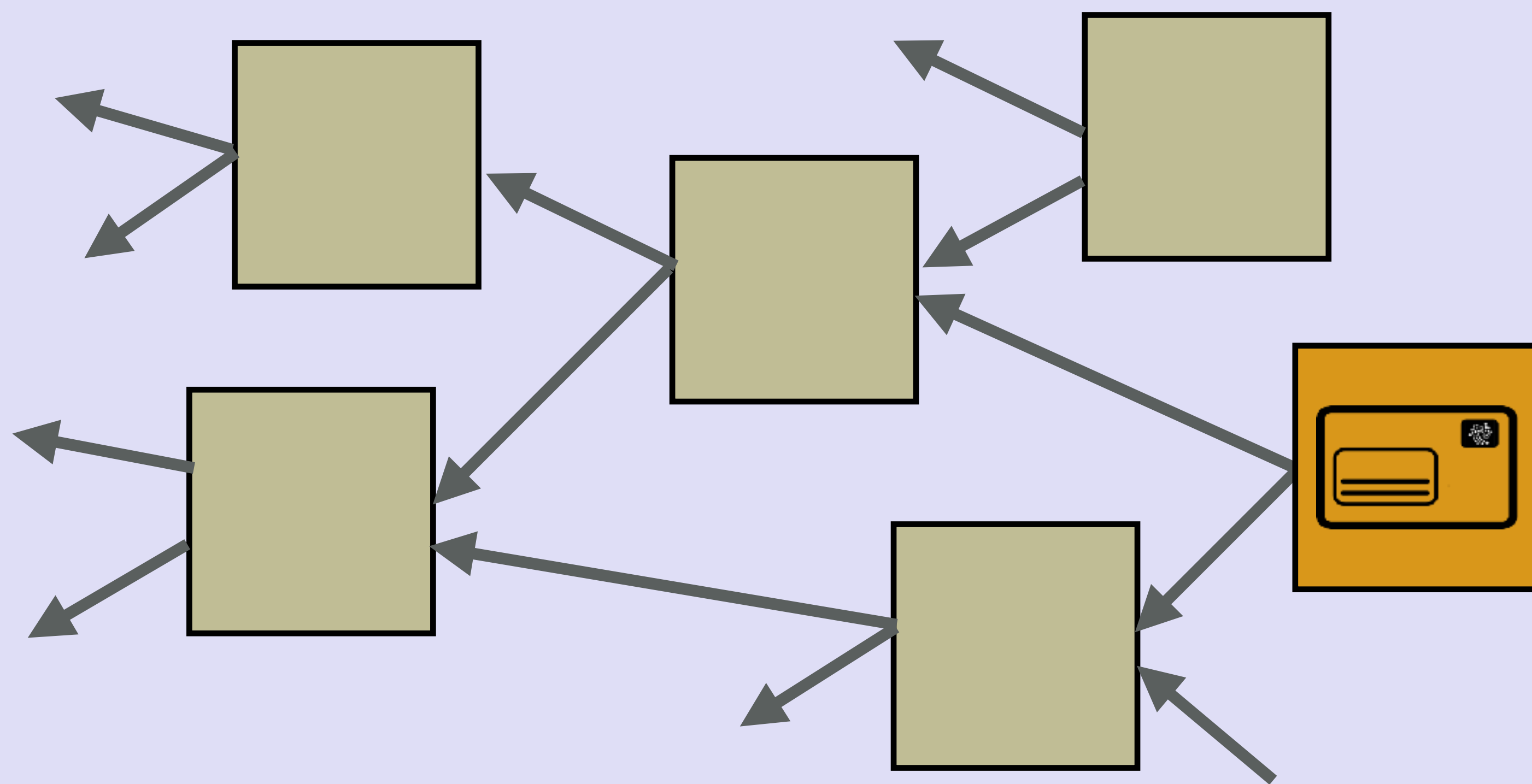


# IOTA TUTORIAL II

## Attach Address To Tangle



# INTRO

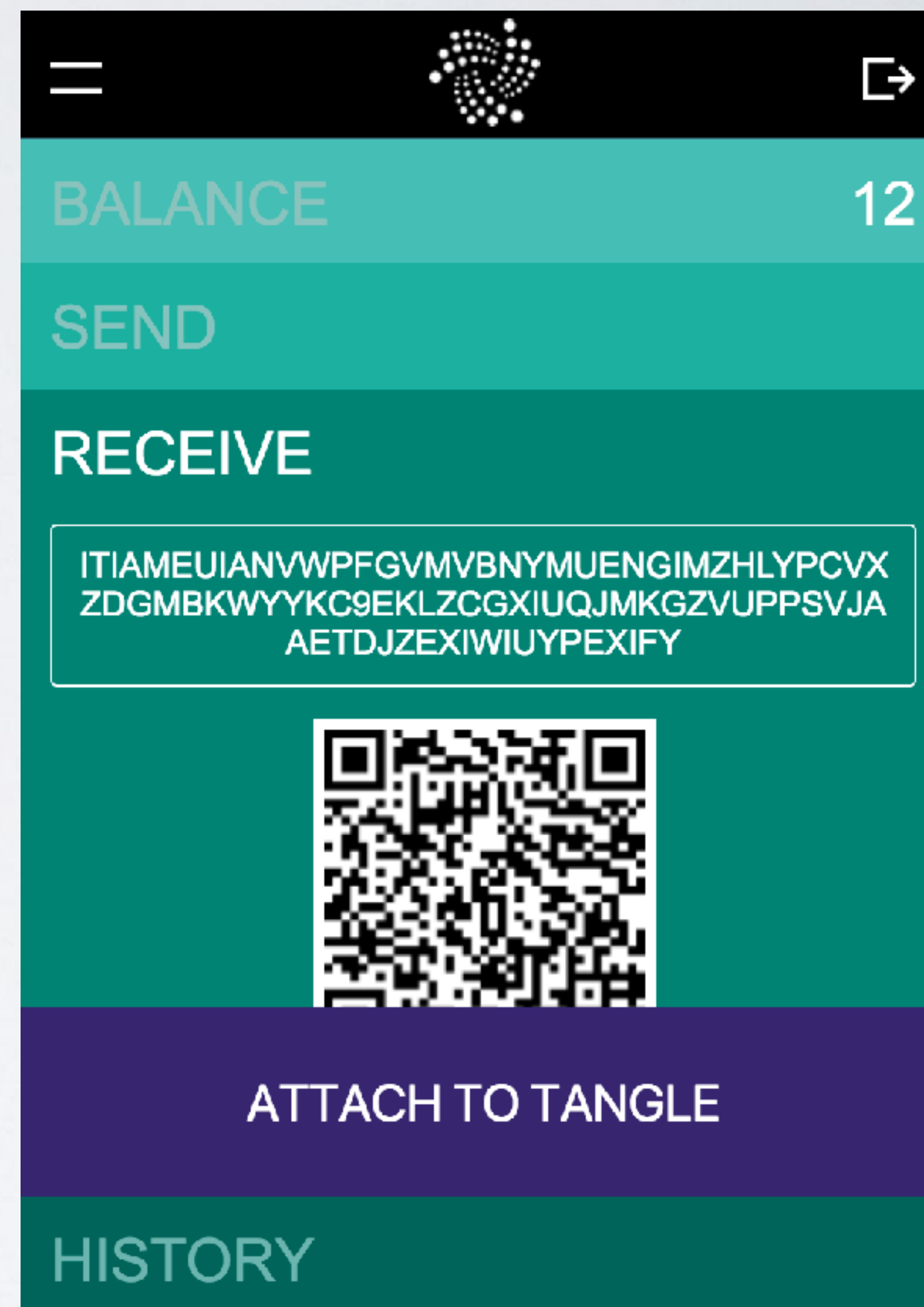
- In this video I will explain what the purpose is of “attach address to Tangle”.

# IOTA LIGHT WALLET

- The IOTA Light Wallet is a stateless wallet, meaning all information such as balance and which address is in use are retrieved from the Tangle.
- The IOTA Light Wallet does not store any information on your computer.
- The Trinity Wallet retrieves information from the Tangle and some of this information is stored on your computer. Therefore the Trinity Wallet is called a stateful wallet.
- **The information provided in this video applies to the IOTA Light Wallet.**
- When making this video the Trinity Wallet was not released.

# ATTACH ADDRESS TO TANGLE

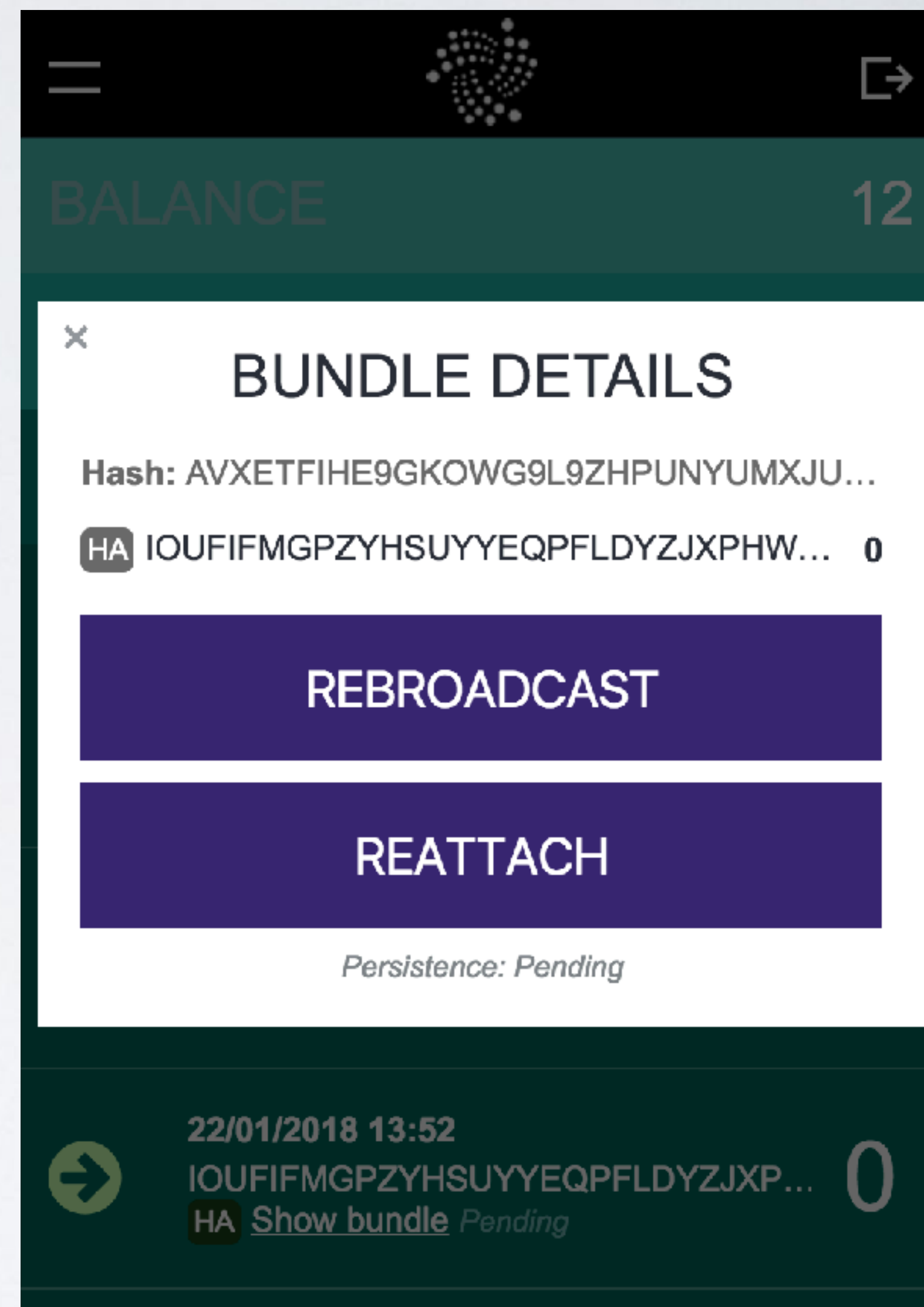
- When you attach an address to the Tangle, you create a transaction where you transfer 0 IOTA to the address.
- In the image right, when you press the button “ATTACH TO TANGLE” you transfer 0 IOTA to address ITIA...XIFY.





# ATTACH ADDRESS TO TANGLE

- When the address is attached to Tangle, the transaction is ALWAYS pending.
- Example (using `iota.lib.js v0.4.6`):  
[https://www.mobilefish.com/download/iota/transactions\\_in\\_bundle\\_attach\\_to\\_tangle.txt](https://www.mobilefish.com/download/iota/transactions_in_bundle_attach_to_tangle.txt)



# ATTACH ADDRESS TO TANGLE

- In the example, you will notice the following:
  - The transaction bundle contains only one transaction, indicated by `lastIndex = 0`.
  - The transaction does not have a signature.
  - The transaction references two unreferenced transactions (aka tips), see the `trunkTransaction` and `branchTransaction` hashes.
  - The transaction has a nonce, which means it had to do PoW.

# ATTACH ADDRESS TO TANGLE

- The purpose of attaching an address to Tangle is to prevent the re-use of the address's private key.
- If you attach an address to Tangle you indicate that the address is in use or will be in use.
- A way to find a non-attached address, repeat the following steps:
  - If an address is in use, call the `getNewAddress` API to get the next address. The `getNewAddress` API can deterministically generate addresses.
  - Next call the `findTransactions` API to check if an address is in use.



# ATTACH ADDRESS TO TANGLE

- You can always successfully sent IOTAs to non attached addresses but it is recommended to attach an address first before using it.
- Here is a demonstration why you should attach addresses to Tangle:
  - The wrong way:  
[https://www.mobilefish.com/download/iota/attach\\_to\\_tangle\\_example\\_nok.txt](https://www.mobilefish.com/download/iota/attach_to_tangle_example_nok.txt)
  - The correct way:  
[https://www.mobilefish.com/download/iota/attach\\_to\\_tangle\\_example\\_ok.txt](https://www.mobilefish.com/download/iota/attach_to_tangle_example_ok.txt)



# ATTACH ADDRESS TO TANGLE

- Here is a demonstration why you should attach addresses to Tangle after a snapshot:
- The wrong way:  
[https://www.mobilefish.com/download/iota/snapshot\\_example\\_nok.txt](https://www.mobilefish.com/download/iota/snapshot_example_nok.txt)
- The correct way:  
[https://www.mobilefish.com/download/iota/snapshot\\_example\\_ok.txt](https://www.mobilefish.com/download/iota/snapshot_example_ok.txt)

# ATTACH ADDRESS TO TANGLE

- When you use the IOTA Light Wallet apply the following rules:
- **For every RECEIVING payment always create a new address and attach this address to the Tangle before handing out this address. This address should only be used once!**
- **After a snapshot attach the same number of addresses you had before the snapshot.**
- These two rules will prevent you, using an address more than once for outgoing transactions when using the IOTA Light Wallet.

# USE SAME ADDRESS TO RECEIVE REGULAR PAYMENTS

- To use the same IOTA address to receive regular payments, for example an IOTA donation address, use the following procedure:
  - Create a separate wallet by creating a new seed.
  - Use this wallet only to RECEIVE regular payments and do not create any outgoing transactions from this wallet.
  - When you decide to withdraw from this wallet, it is recommended to withdraw the complete balance.
  - Once the complete balance is withdrawn, attach a new address to the Tangle and use this new address to receive regular payments again.