

An aerial photograph of a tropical island. The island is covered in a dense forest of palm trees, which appear as a dark green canopy. A narrow strip of white sand beach runs along the left edge of the island, meeting a shallow, turquoise lagoon. The water is clear, revealing a coral reef with various circular and irregular patterns. The overall scene is bright and sunny, with high contrast between the dark green of the trees and the light blue of the water.

An introduction to transferring assets on the iov42 platform

On the iov42 platform, asset owners can transfer and exchange the ownership of assets.

Atomic Swaps on the iov42 Platform

Across the DLT industry, an atomic swap usually refers to the exchange of cryptocurrencies across different blockchains without a centralized exchange. More generally, an atomic swap describes a peer-to-peer value exchange that is only executed once both parties transfer their agreed-upon assets.

The basic concept of an atomic swap has been built into the design of the iov42 platform so that the swap of assets are inherently atomic—either an exchange of assets happens in one instantaneous transaction, or it fails. The platform's design makes it impossible for a transaction to be half-complete or in any other stuck state. This feature is important because it eliminates the risk of one party not fulfilling their side of the transaction.

Let's say Alice and Bob are two identities on the iov42 platform and Alice has decided to transfer ownership of her car to Bob in exchange for 20,000 euros. When Alice and Bob authorize this

transaction, either the transaction will be successful and the swapping of assets will happen simultaneously (atomically), or it will be denied and the transaction will not proceed.

The iov42 platform can also support multiple legs in a single atomic transaction, which could look something like this:

- Alice sends Bob her car and surfboard
- Bob sends Alice 20,300 euros
- Bob sends Carol his vintage electric guitar
- Carol sends Bob 5,000 euros
- Carol sends Alice her electric bike
- Alice sends Carol 1,500 euros

Distributed Asset Allocation

The iov42 platform supports a process called “Distributed Asset Allocation” (DAAL), which includes reserving assets, and in doing so allows multiple, overlapping transactions to be performed against the same account, while preventing double spending.

DAAL takes place during the consensus reaching process. In determining the validity of a

transaction, the voting node will reserve the appropriate balance against the account that submitted the transaction. In the case of unique assets, such as Alice’s car, the “balance” of this one asset is reserved. If there is an insufficient balance for a requested transaction, it will be rejected.

DAAL is analogous to what happens when you use your bank card during a shopping trip—you may use it multiple times throughout the day at different shops. As long as you have sufficient funds in your account, each transaction will go through, even if the money won’t actually be debited from your account until one or two business days later.

