



# A Tale of Two Trees: One Writes, and Other Reads

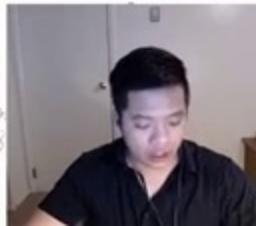
## Optimized Oblivious Accesses to Bitcoin and other UTXO-based blockchains

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# Tree-based ORAM schemes

- Path-ORAM example.

Client  
Position map

Block	Path
Id 1	1
Id 2	2
Id 3	4
Id 4	3

Stash



Read path 3



1



2

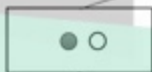
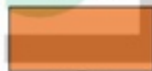


3



4

Server

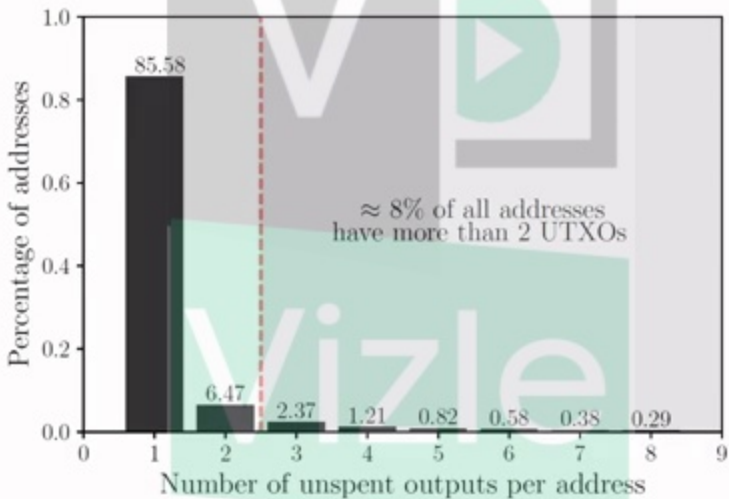


## Challenge 2:

- The Bitcoin network generate new Bitcoin block every 10 minute
- New Bitcoin block can generate thousands ORAM update requests.



## Output/Address distribution





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