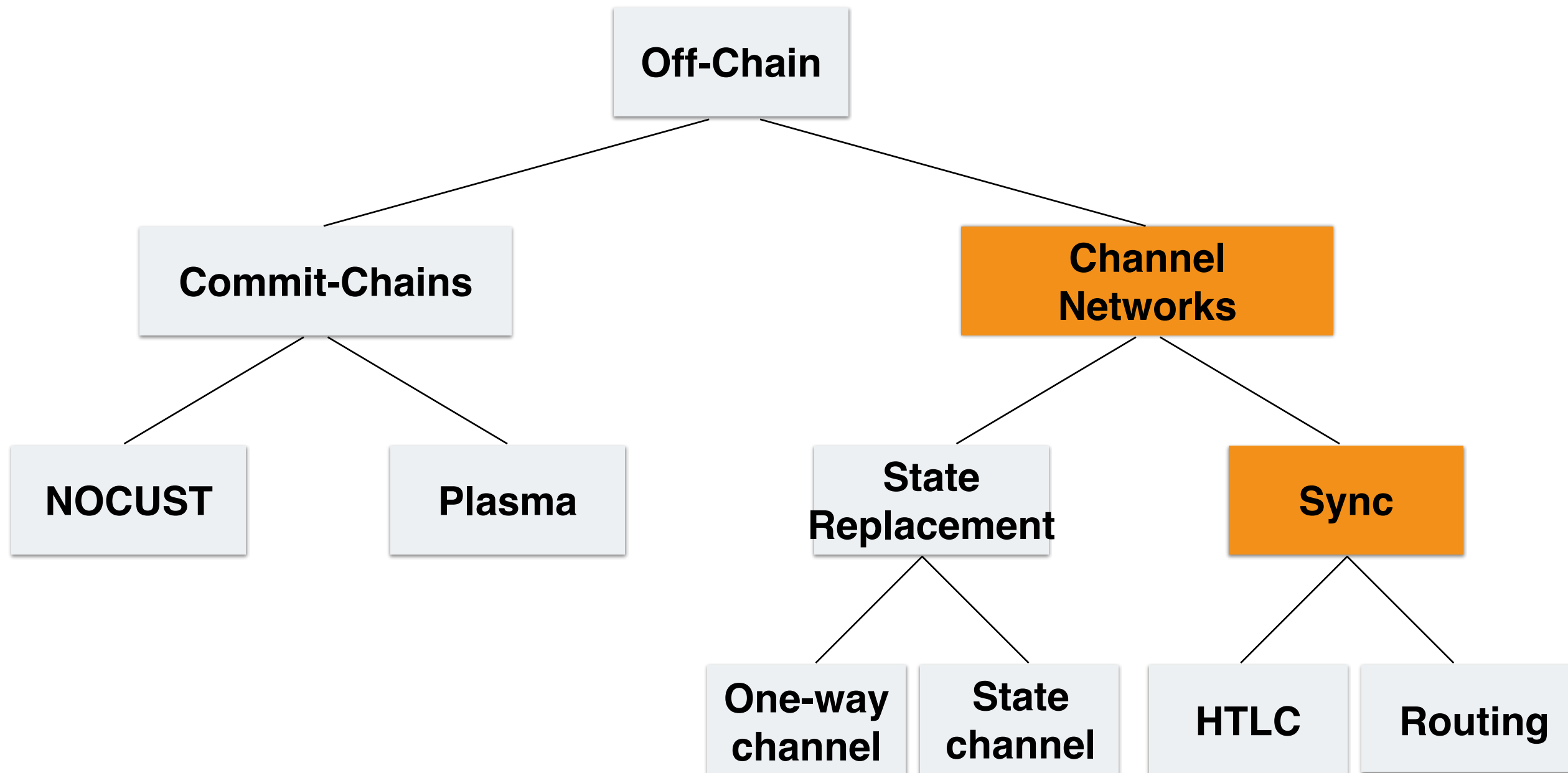


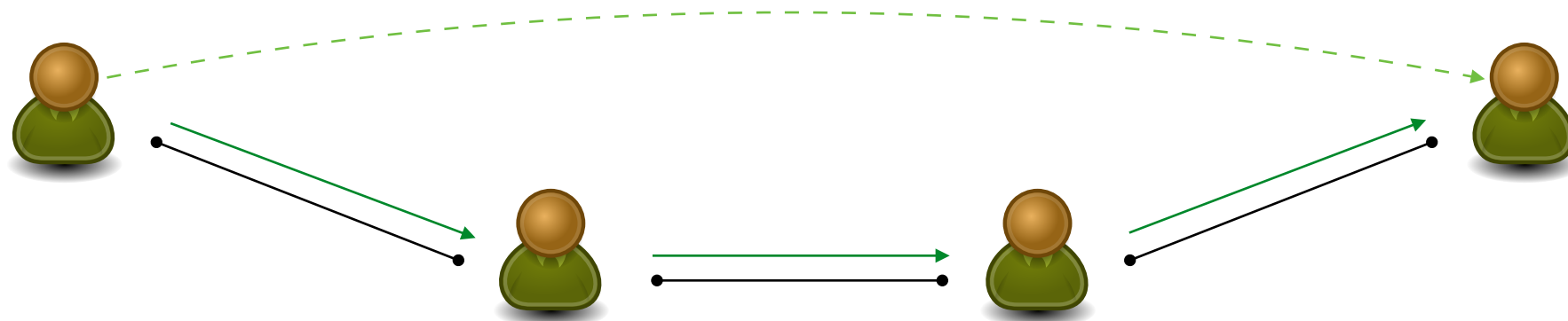


Channel Networks
HTLC

Which Off-Chain Solution?

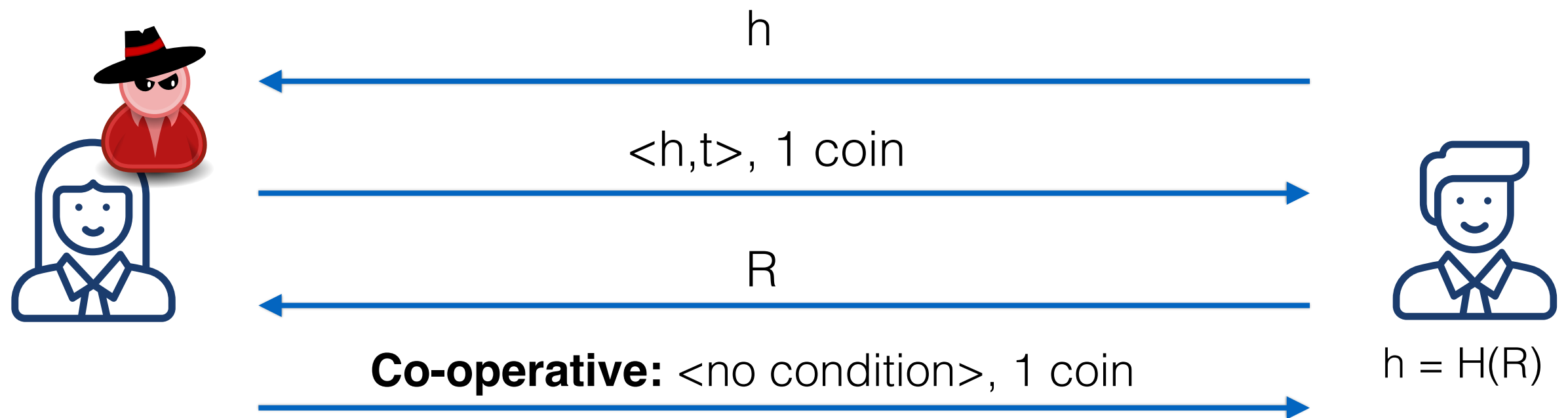


Payment Channel Network



We need a **simple conditional transfer**.

A Humble Conditional Transfer

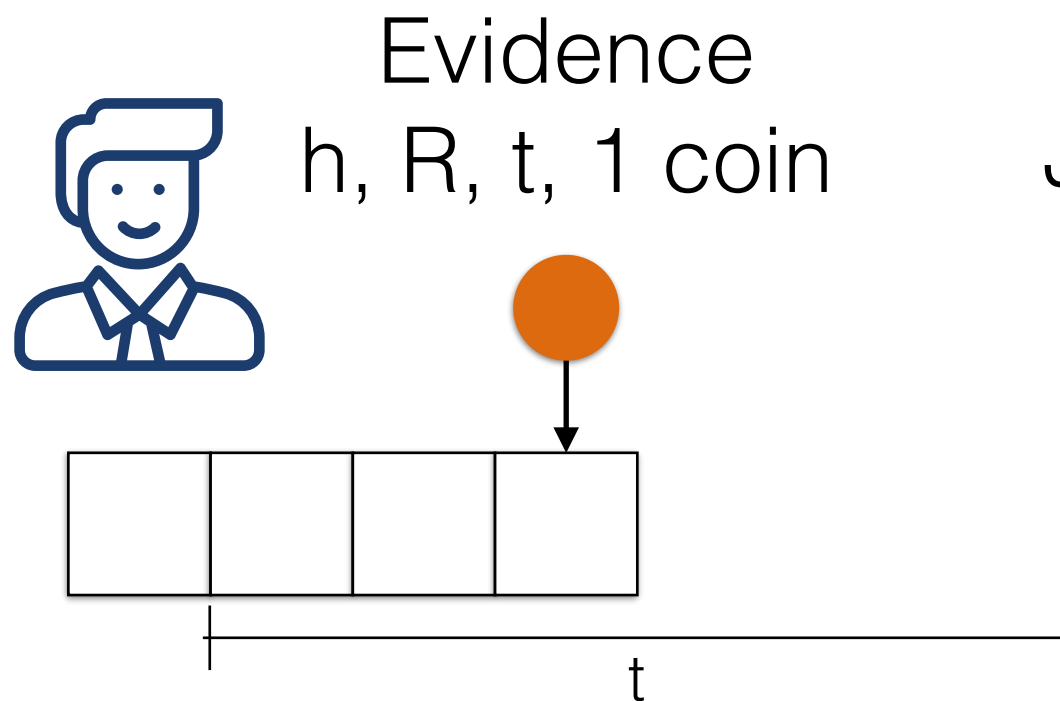


- (1) Jackson computes $H(R)$ and shares h
- (2) Michaela's conditional transfer: *"Jackson, if you reveal R before time t , you get the coins"*
- (3) Jackson reveals R
- (4) Michaela cooperates

..what if Michaela doesn't cooperate?

Hashed Time-locked Contract

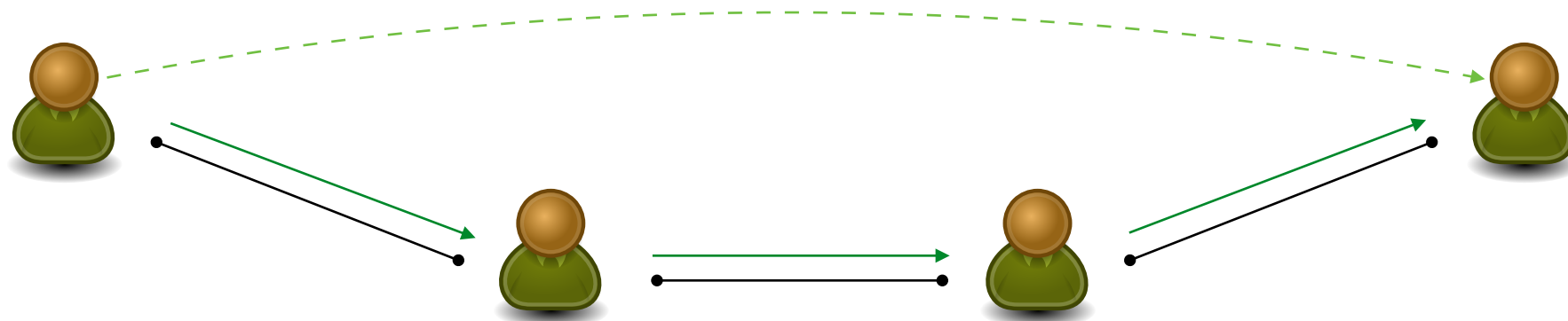
== conditional transfer + evidence



The blockchain confirms that Jackson revealed R before time t and complied with the contract

-> He receives the coin.

Payment Channel Networks



Path-based Payments
(HTLC)

We can synchronise a payment
among peers on the path!

Path-based virtual
Payment Channels
(Perun)

We can set up a virtual channel
to avoid intermediary peers to be responsive!