



MUNSTR

Enhancing Bitcoin with the power
of multisignature technology and Nostr





Problem

Most Bitcoin multisignature solutions today require lots of **time**, **coordination**, and **money** in order to securely facilitate a multisignature transaction. While users gain a degree of security and privacy using standard multisignature schemas, it can be a ***MONSTEROUS*** experience. Our team knows that we can enhance this process with recent Bitcoin improvements and decentralized social media enhancements.






Solution

Munstr is a Schnorr based multi-sig scheme signature (MuSig) using decentralized Nostr networks as a communication layer for a secure and encrypted method of transporting and digitally signing partially signed bitcoin transactions with increased privacy. Our end-to-end solution solves issues with **encrypted communication, coordination, optimization**, and **increased privacy** for an enhanced multisignature experience.

- To anyone observing the blockchain, Munstr multisignature transactions look like any Pay-to-Taproot (P2TR) spend.



Transaction

fe797d03f94542317373bd78bc97317fa6030ed4f8962a87e9eee51c77d87dfd 

1 confirmation



Timestamp 2023-04-22 20:05 (1 minute ago)

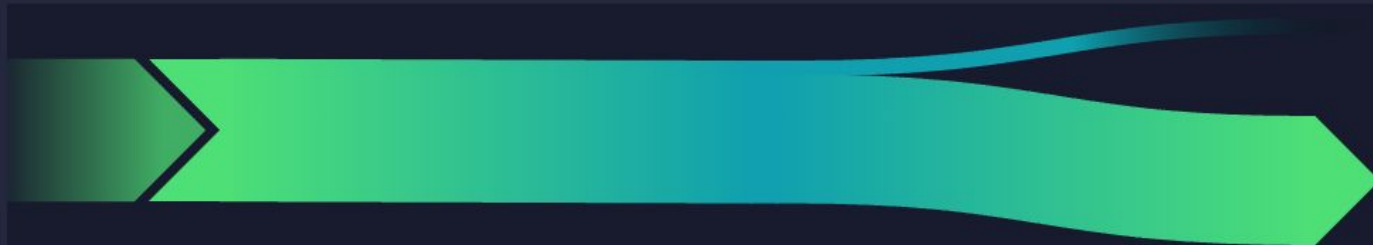
Fee 1,000,000 sat \$0.00

Features SegWit Taproot RBF

Fee rate 10,000 sat/vB


Flow

Hide diagram



Inputs & Outputs

Details

 tb1p7lhmmc4d4npevg4h7rd7r28... esvyaw5q

0.10000000 tBTC

2NEwkTybLpYyaRooBFMXAJDtchRdA8FMM4G

0.09000000 tBTC

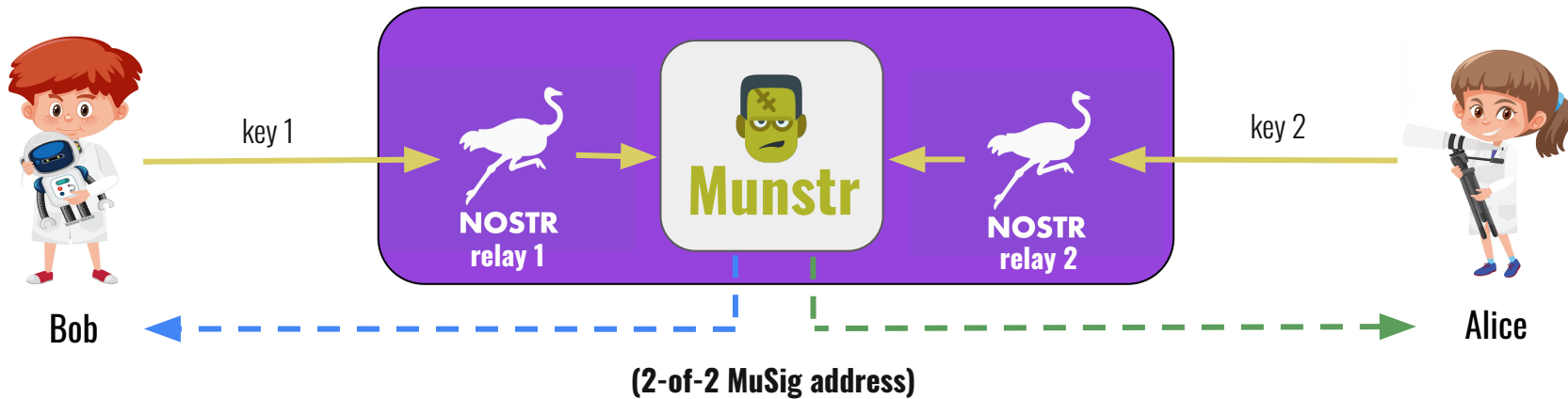


0.09000000 tBTC

HOW IT WORKS

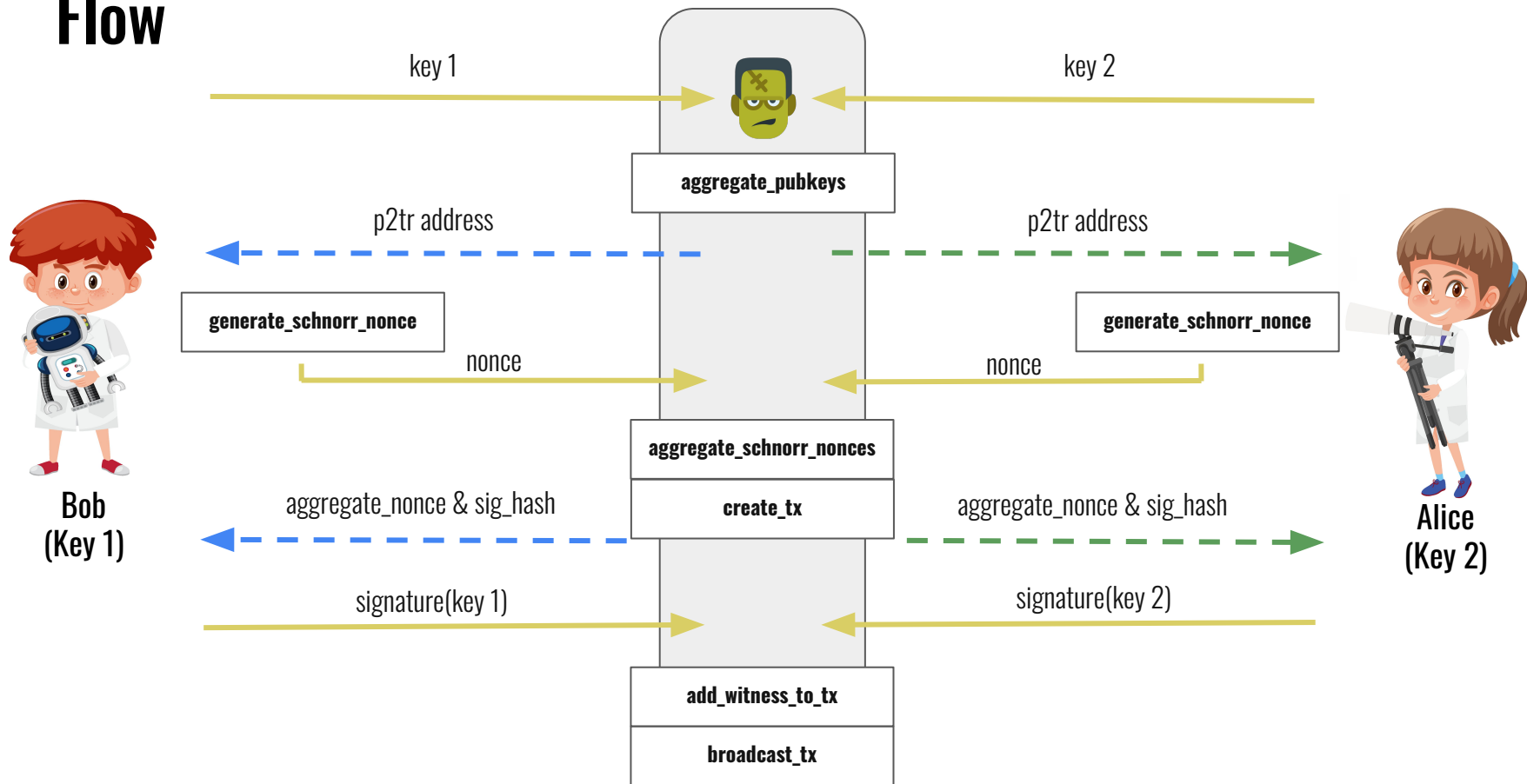


Architecture



Munstr consists of three distinct layers. **Digital key signers** communicate public keys to a **Munstr coordinator**. The coordinator handles functions such as generating addresses, transaction creation, and signature management. By using **decentralized Nostr relays**, end-users take advantage of decentralized services and encrypted event communication during the signing and transaction process.

Flow



Demo & Links

[Github](#)

[Demo Video](#)

[Nostr Coordinator](#)

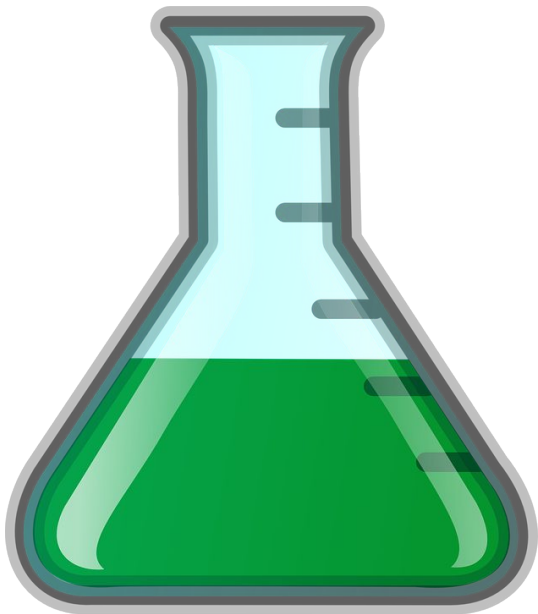
[Munstr Transaction](#)





Future Enhancements

(Post-Hackathon)



- MuSig2 enhancements
- More accurate transaction fee estimation
- Better nostr encrypted DM support
- Custom nostr relay servers
- Custom nostr PSBT event types
- Node connectivity
 - Sovereign TX lookup & broadcast
- Seed Phrases & xpubs
- Hardware Wallet support
 - SeedSigner (Taproot incoming)
 - Blockstream Jade

TEAM MUNSTR





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