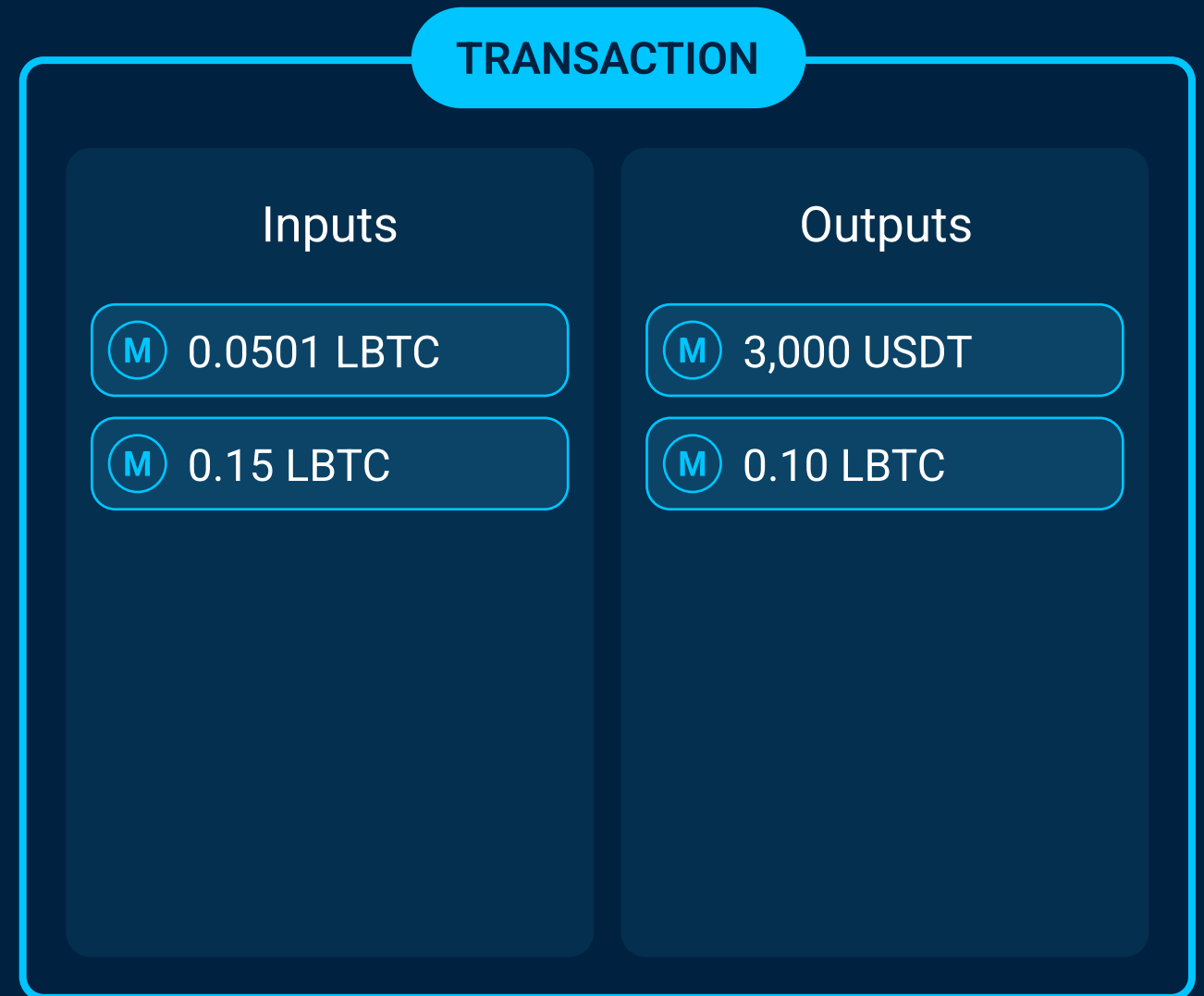
- The Maker is required to be online and sign the transaction within 30 seconds of Taker acceptance signing
- Requires the Maker to be online and use a hot wallet

M Maker makes

Maker creates a transaction with one or more inputs and two outputs

- M *The inputs are the delivered asset*
- M *The first output is the received asset*
- M *The second output is the change from the delivered asset*

The Maker delivers the swap proposal to SideSwap for public listing



s SideSwap

- Reviews the transaction
- Monitors the inputs for spentness
- Adds a swap fee output (0.1%)
 - s *includes network fee of about 600 sats*
- Publishes the swap proposal in our Swap Limit Order Book

The order is now live







Order is now live

Order book

● Websocket is connected

Index price
29,100.27  USDt

[Details](#) 

Amount	Bid	Offer	Amount
0.02500000	28,245.71	30,000.00	0.10000000
0.00196078	28,500.00	31,200.00	0.10000000
		32,000.00	0.03431978

T Taker

Reviews the transaction

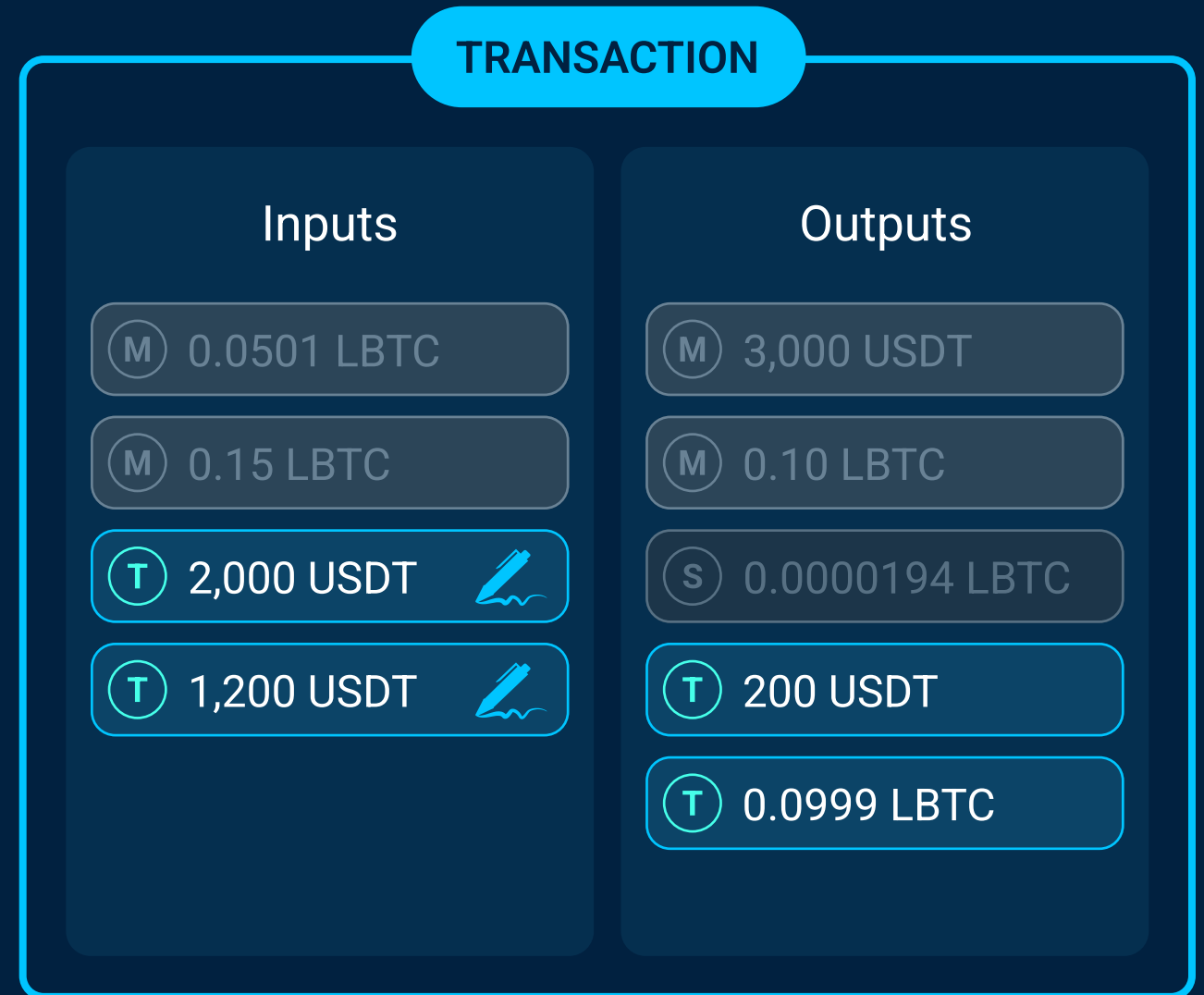
T Adds one or more inputs delivering an amount equalling, or exceeding, 3000 USDT

T Adds an USDT output for the change amount

T Adds an output to receive LBTC as payment

 Hashes the transaction and signs the USDT inputs

Delivers the signed swap proposal to SideSwap for broadcast



S SideSwap

- Reviews the transaction
- Removes the Taker signature
- Delivers the swap proposal to Maker for review and signing



M Maker

Reviews the transaction


 Sign swap proposal within permitted time

Delivers the swap proposal to SideSwap for broadcast




TRANSACTION

Inputs	Outputs
M 0.0501 LBTC 	M 3,000 USDT
M 0.15 LBTC 	M 0.10 LBTC
T 2,000 USDT	S 0.0000194 LBTC
T 1,200 USDT	T 200 USDT
	T 0.0999 LBTC

S SideSwap

- Reviews the transaction
-  Adds the Taker signature
- Broadcasts the transaction

TRANSACTION

Inputs	Outputs
M 0.0501 LBTC 	M 3,000 USDT
M 0.15 LBTC 	M 0.10 LBTC
T 2,000 USDT 	S 0.0000194 LBTC
T 1,200 USDT 	T 200 USDT
	T 0.0999 LBTC

Please feel free to contact us
if you need any further information

 sideswap.io/faq

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Thank You!