

Sui Network

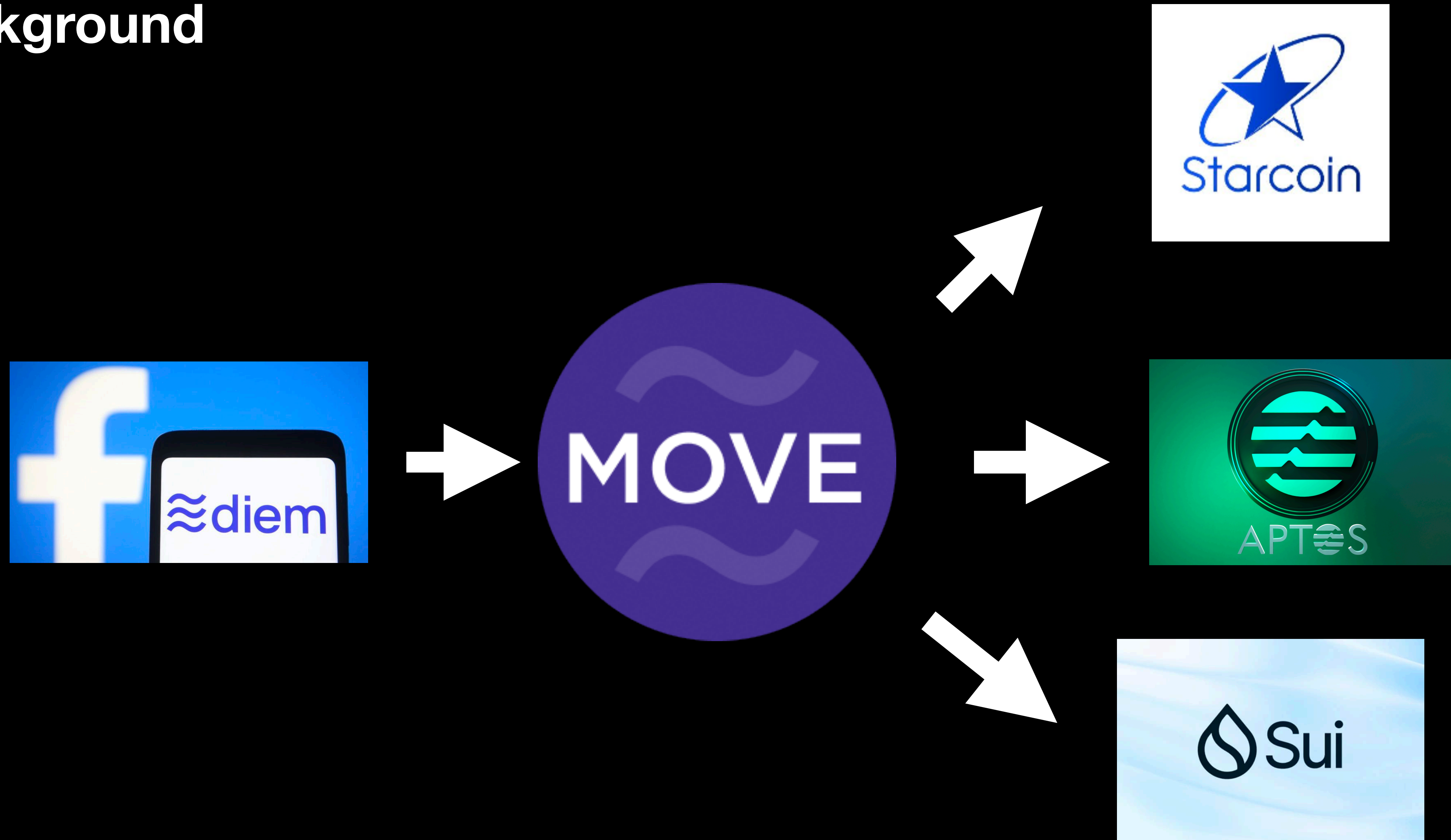
When DAG meets Move Language

Justa from Bucket Protocol



Bucket

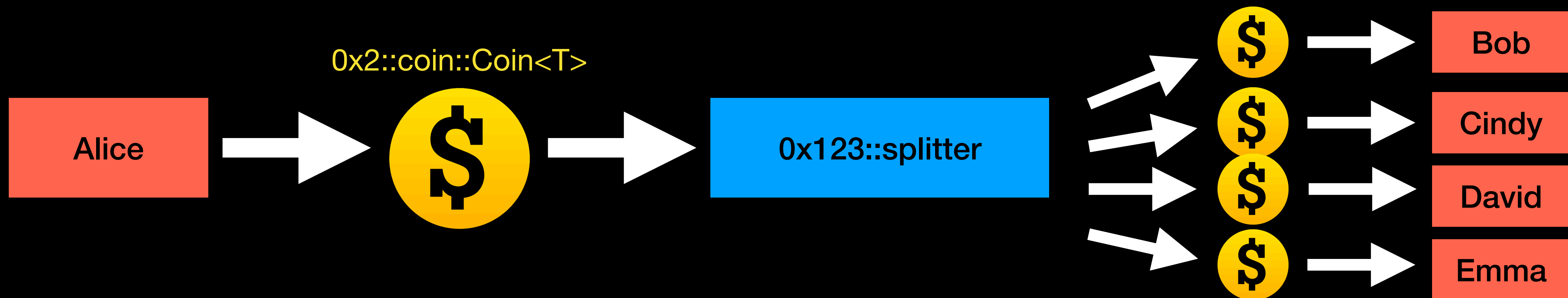
Move Language Background



Key Feature of Move

Object of Digital Assets

- Move assets are arbitrary user-defined **types**.
- Assets can be passed as **arguments**, returned from **functions**, and **stored inside other assets**.
- Assets can **flow freely across contract boundaries** without losing their integrity thanks to Move's built-in **resource safety protections**.



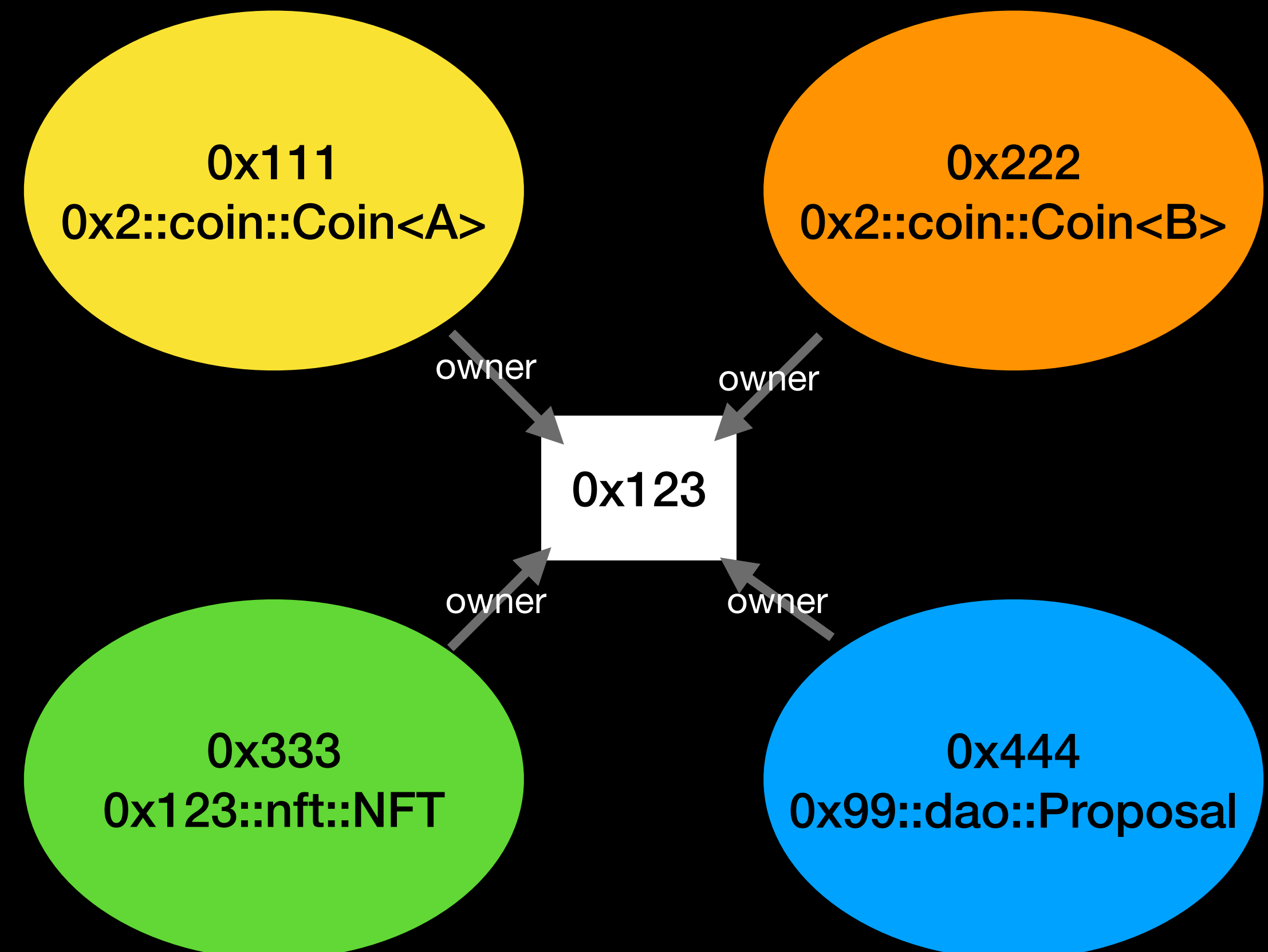
Diem-Move v.s. Sui-Move

Account-centric v.s. Object-centric

- Diem Move

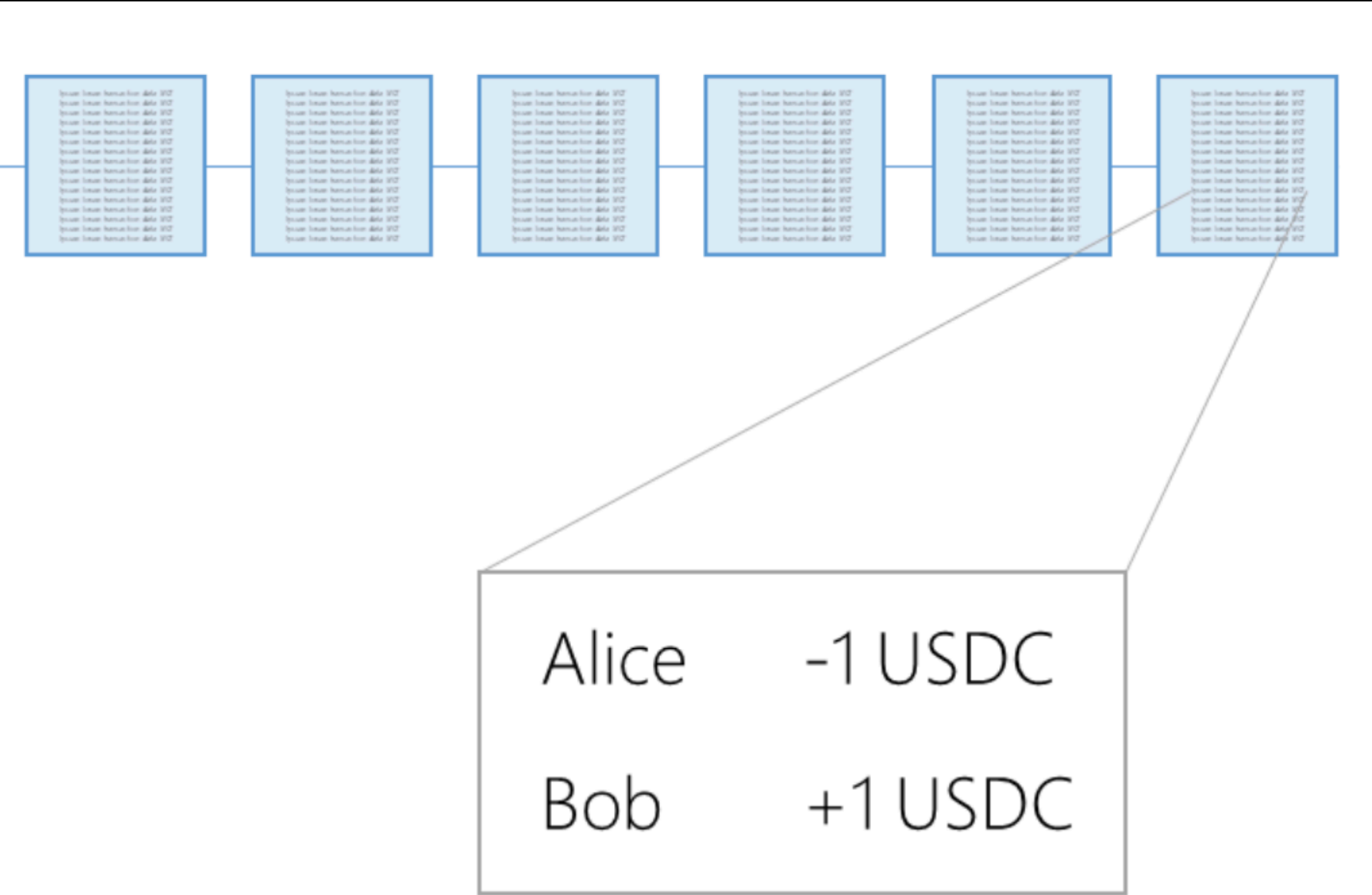


- Sui Move

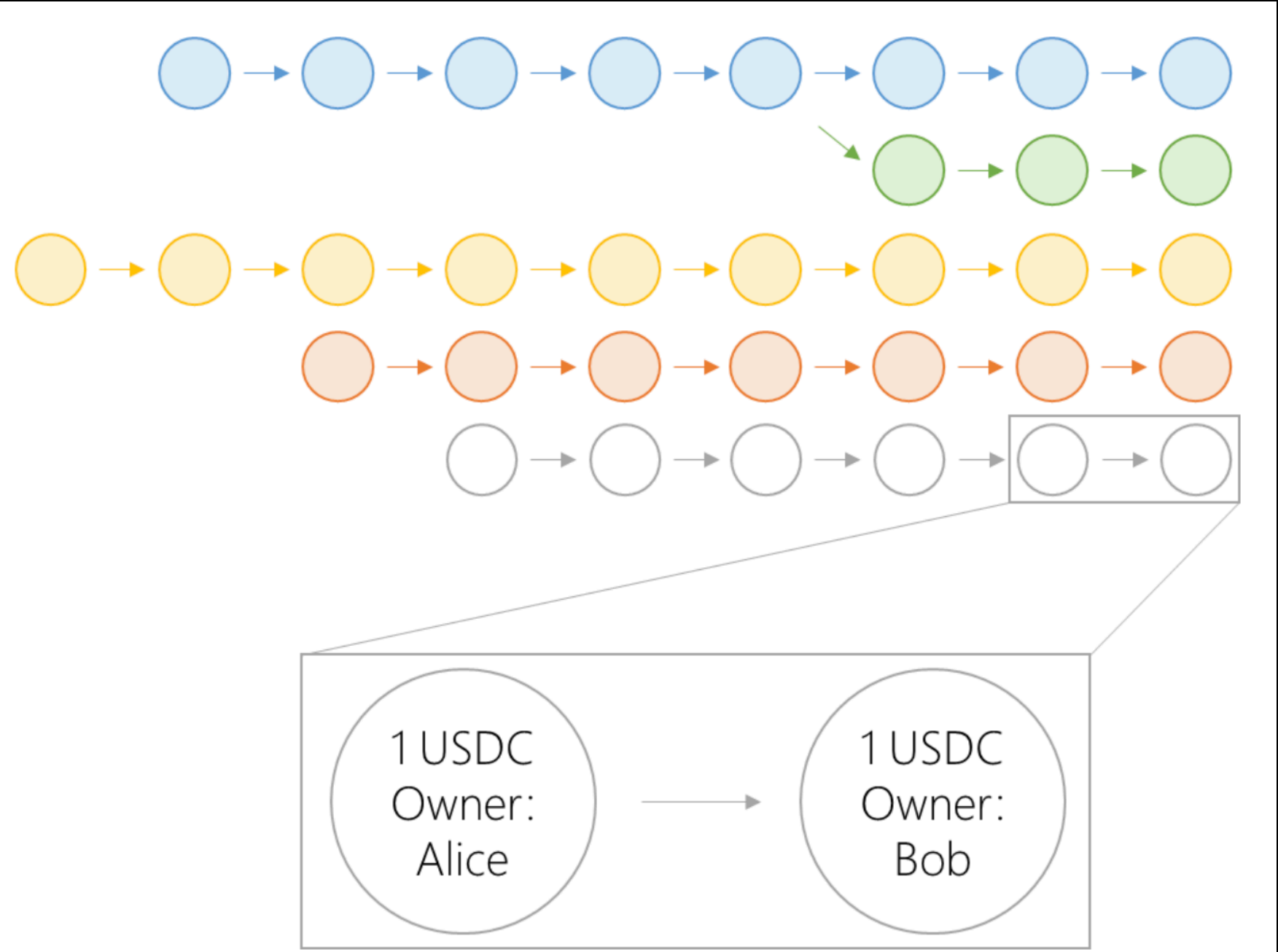


Blockchain v.s. Sui DAG

- Blockchain



- Sui DAG



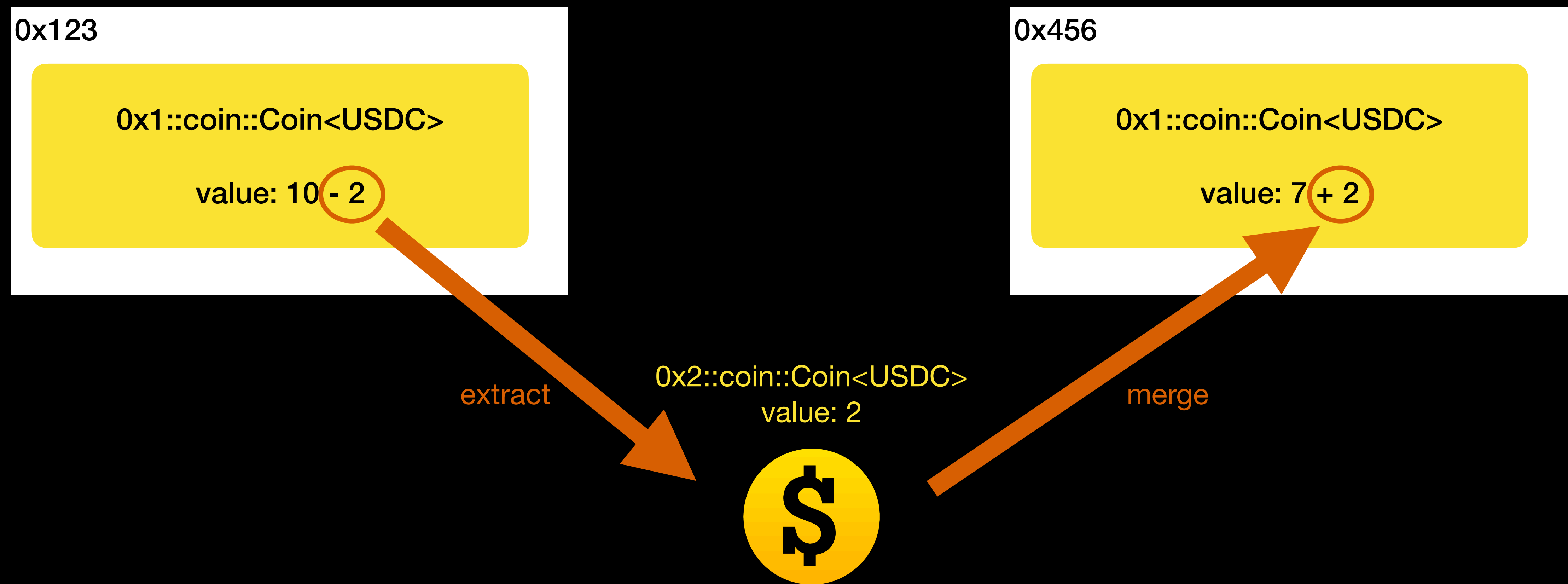
Sui Object Metadata

- A 32-byte globally unique ID pointing to the object.
- An 8-byte unsigned integer version representing the number of transactions that have included this object as an output.
- A 32-byte transaction digest indicating the last transaction that included this object as an output.
- A 33-byte owner field indicating how this object can be accessed.
- A type in the format of package_id::module_name::struct_name

Sui Object Ownership Rules

- **Immutable Object**: read-only by anyone (ex: Move Package)
- **Owned Object**: read or write only by owner (ex: Owned Assets)
- **Shared Object**: read or write by anyone (ex: Pool or Vault)

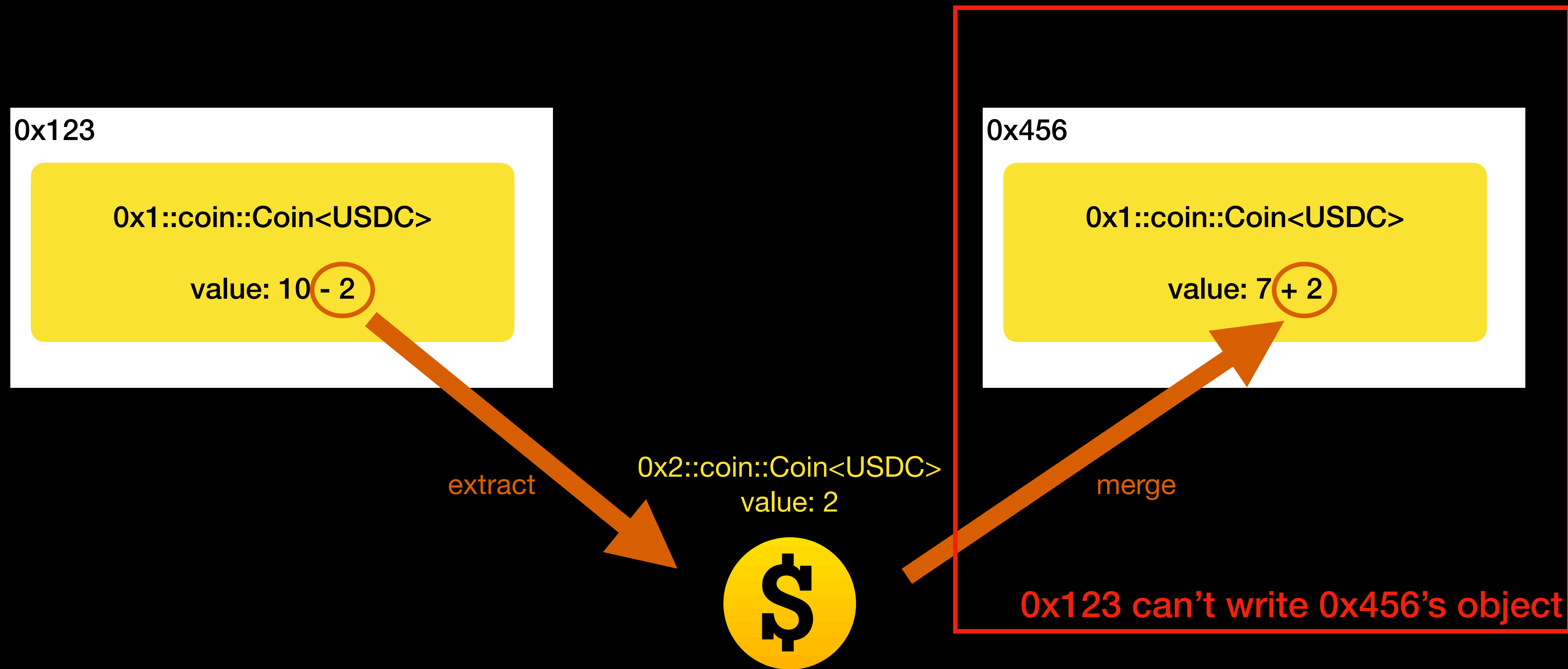
Diem Transfer Assets



This can't be done under Sui Object Rules

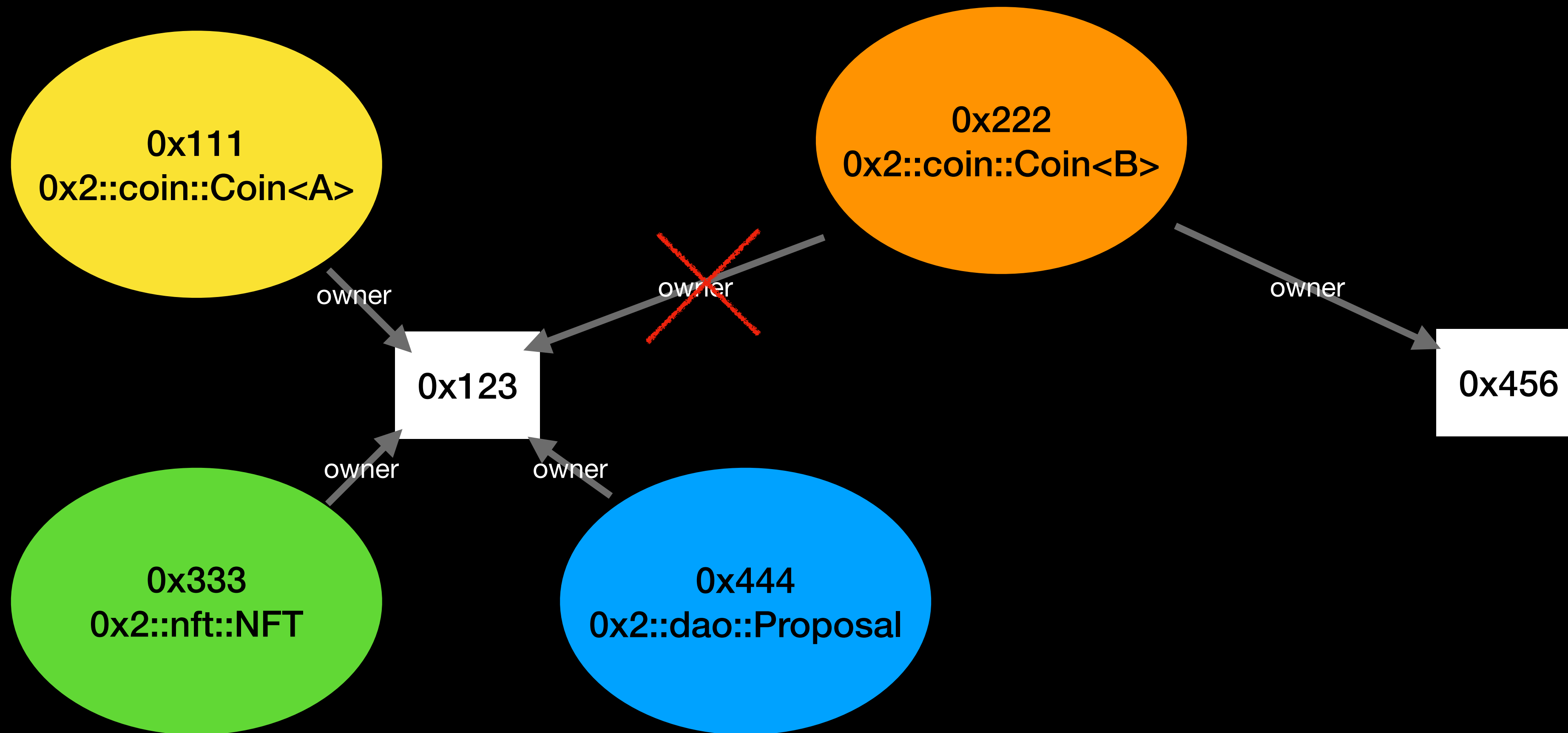
Why?

Under Sui's Rules



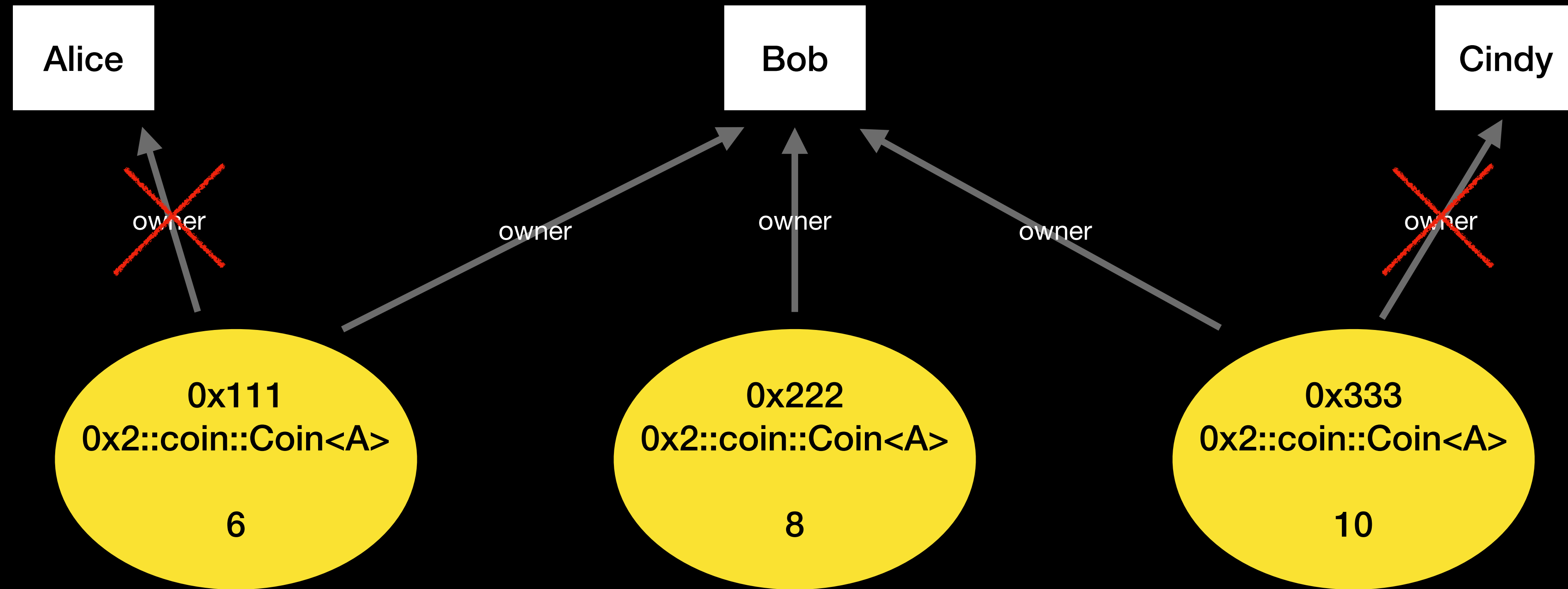
Sui Transfer Assets

= Change The Owner of the Object



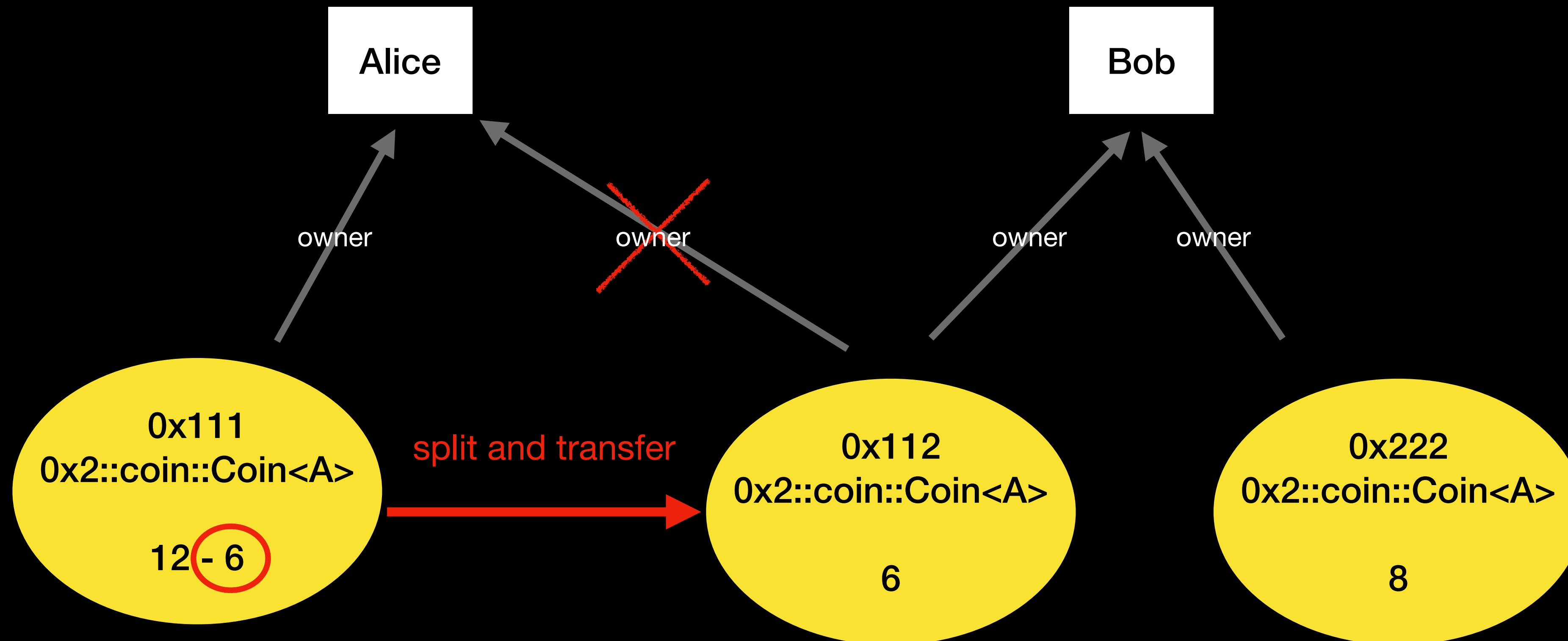
Sui Transfer Fungible Token

No Data Race

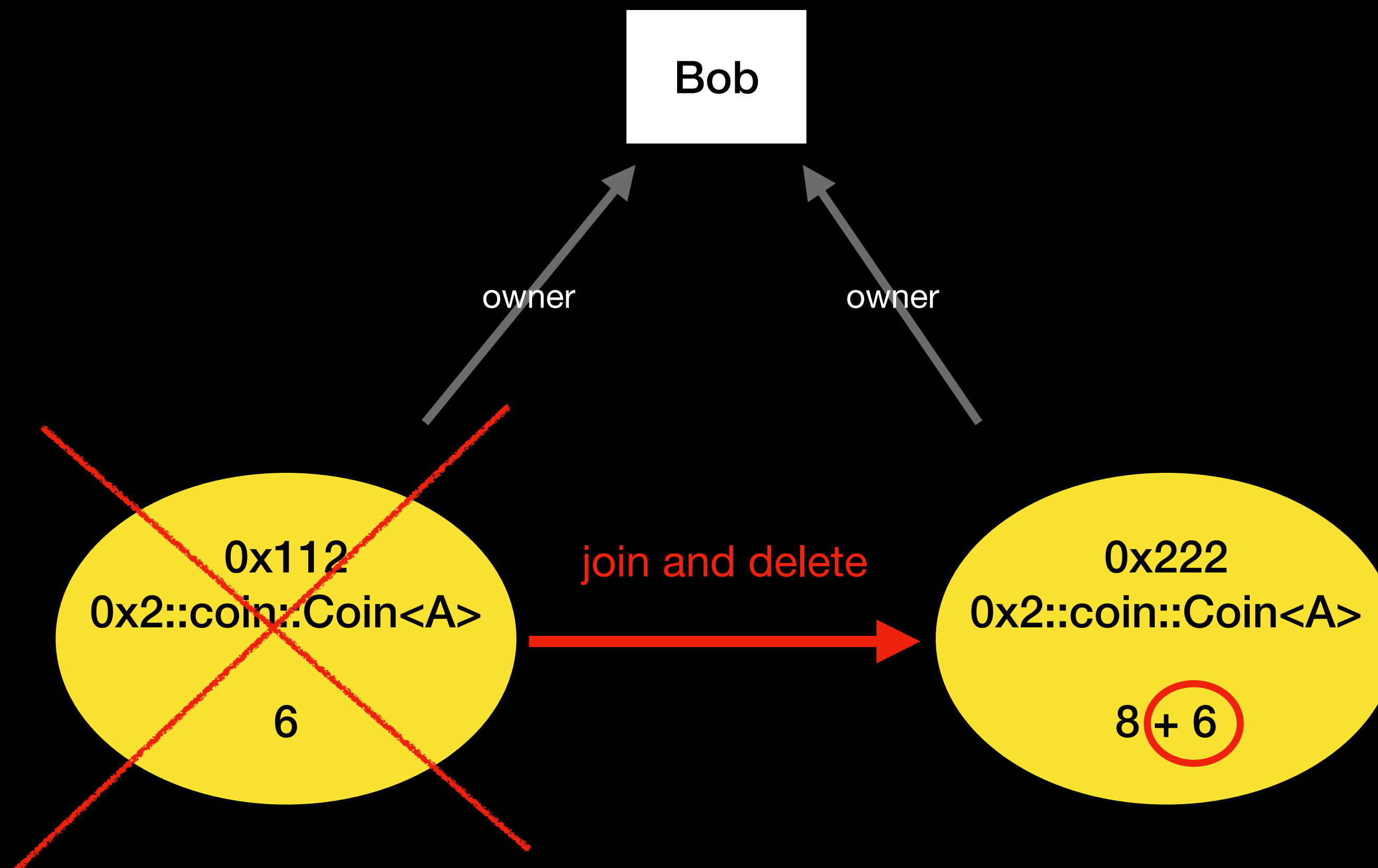


Sui Transfer Fungible Token

Split before Transfer

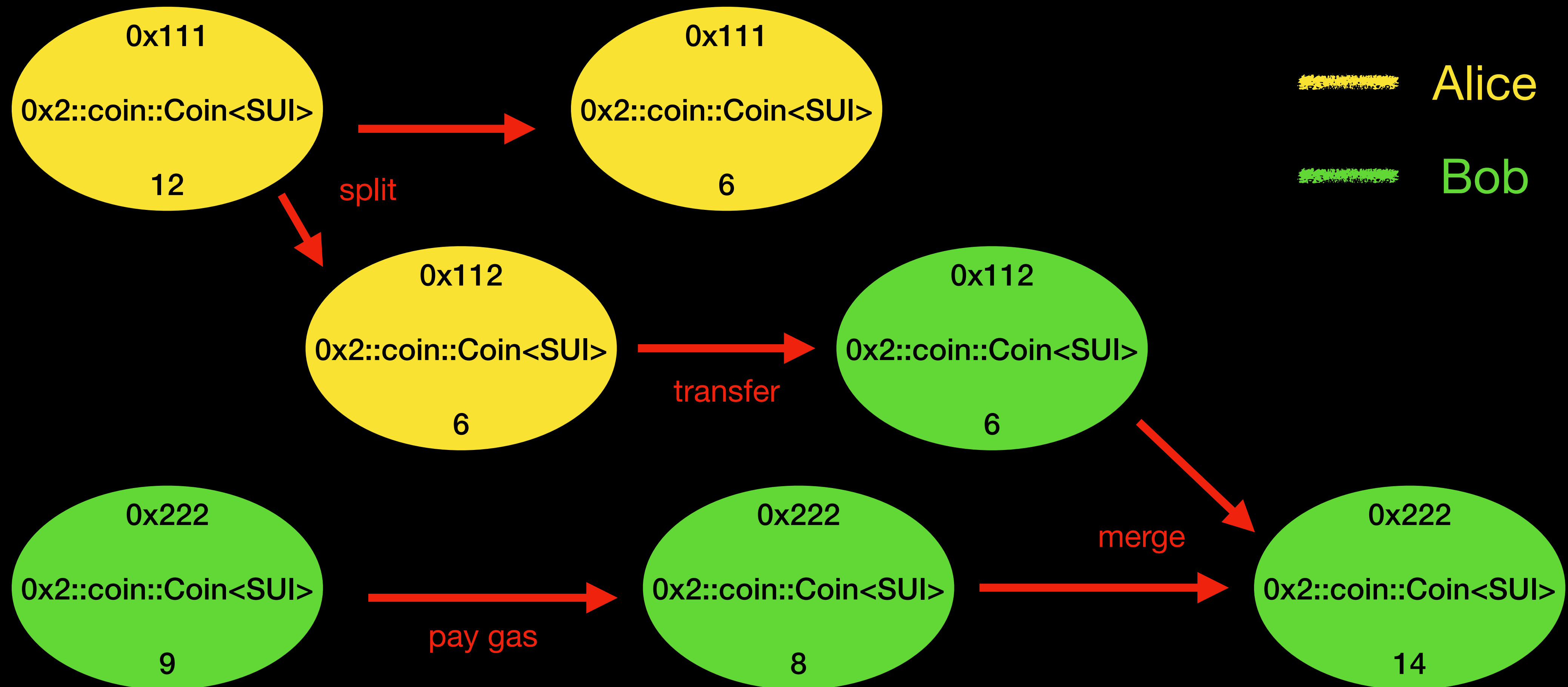


Sui Merge Coins



Whole Process

Split, Transfer and Merge



Practice

use Sui CLI to setup an account

- sui client new-address
- sui import [註記詞 or 私鑰] [加密格式 ex. ed25519]
- sui client envs
- sui client switch —address [地址] —env [環境別名]
- sui client faucet
- sui client gas

Practice

use Sui CLI to publish package and interact

- sui client publish —gas-budget [鏈費預算]
- sui client call —package [套件地址] —module [模組名] —function [函式名]
—type-args [型別名A] [型別名B] ... —args [參數1] [參數2] ...
—gas-budget [鏈費預算]
- sui client upgrade —upgrade-capability [升級權限ID] —gas-budget [鏈費預算]