



TUM
Blockchain
Club

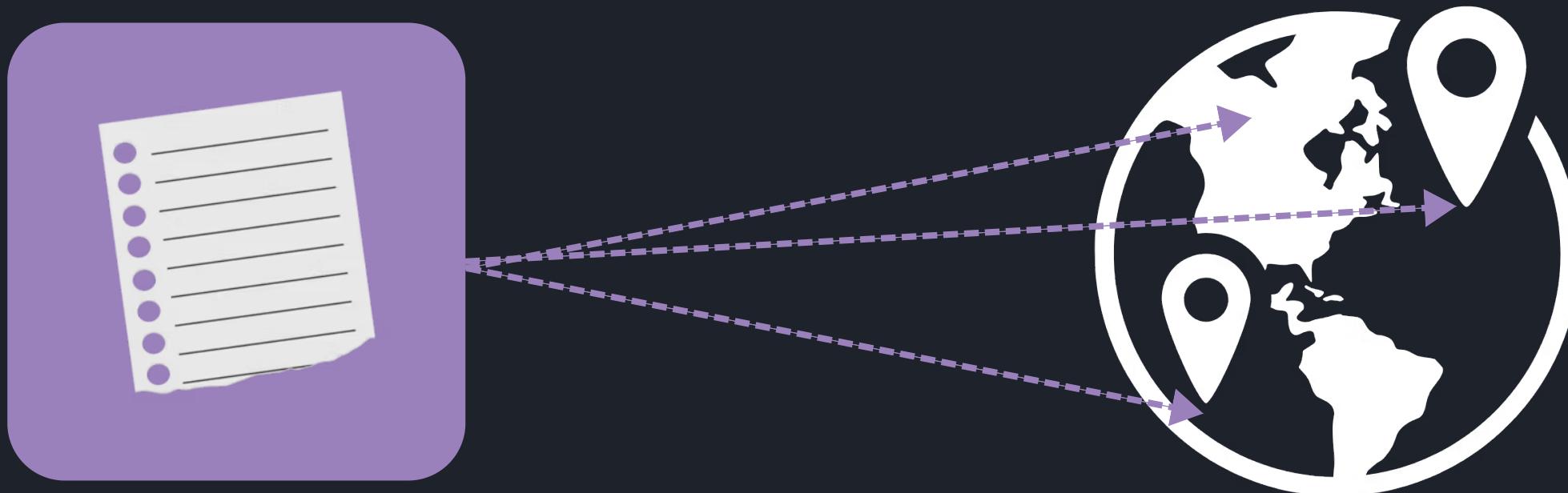
GEOTRUST : Prove your Discovery

HEDERA X BSA HACKTHON @ EPFL

Try Pitch



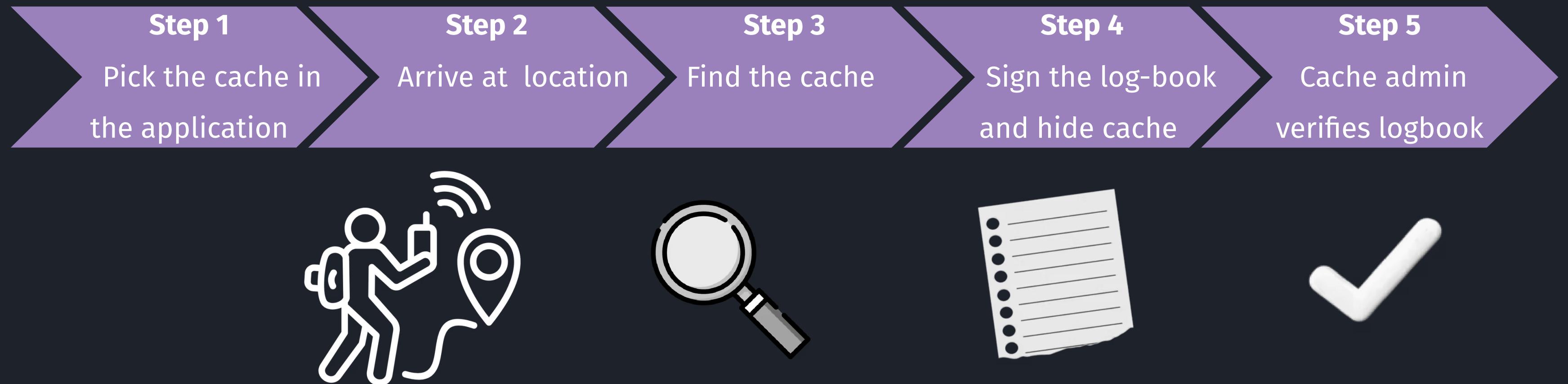
What is a geocache



HIDDEN IN A PUBLIC PLACE (PARKS, FOREST, HIKE TRAILS, ...)

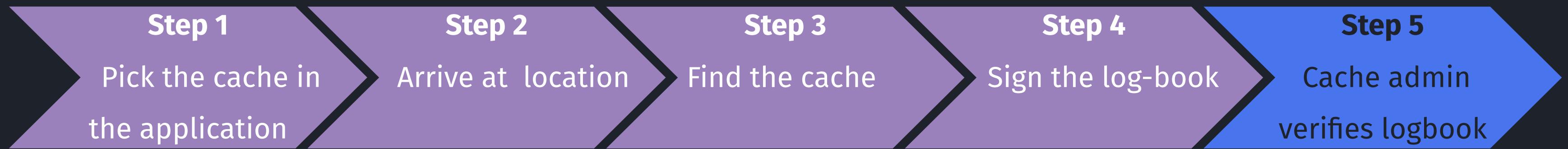
CONTAINS SIGNATURE OF PREVIOUS FINDERS

Vanilla GeoCaching



Verification of cache logging in GeoCaching.

Vanilla GeoCaching



WE KNOW HOW TO DO IT SMARTER, LET'S INTRODUCE TOKENS...



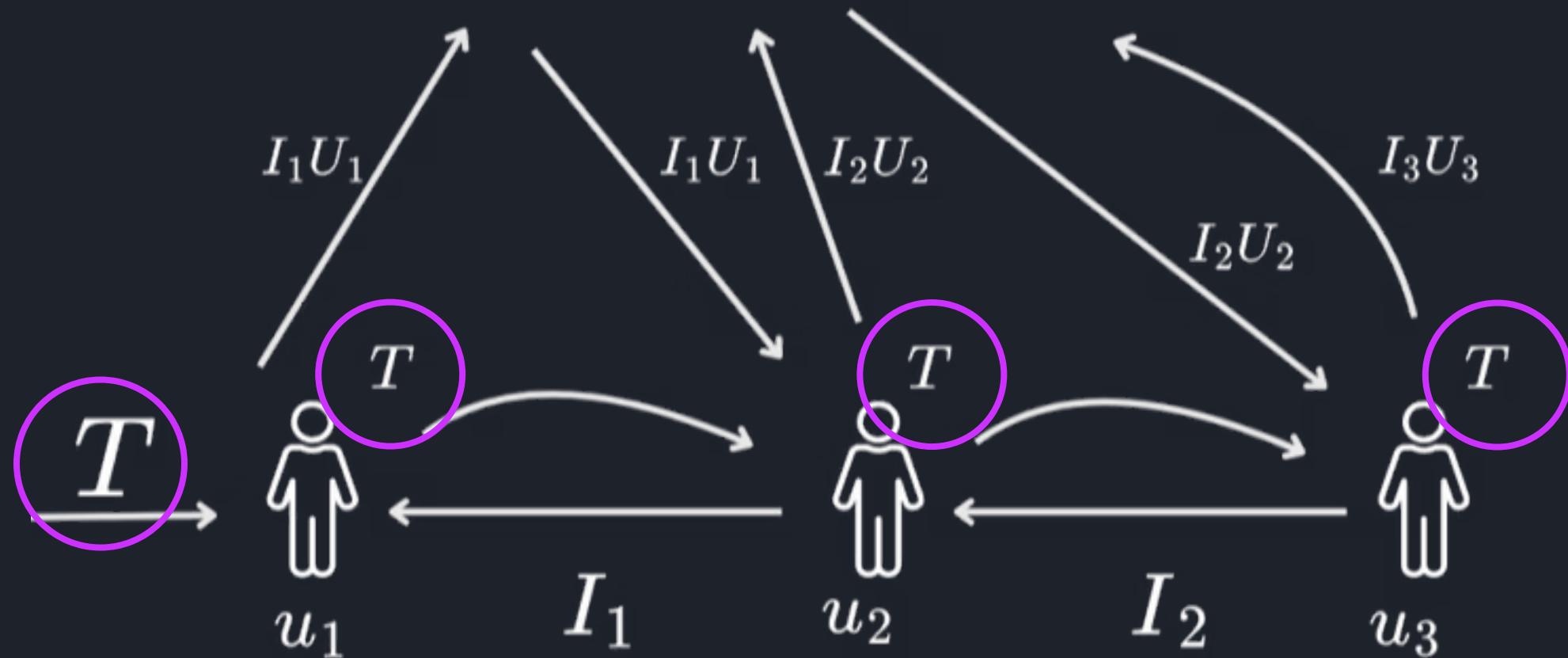
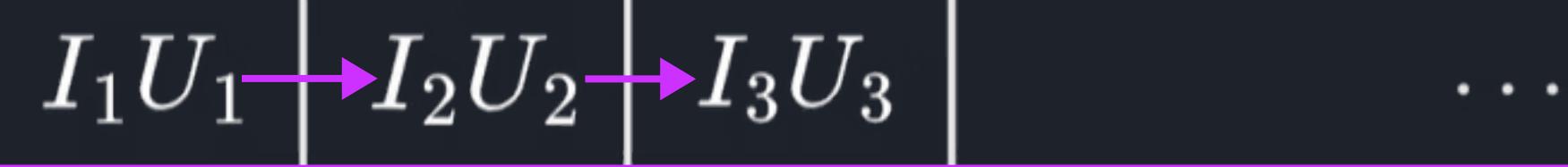
Hedera
Hashgraph™

Our solution via Hedera



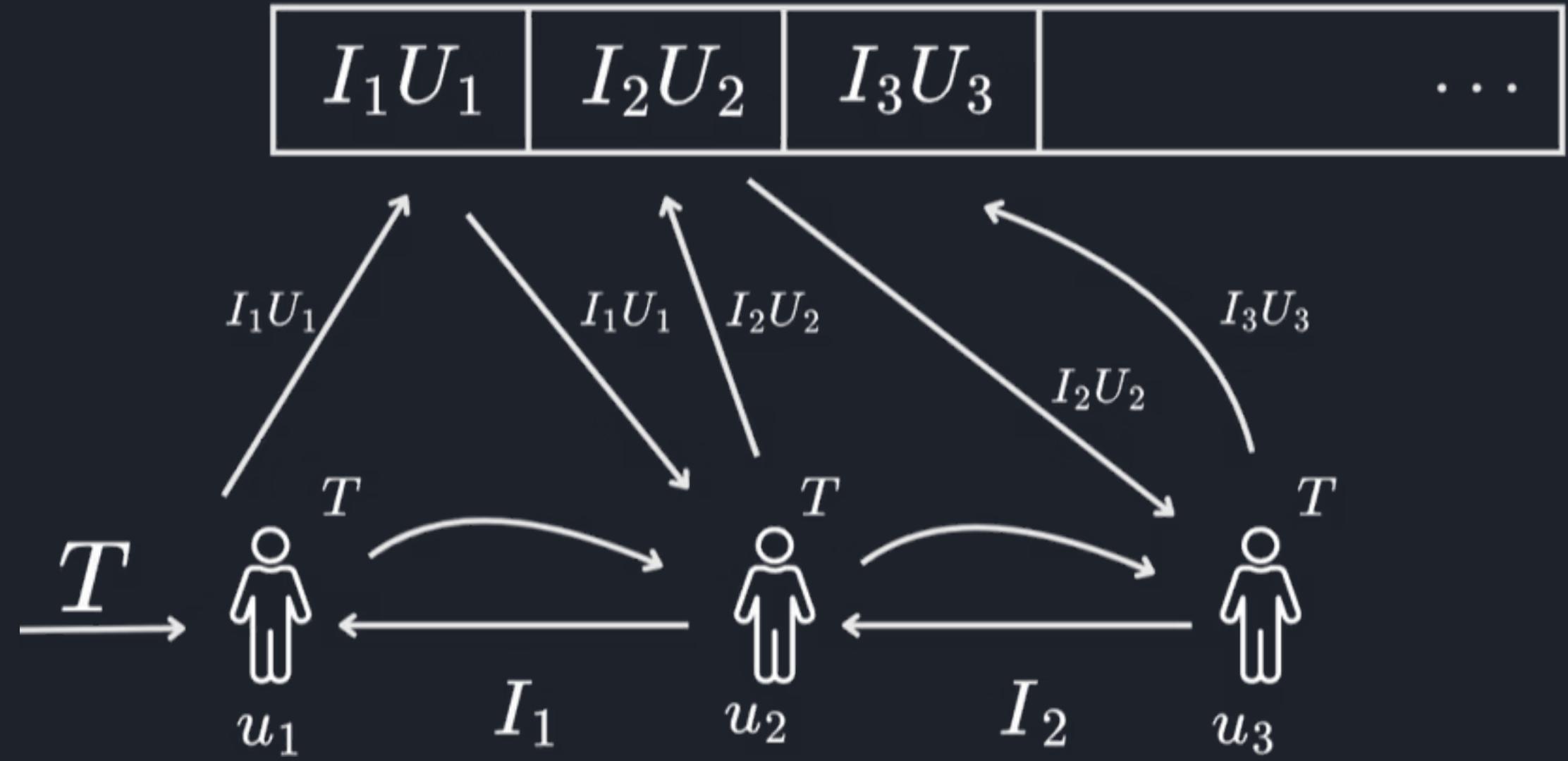
Cache contains a secret information

The information is updated by the each user that finds the cache



Token grants the user to change the information **once** and log the cache in application





NO SINGLE VERIFIER - THE VERIFICATION IS P2P

$$I_{j+1} = \text{Hash}(I_j, \text{user id})$$

HARD TO MAKE FAKE VERIFICATION

NO NEED TO PROVE GEOLOCATION



Use of Hedera

01

HEDERA TOKEN SERVICE

We token manager token associated with each cache that gets transferred between the users who find cache.

3. Balance queries write to the cache

- lets user mark the cache as found

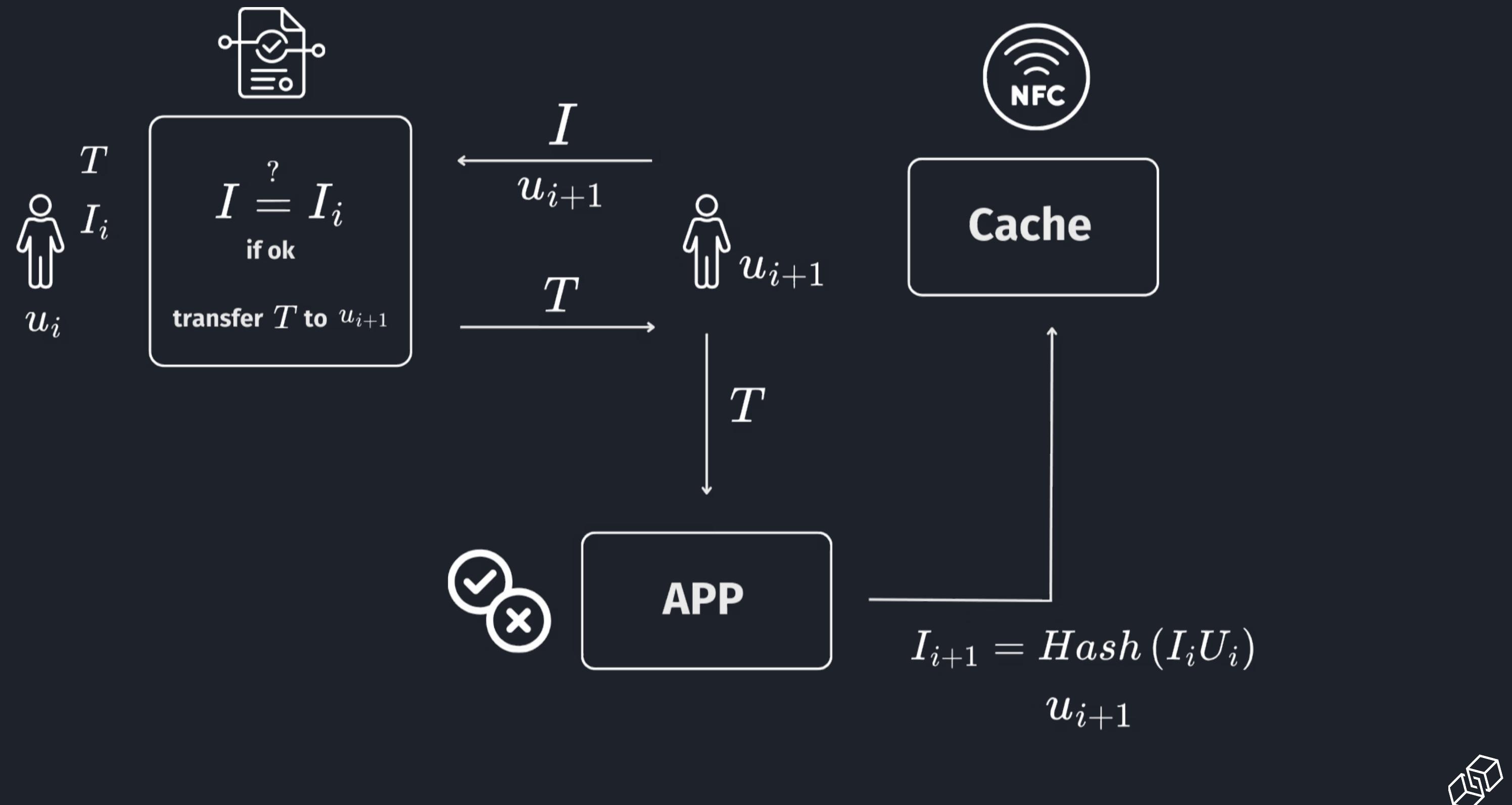
02

HEDERA SMART CONTRACT SERVICE

If the cache token information is presented to the smart contract to token transfer contract

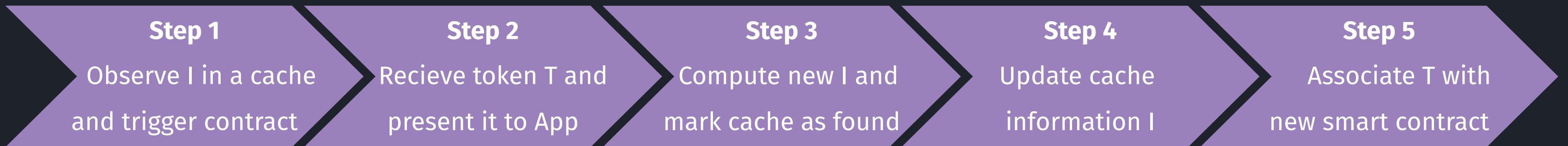
3. Only contract has right to transact the token to prevent malicious users

- template of the contract is public



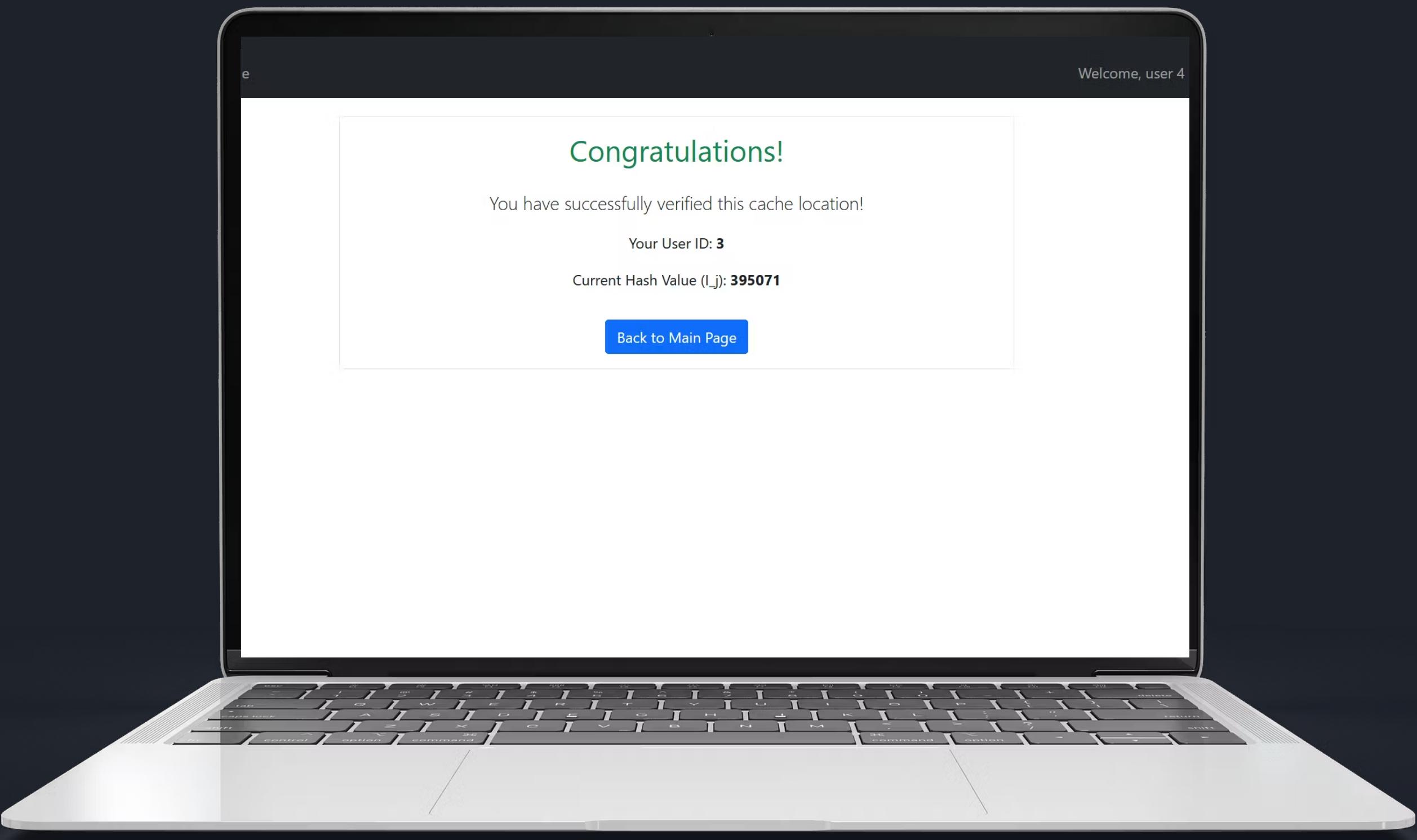
Our solution

- Application UI is a clone of GeoCache
- The difference is in the backend



- Now, the current user is responsible for further verification
- To prevent attacks, implement time-lock after n incorrect tries

GEOTRUST at a glance



Possible Business Model



CACHES PLACED AT POINTS OF INTEREST

TOURISTS ARE TASKED TO FIND THEM

SPONSORED BY CITY OR PAYED BY USER

Our Core Team



Alireza



Ben



Yehor



David



Q&A

WHAT WOULD YOU LIKE TO KNOW ABOUT US?



<https://www.linkedin.com/company/tum-blockchain-club>



<https://twitter.com/BlockchainTum>



<https://www.instagram.com/tumblockchain/>



<https://github.com/DAVIDshenghuei/Cryptocaching-Hedera>





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