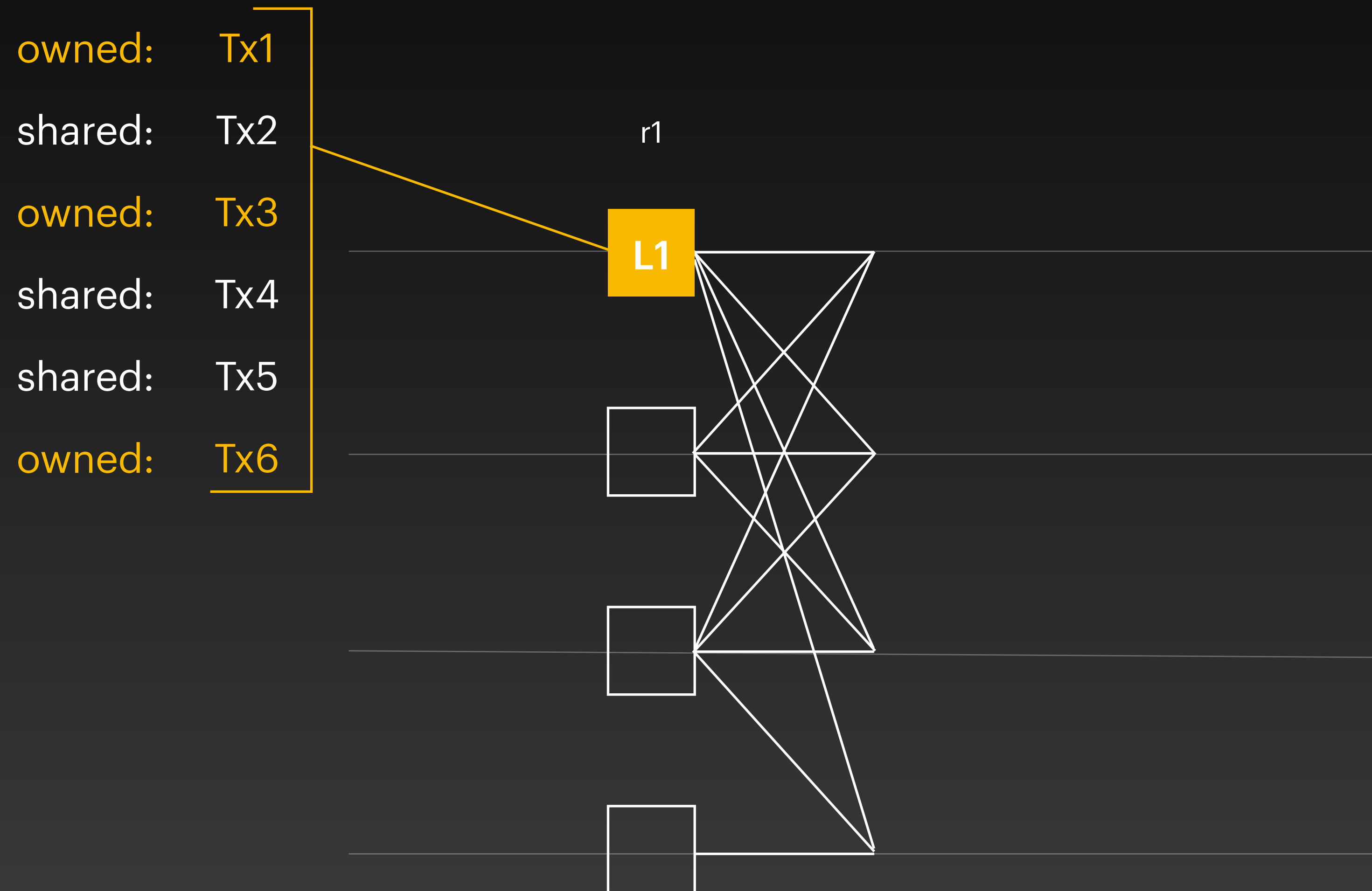


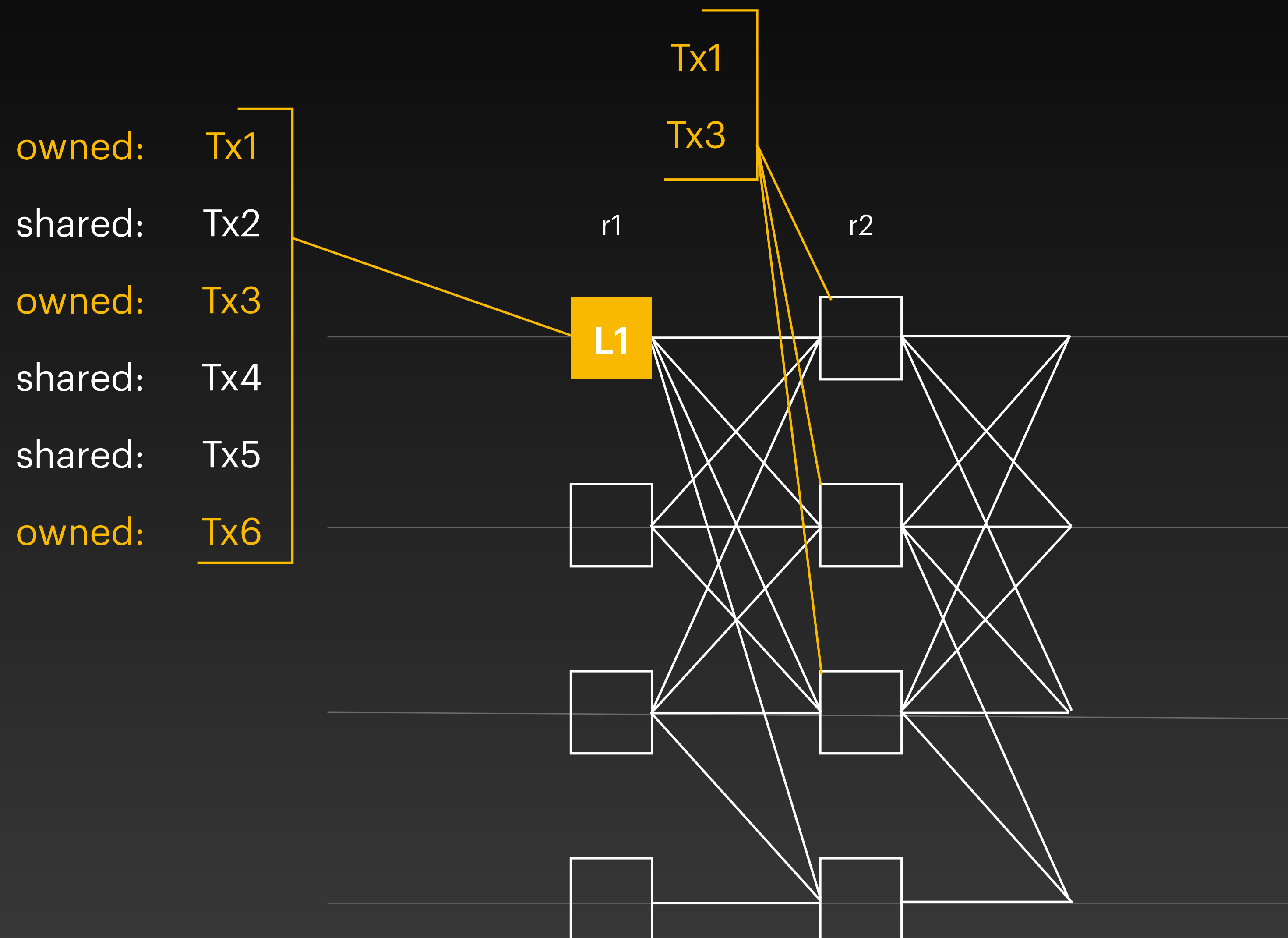
Auto-Unlock on Mysticeti

Mysticeti-FPC

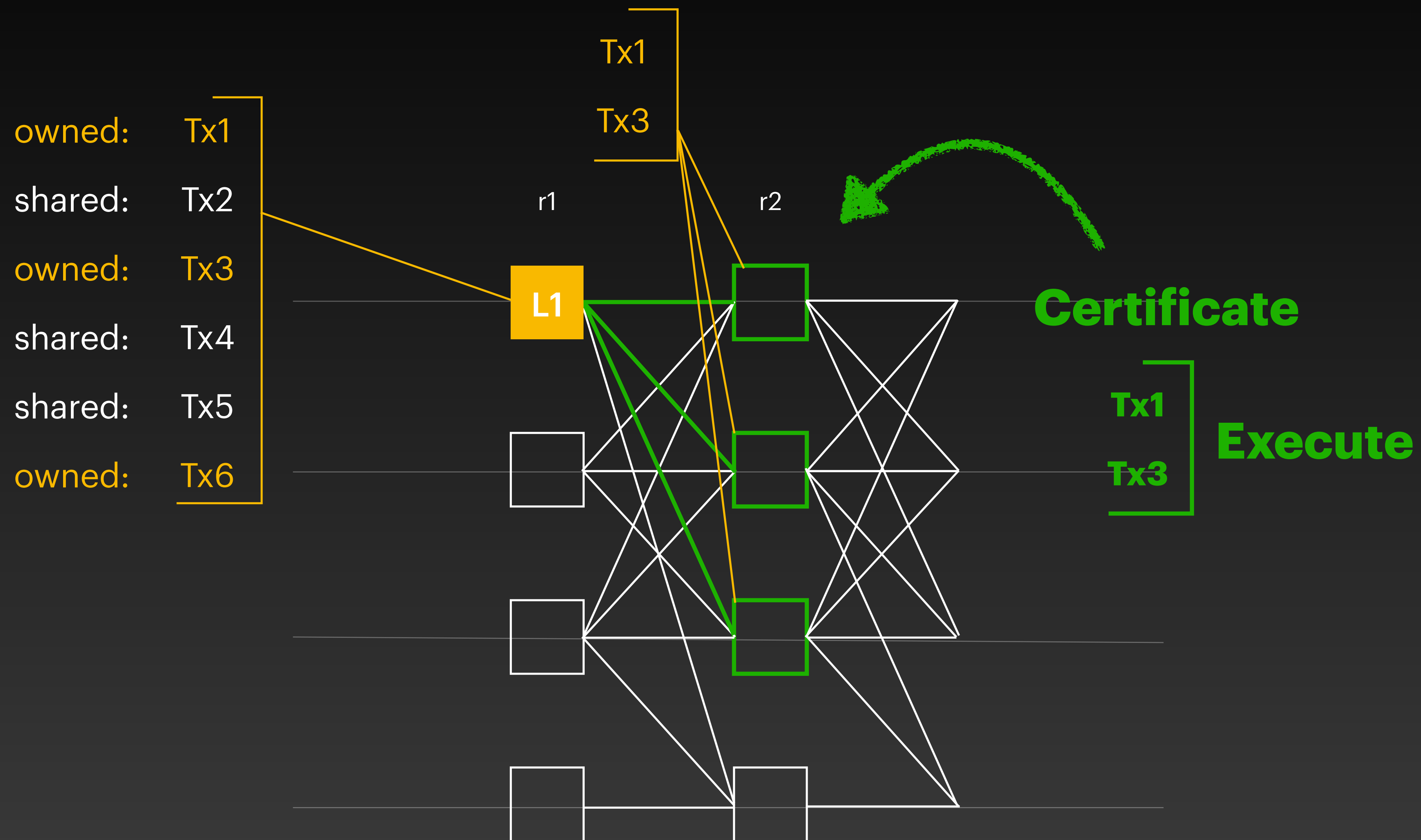
Fast Execution



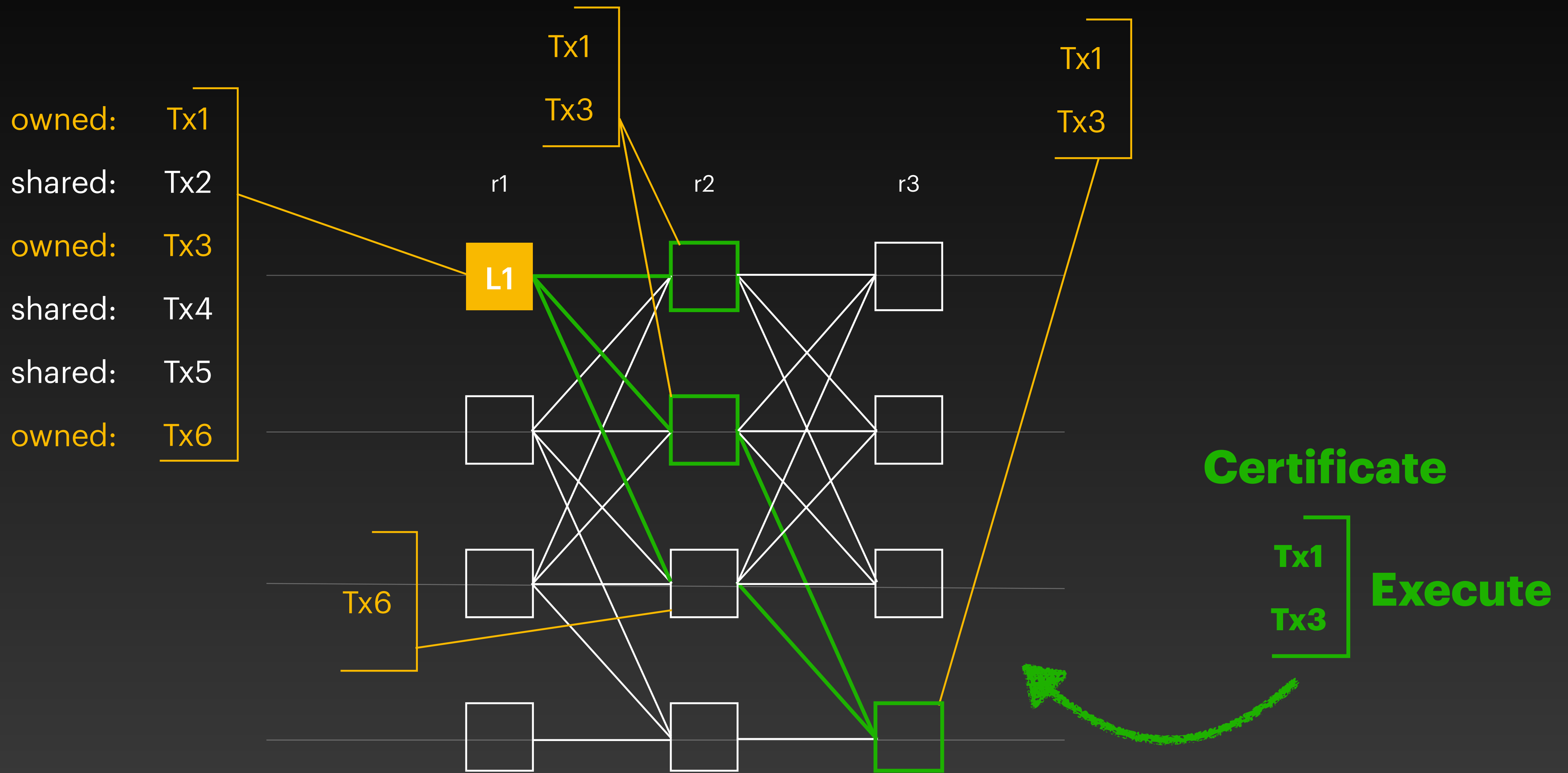
Fast Execution



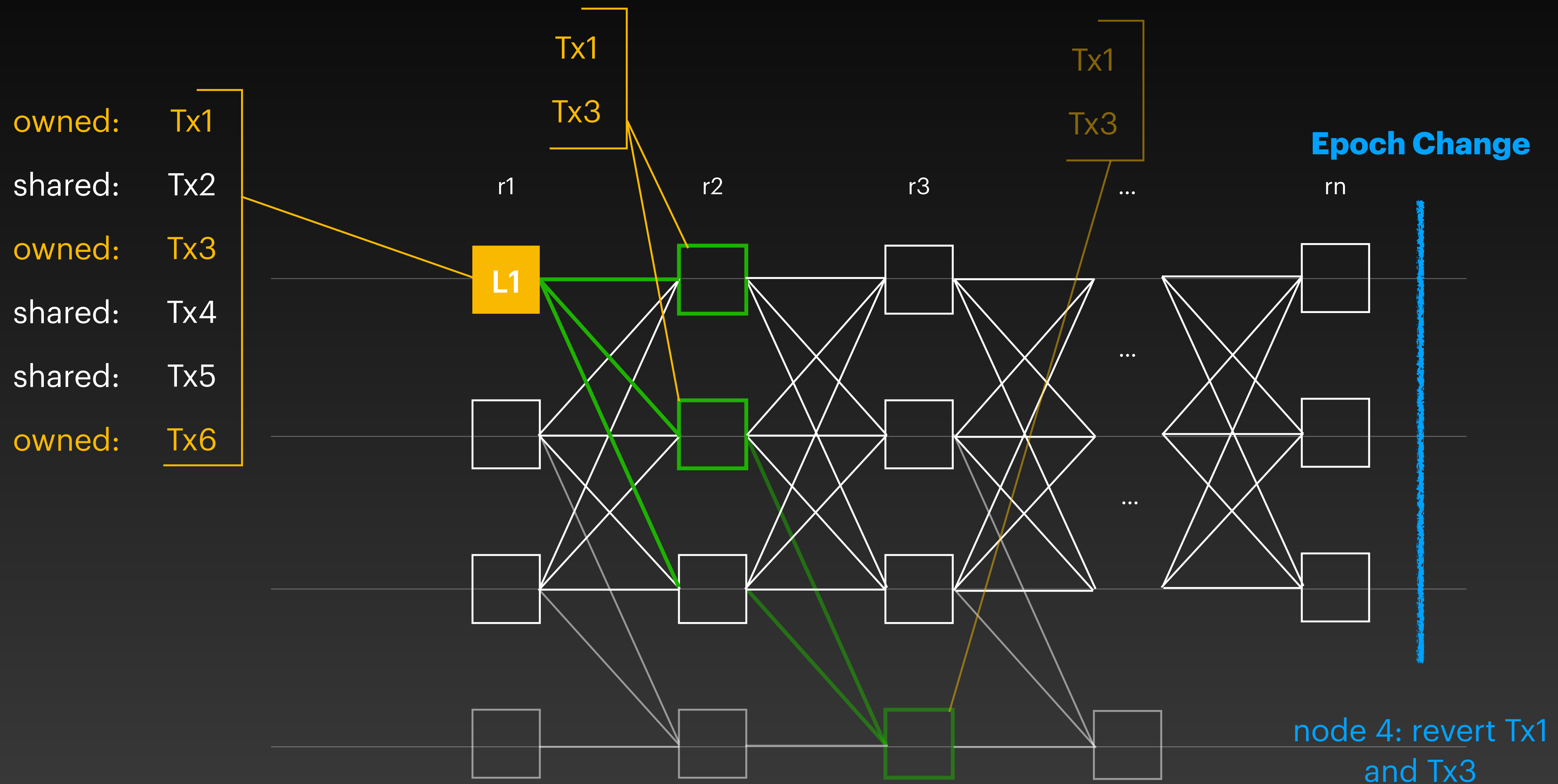
Fast Execution



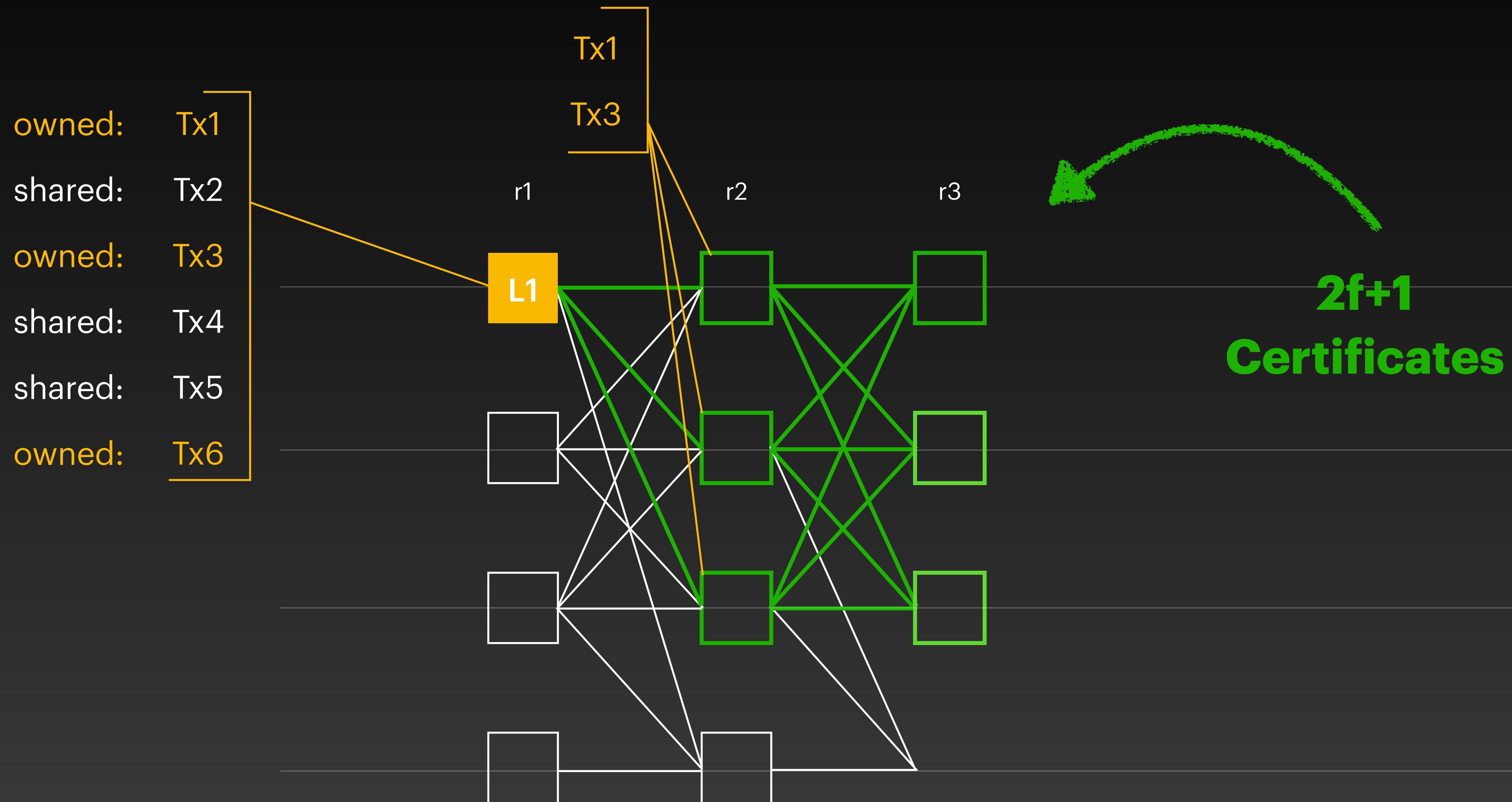
Fast Execution



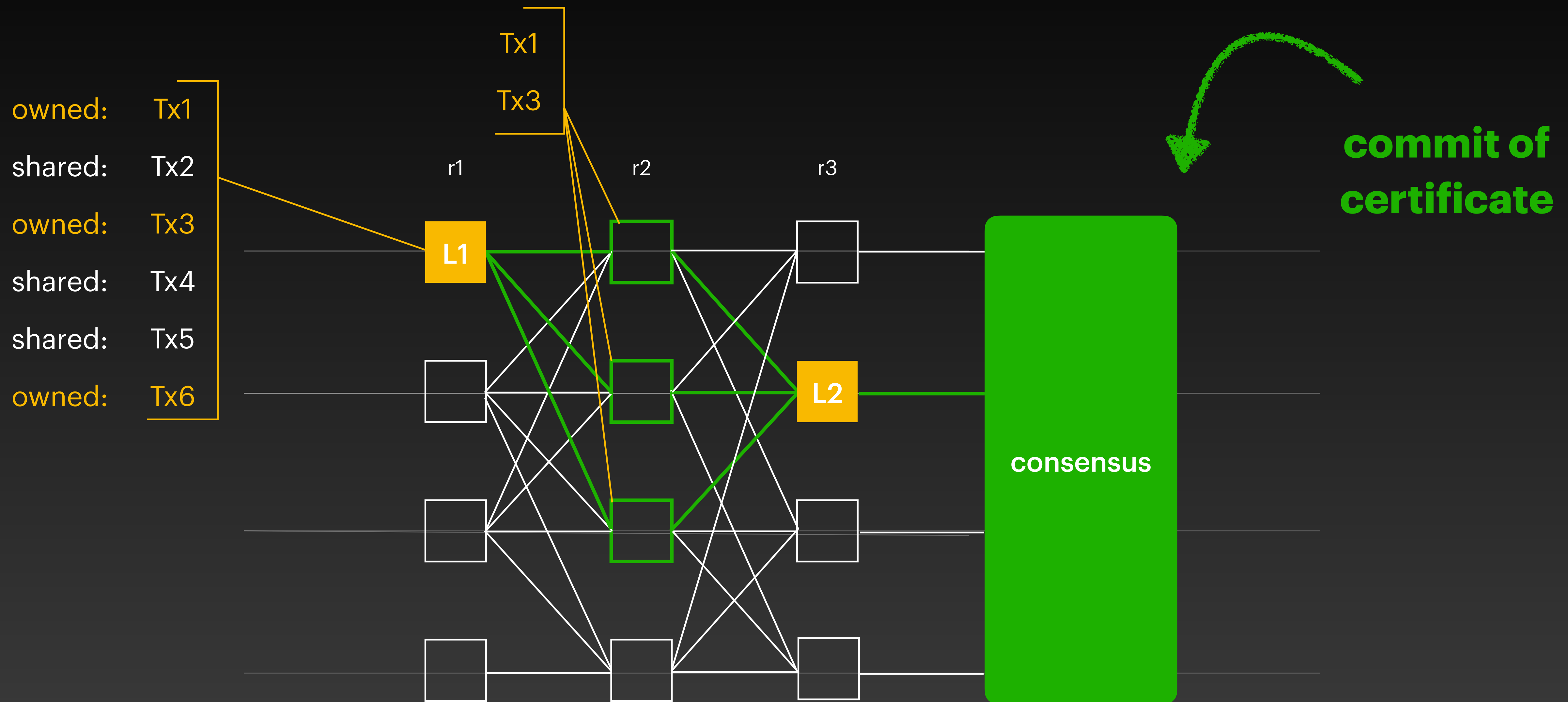
No Finality



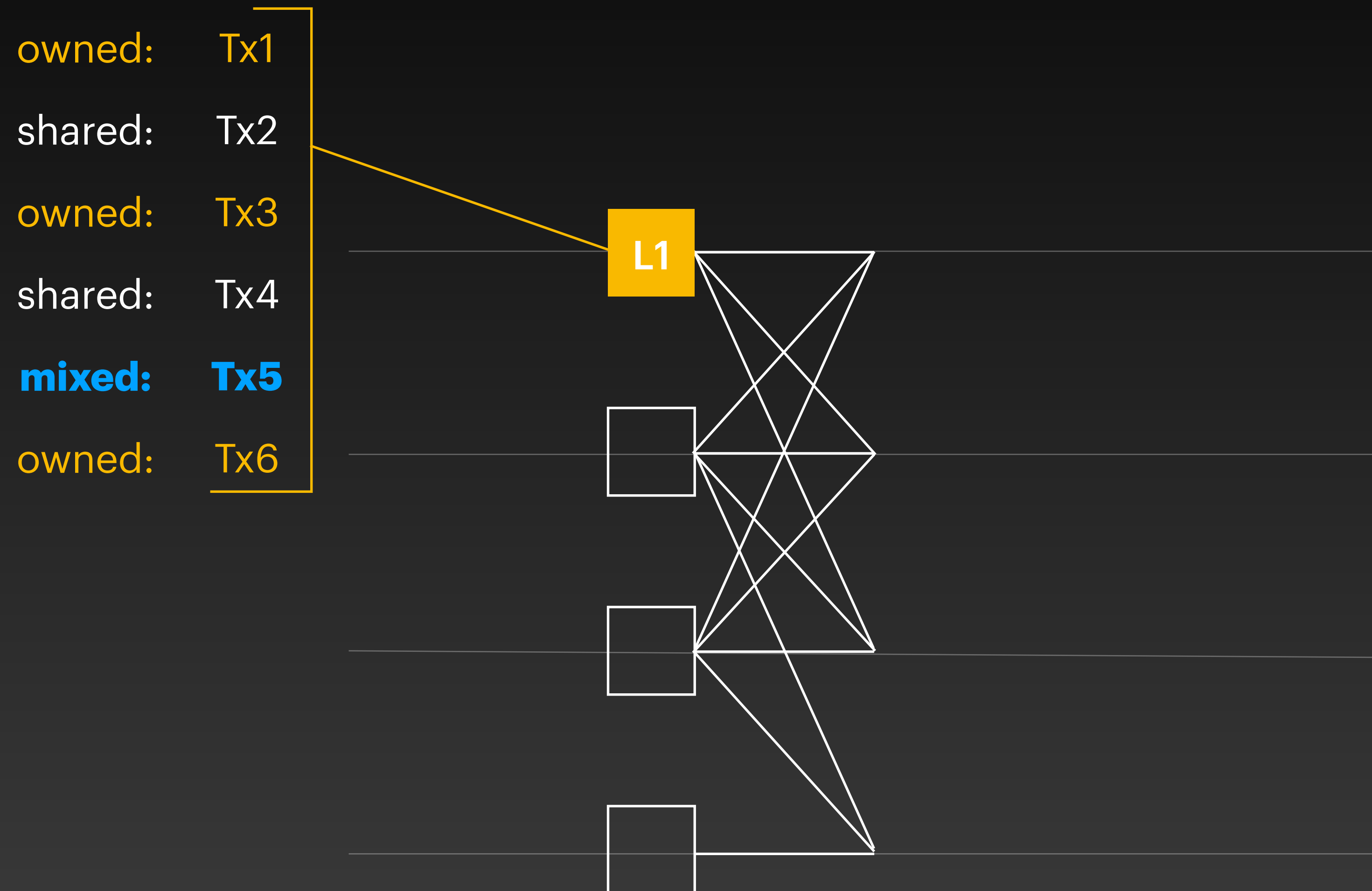
Fast Path Finality (1)



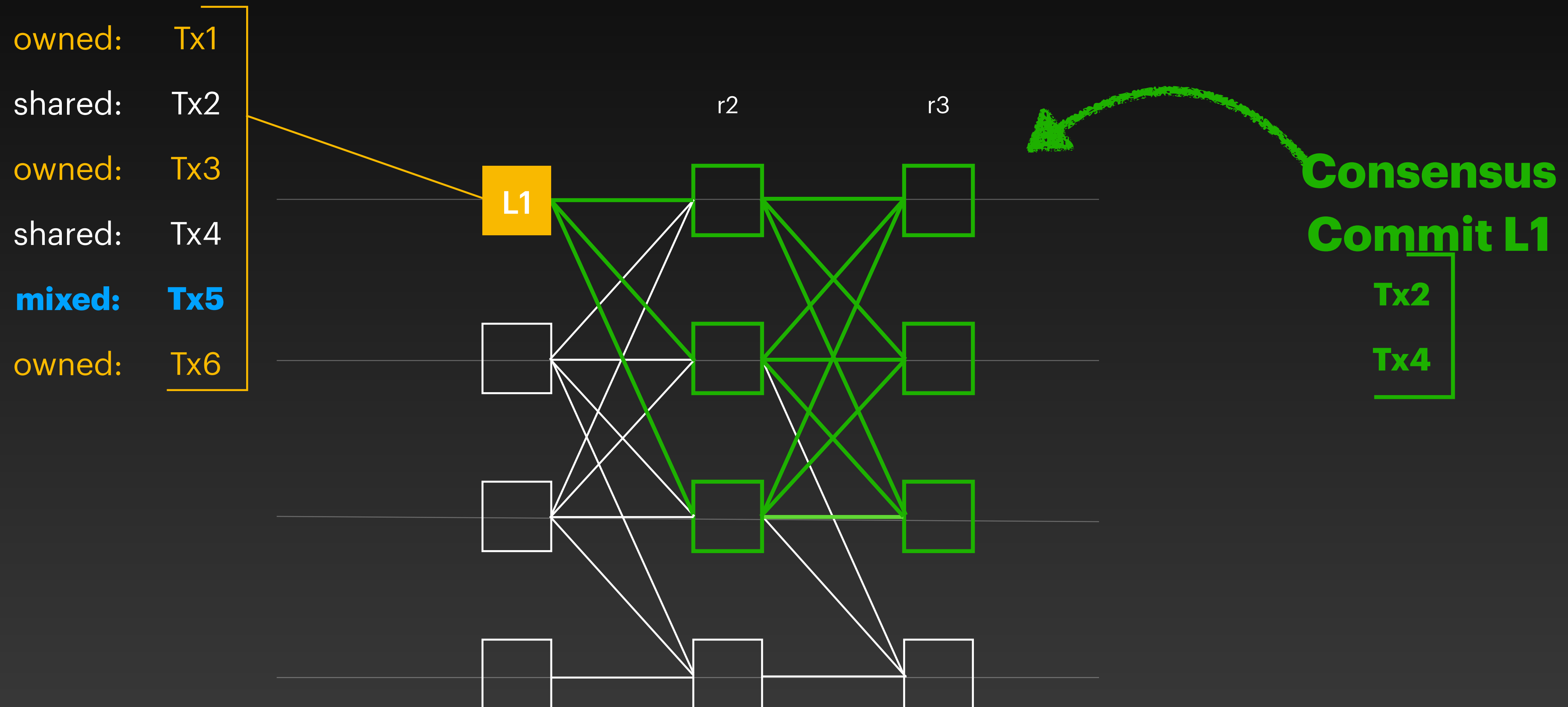
Fast Path Finality (2)



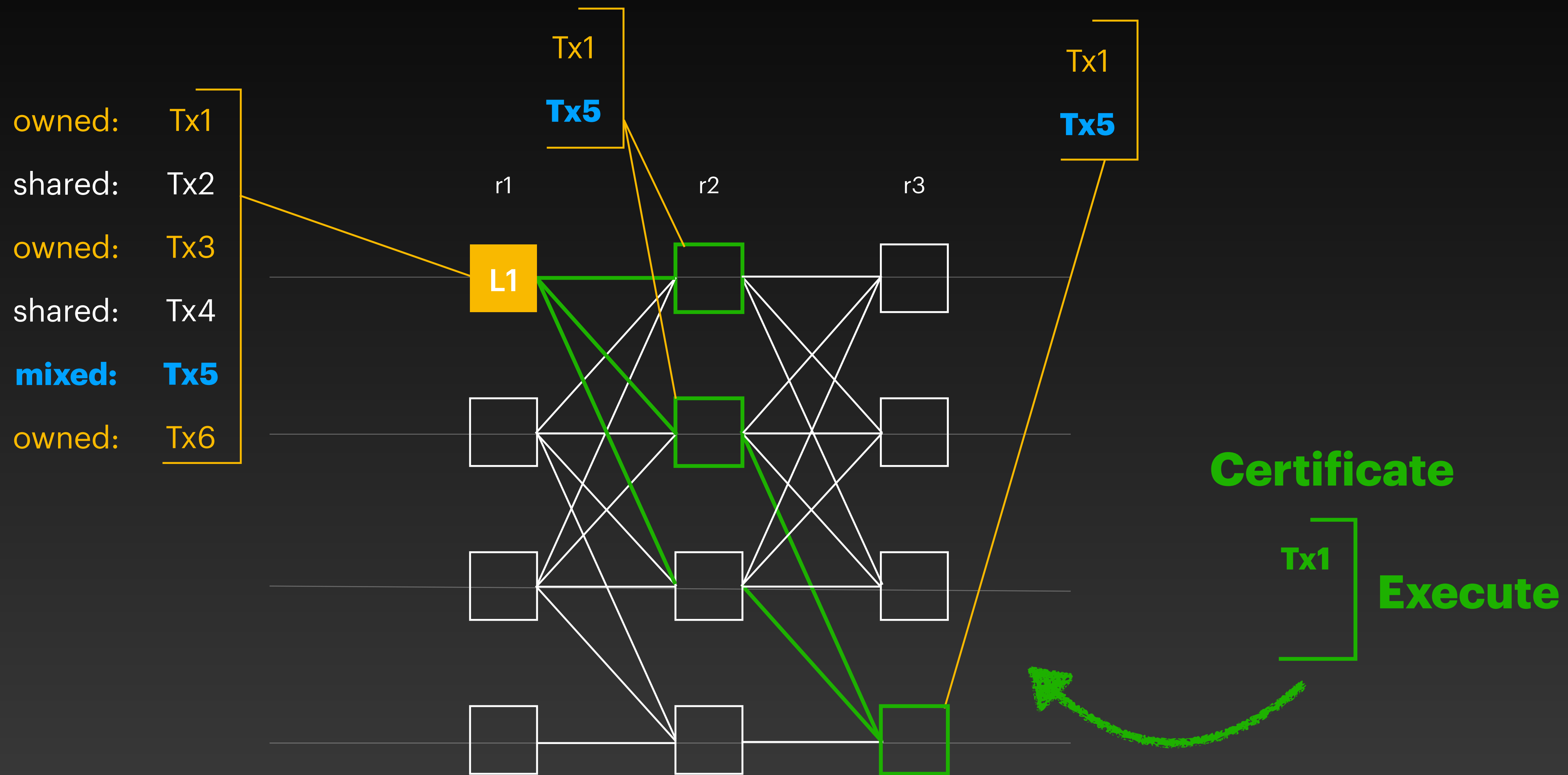
Mixed-Objects Transactions



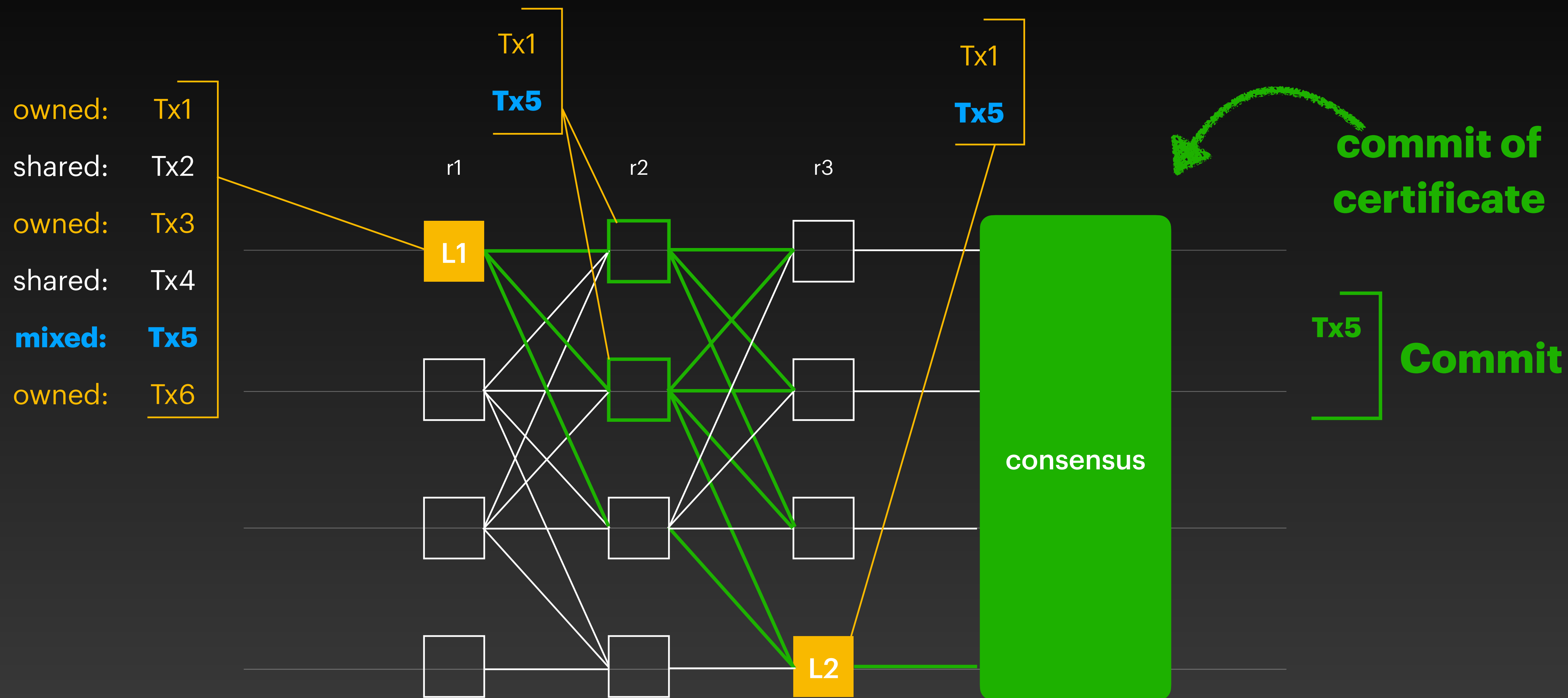
Mixed-Objects Transactions



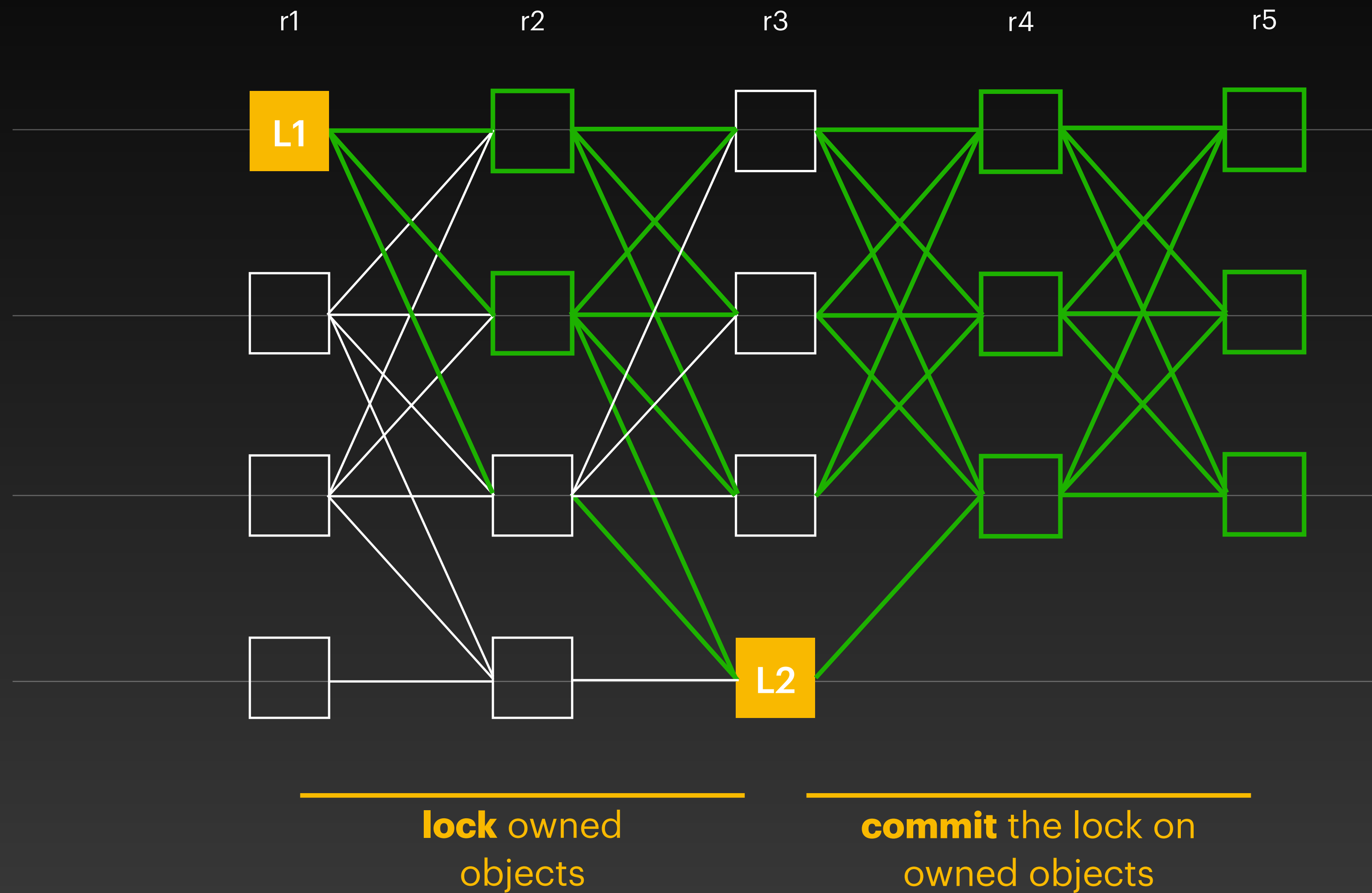
Mixed-Objects Transactions



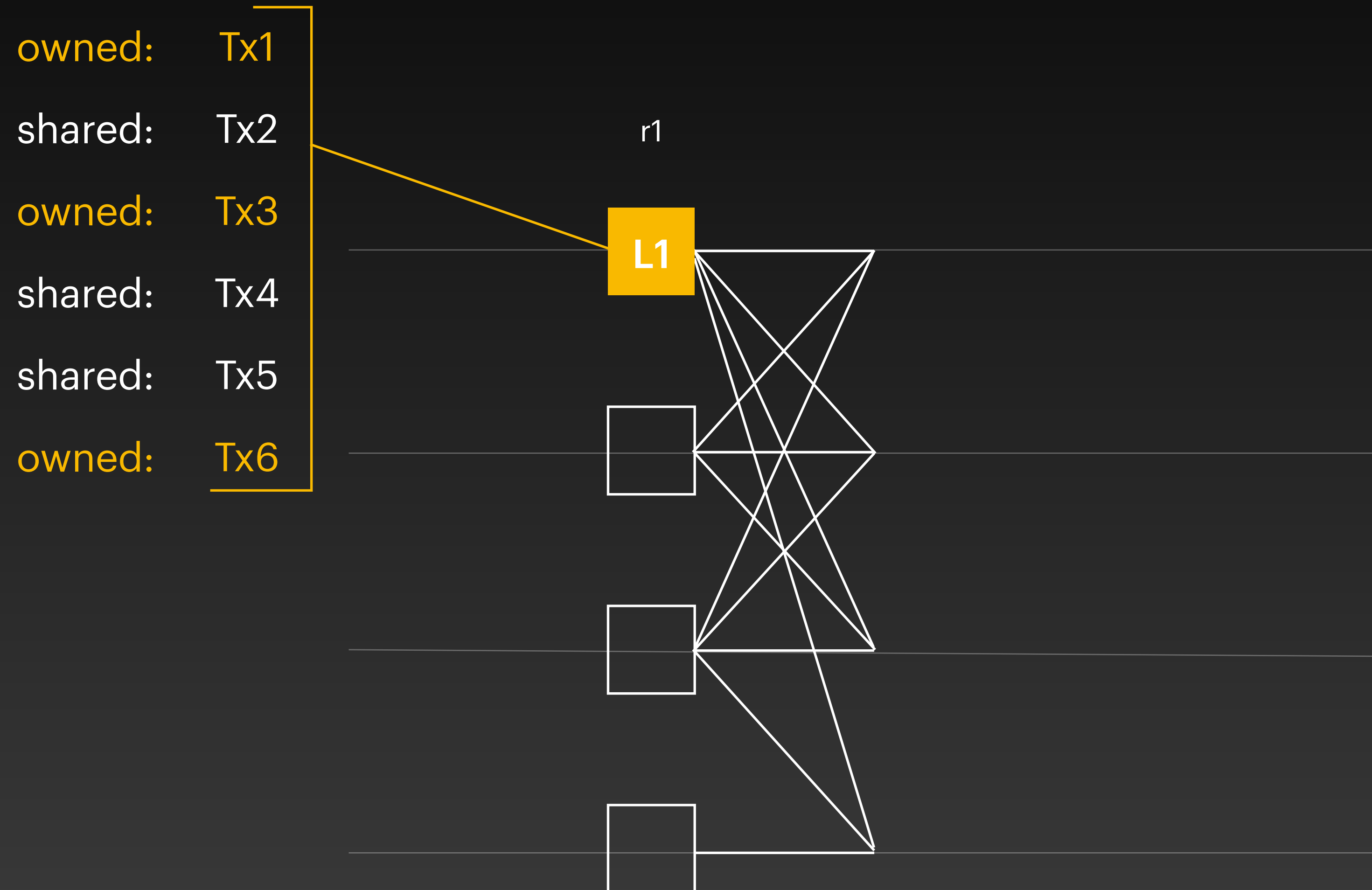
Mixed-Objects Transactions



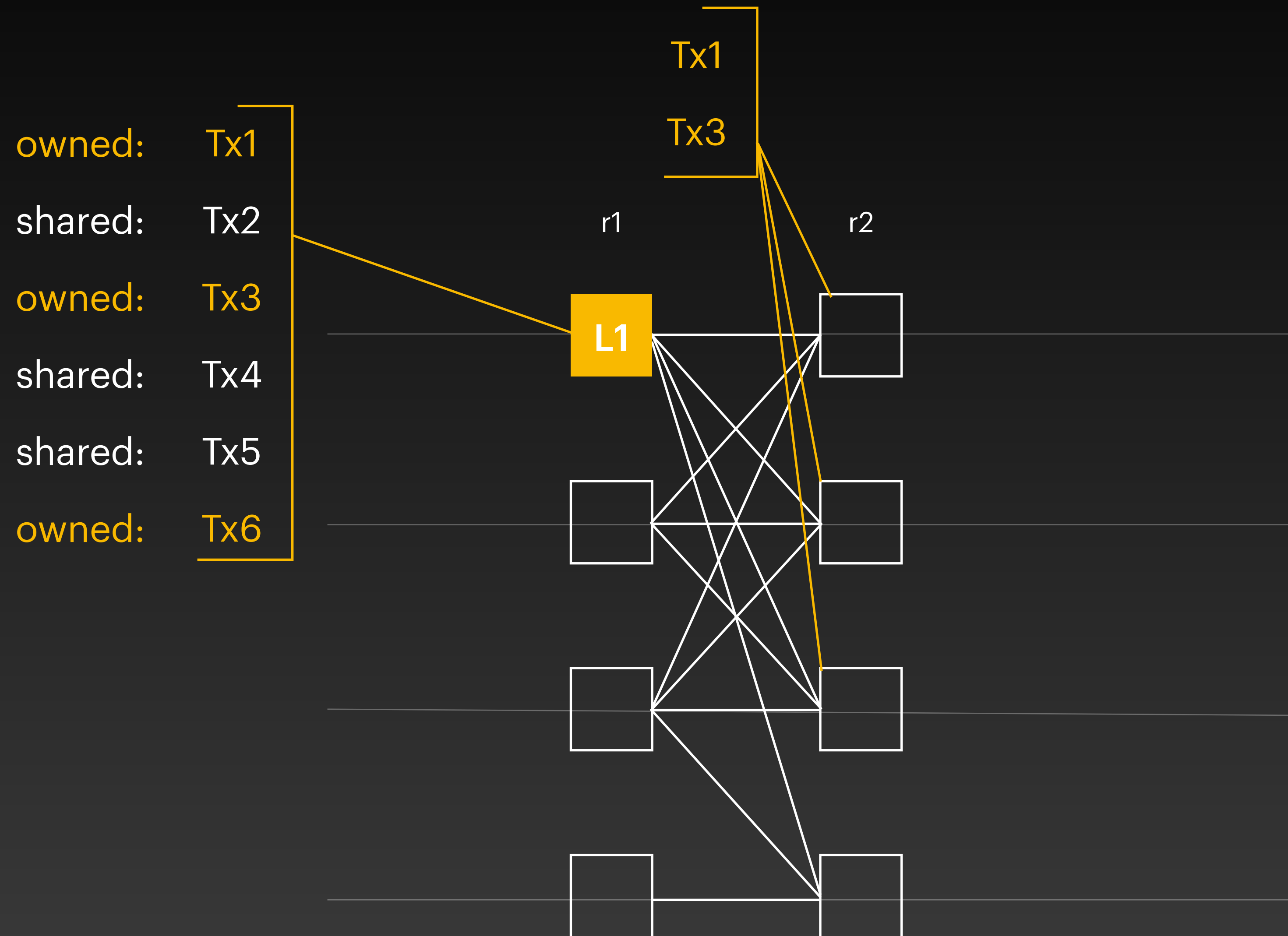
Mixed-Objects Transactions



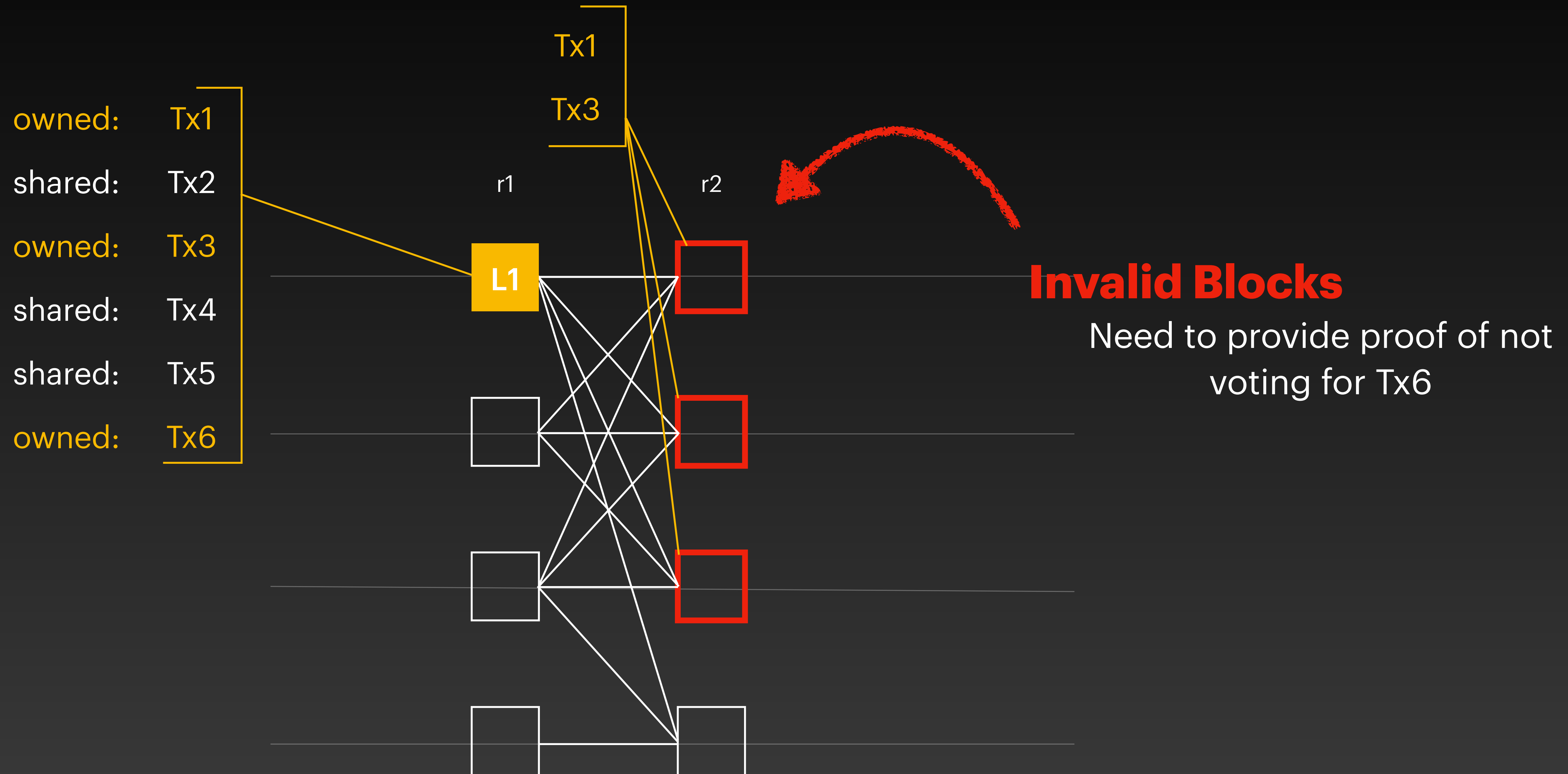
Stricter Voting Rules



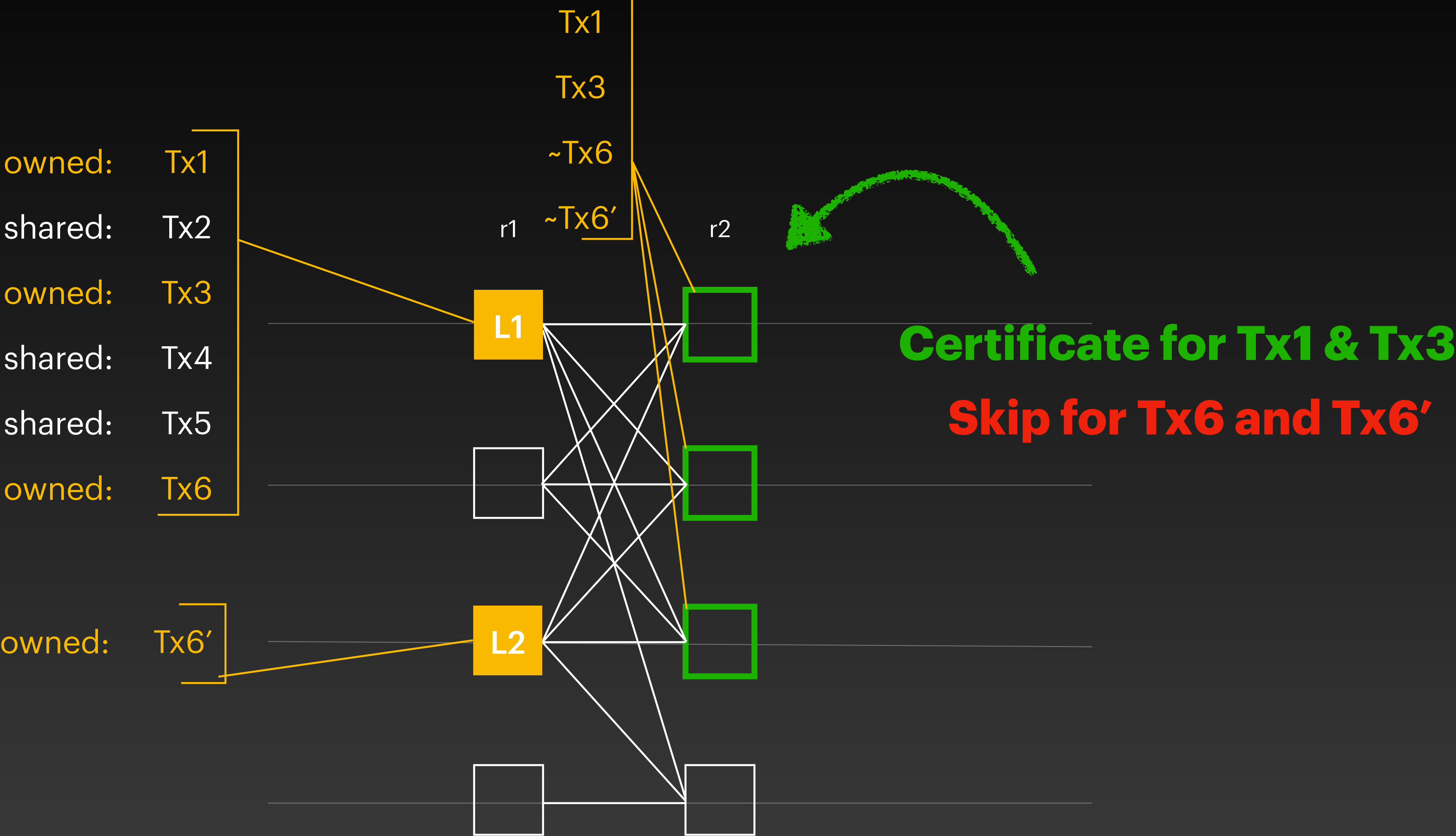
Stricter Voting Rules



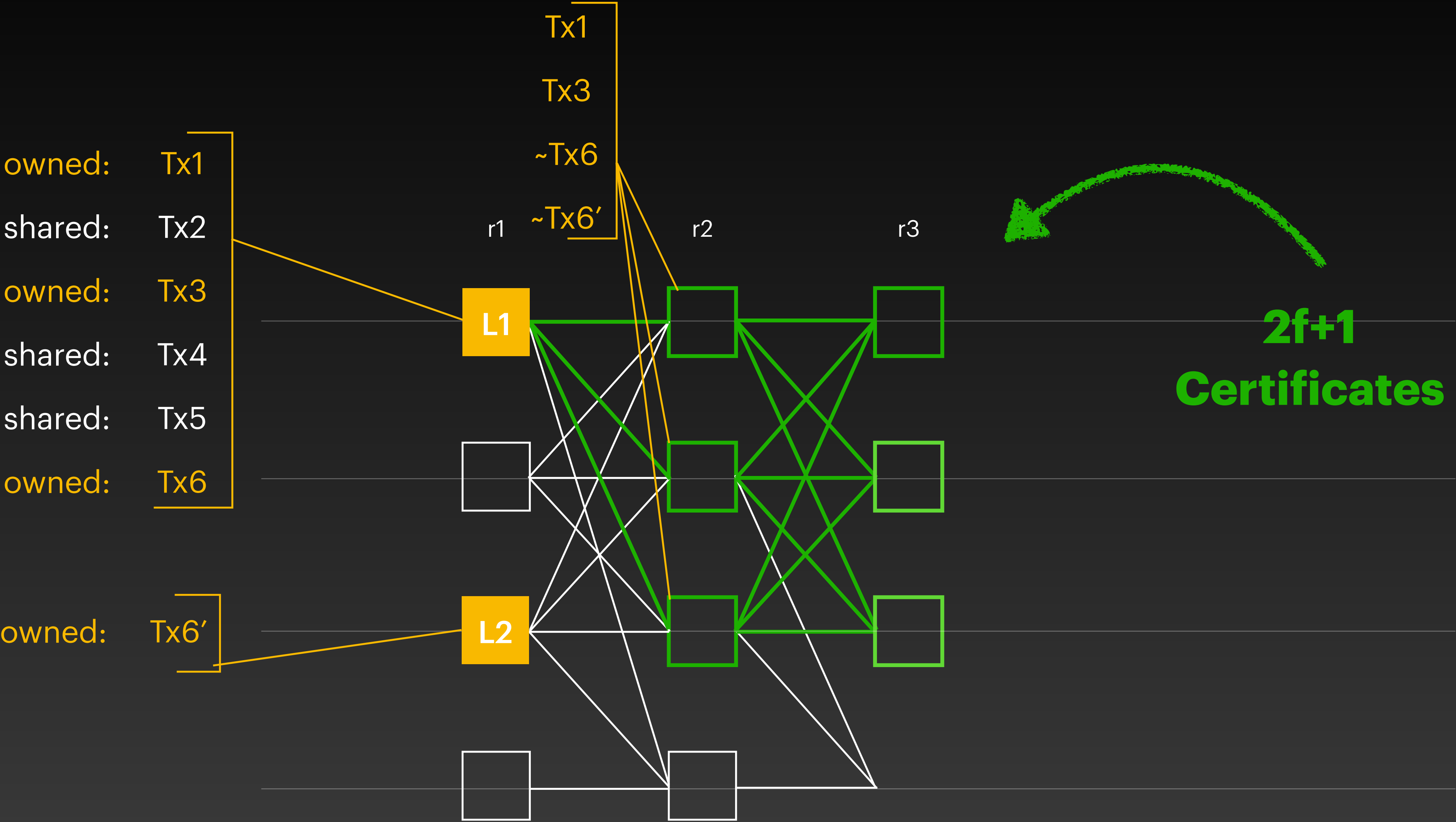
Stricter Voting Rules



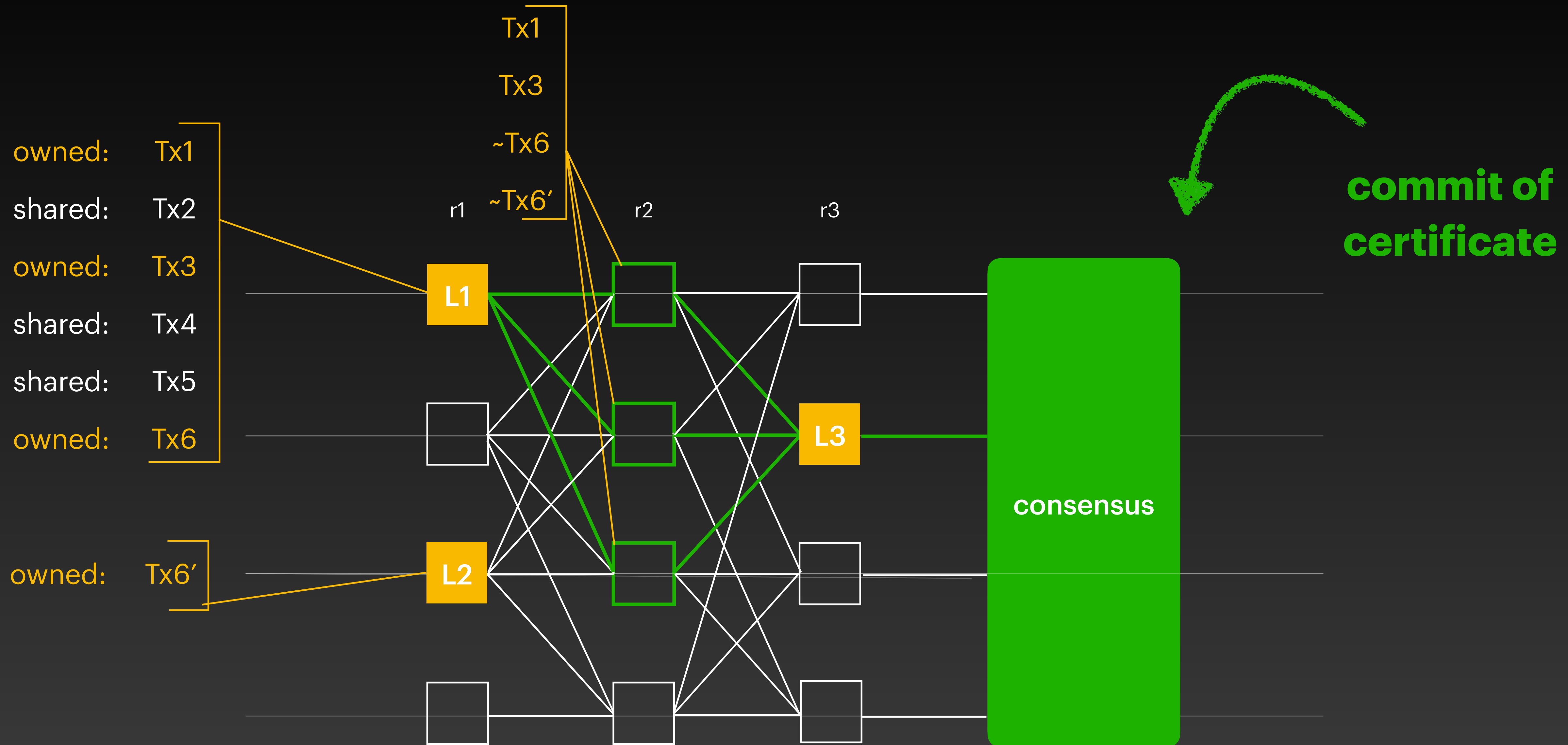
Stricter Voting Rules



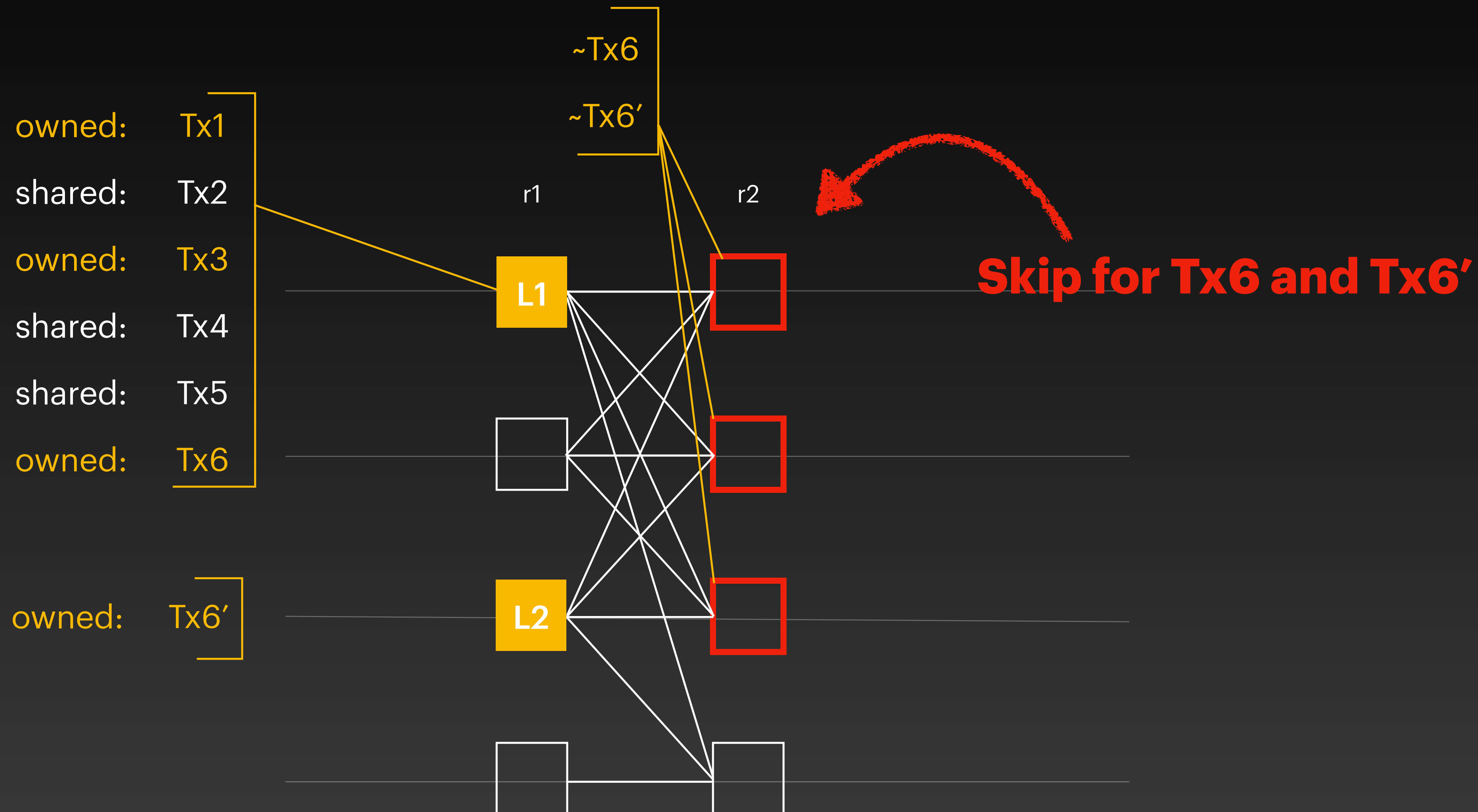
Fast Path Commit Remains



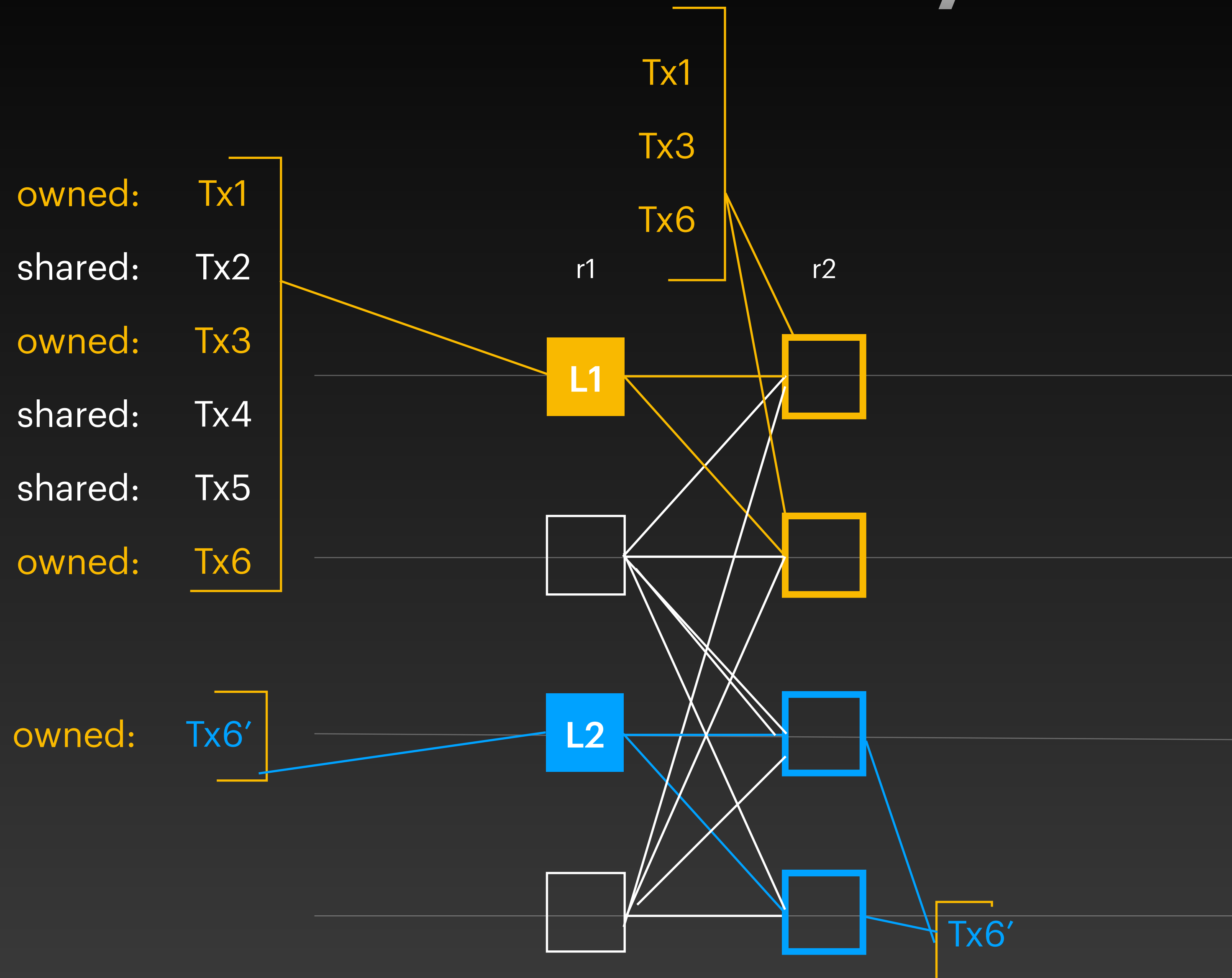
Commit via Consensus Remains



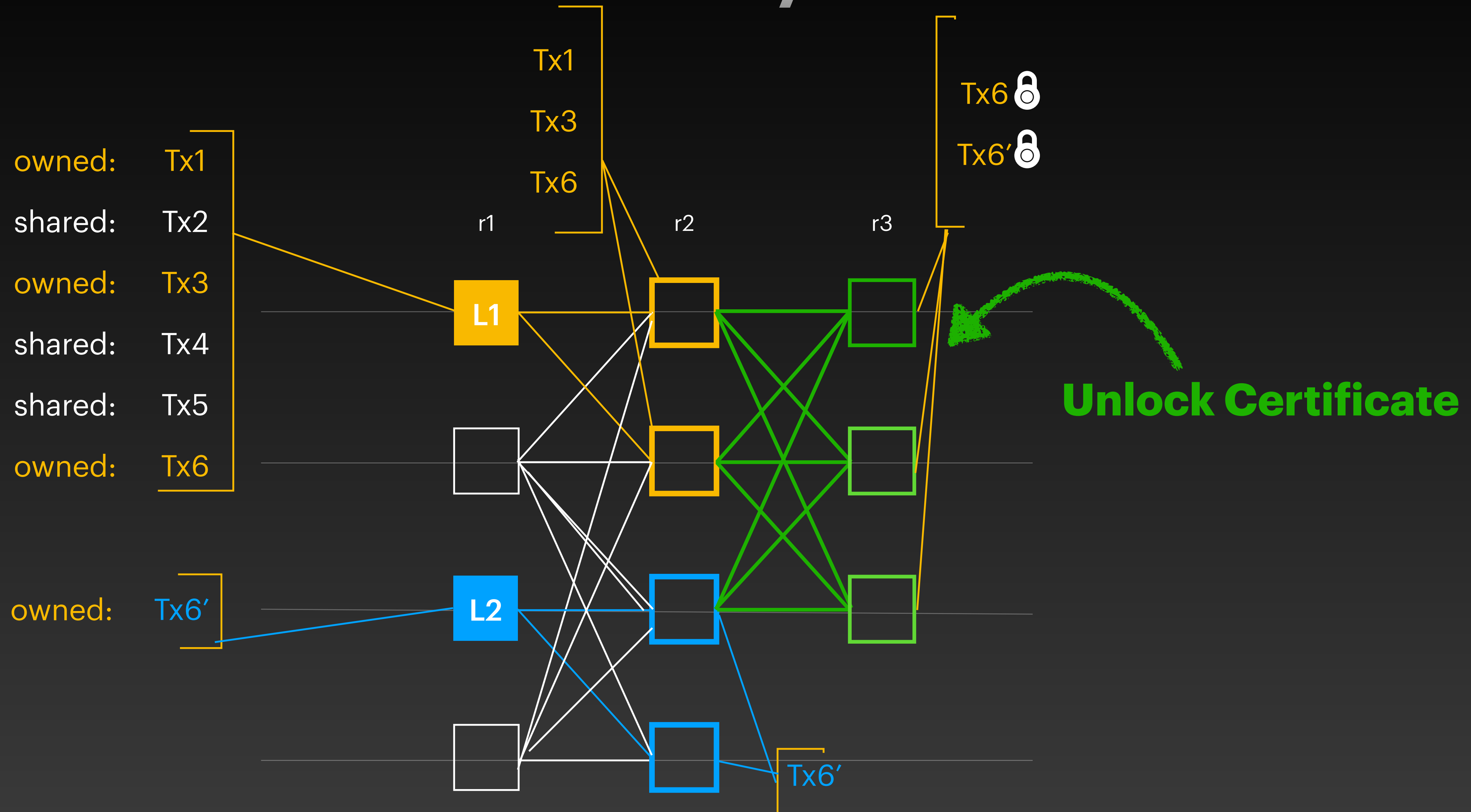
Fast Path Skip on Single Certificate



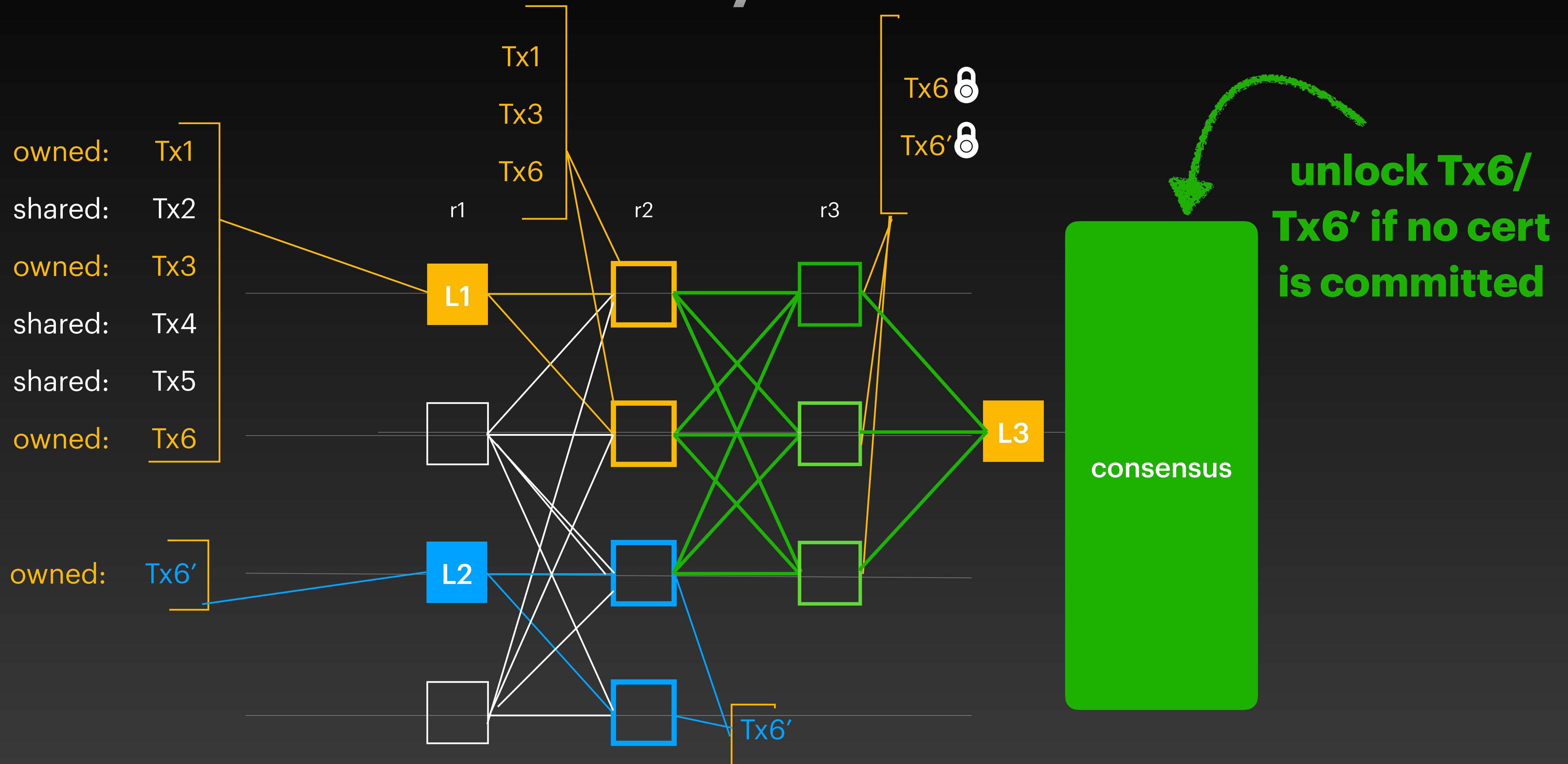
Tricky Case



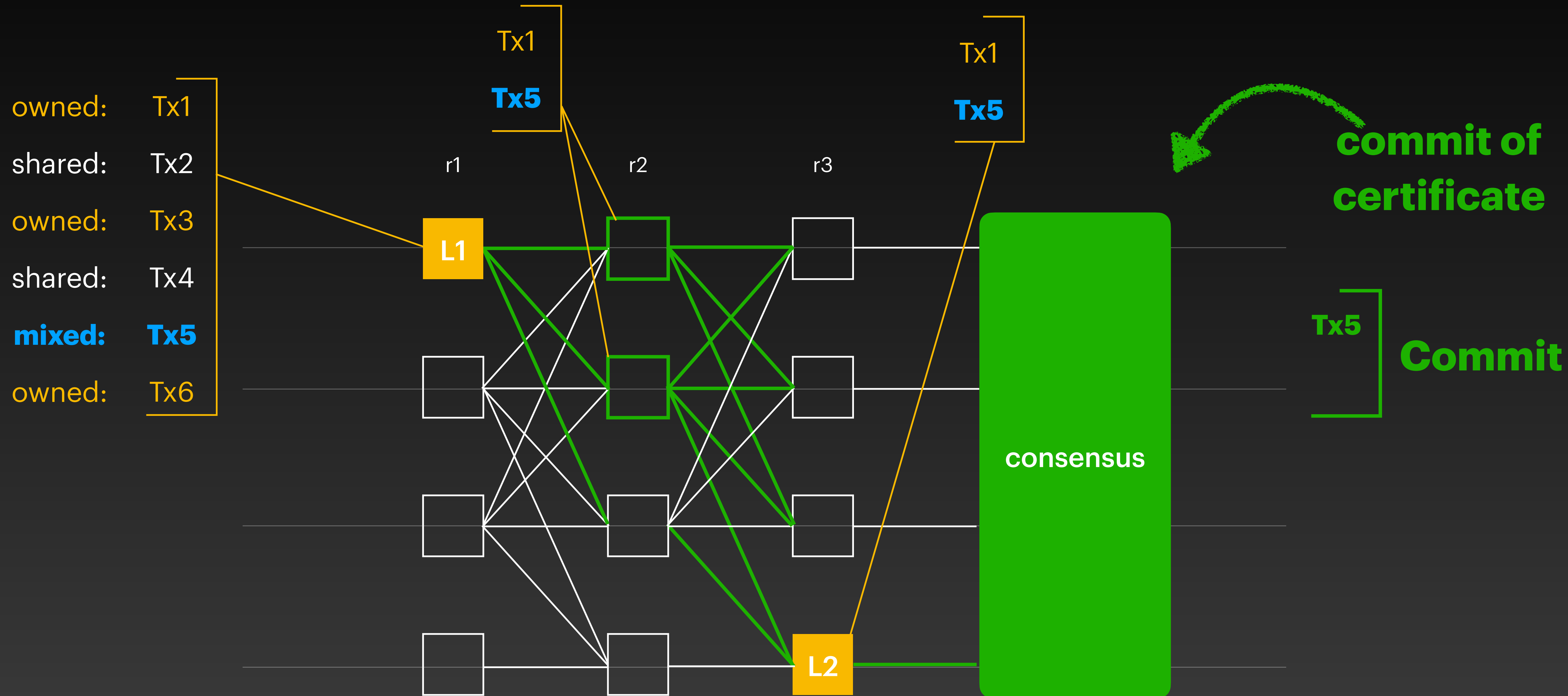
Tricky Case



Tricky Case

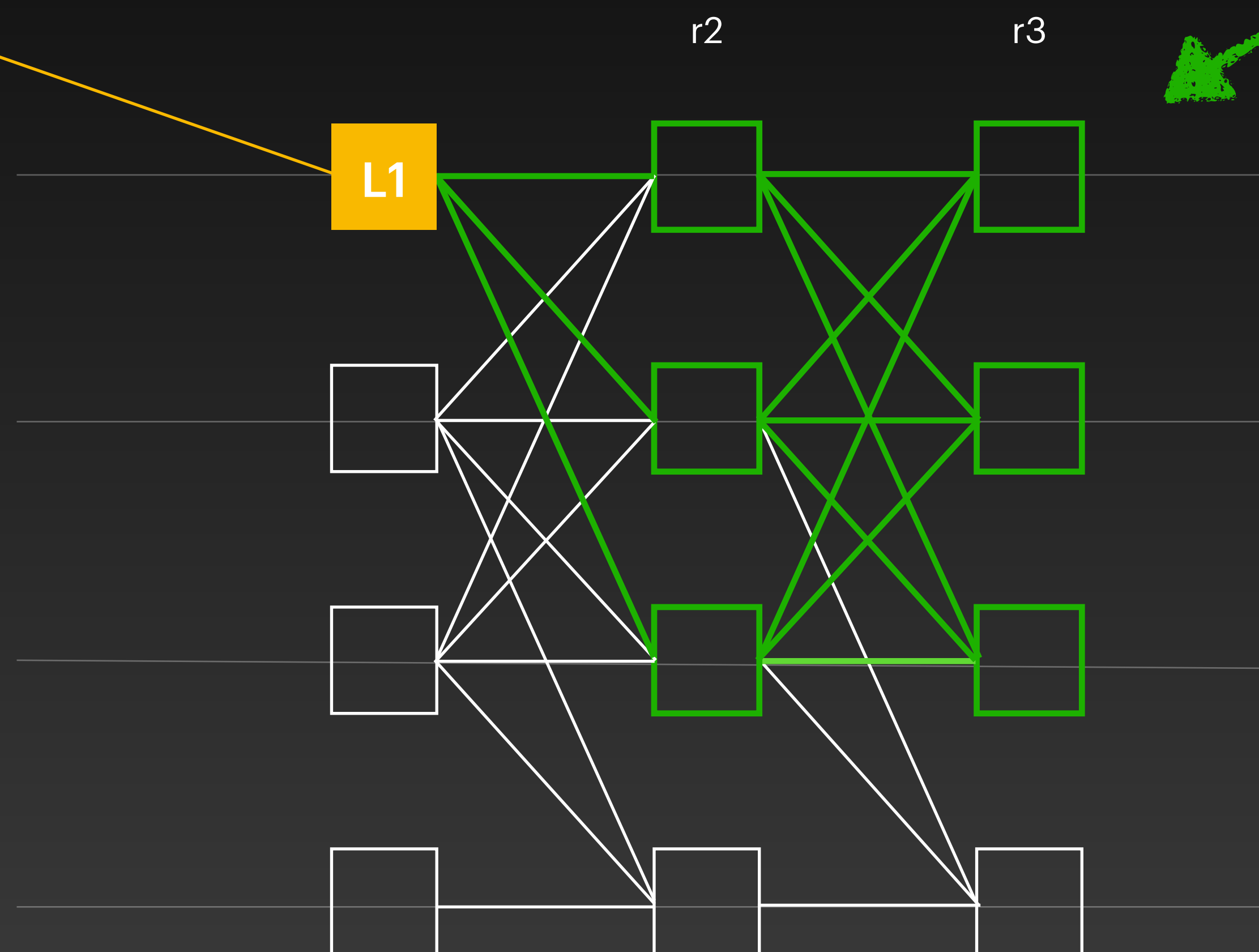


Mixed-Objects Transactions



Mixed-Objects Transactions

owned: Tx1
shared: Tx2
owned: Tx3
shared: Tx4
mixed: Tx5
owned: Tx6



**Consensus
Commit L1**

**Tx2
Tx4
Tx5***

*Tx5 commits if Tx5 as if owned commits
Tx5 skips if Tx5 as if owned skips

Discussion

- If there is no equivocation Tx5 as owned commits concurrently to Tx5 outputted from Mysticeti (0 added latency)
- If there is obvious equivocation Tx5 as owned skips even before Tx5 is outputted from Mysticeti (0 added latency)
- If there is equivocation + network asynchronous Tx5 as owned might take one extra consensus round to be decided (unlock or commit)
 - Downside that Tx5 blocks all causal dependencies from execution until resolved
 - Downside that this also blocks checkpoint formation

Discussion