

Block Synchroniser

The Missing Component

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Live Sync

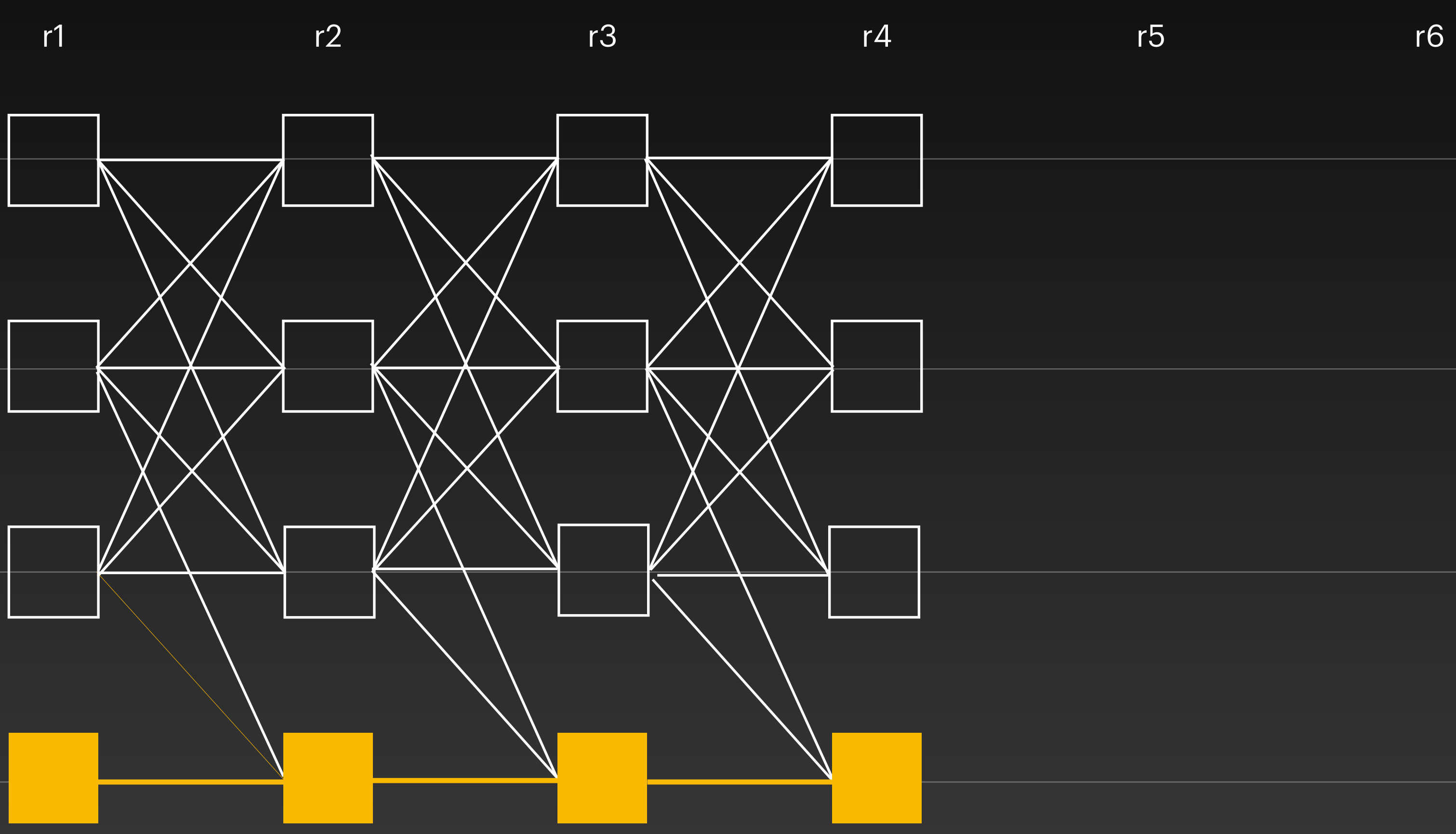
- **Required to commit (liveness)**
- Can only leverage statistics and partial Dag
- Internal component tied to consensus
- Needs low latency
- Harder to build

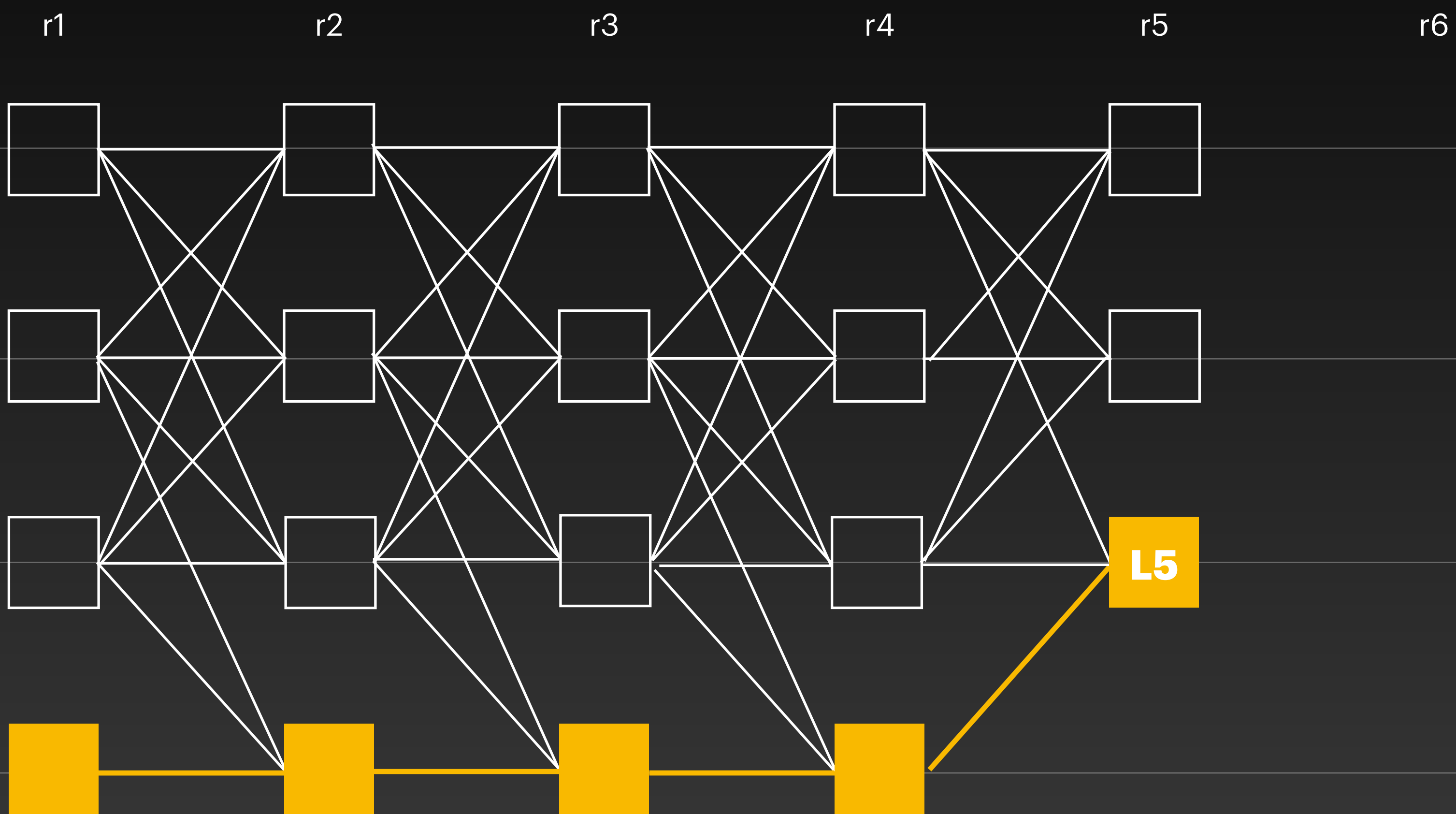
Historic Sync

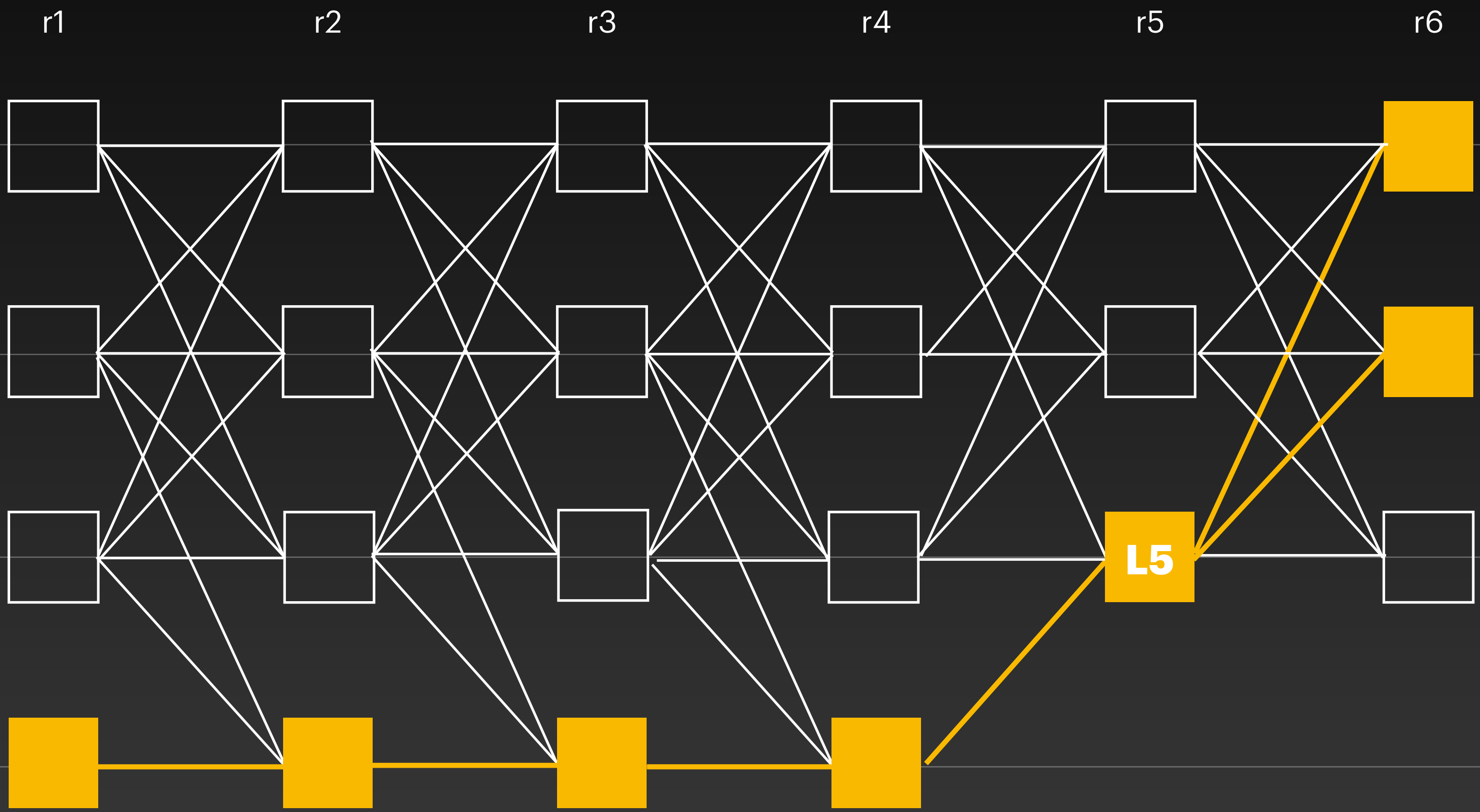
- **Allow slow nodes to catch up**
- Can leverage the commit sequence
- External component
- Needs high throughput
- Easier to build

Live Sync

- **Required to commit (liveness)**
- Can only leverage statistics and partial Dag
- Internal component tied to consensus
- Needs low latency
- Harder to build







GC

r1

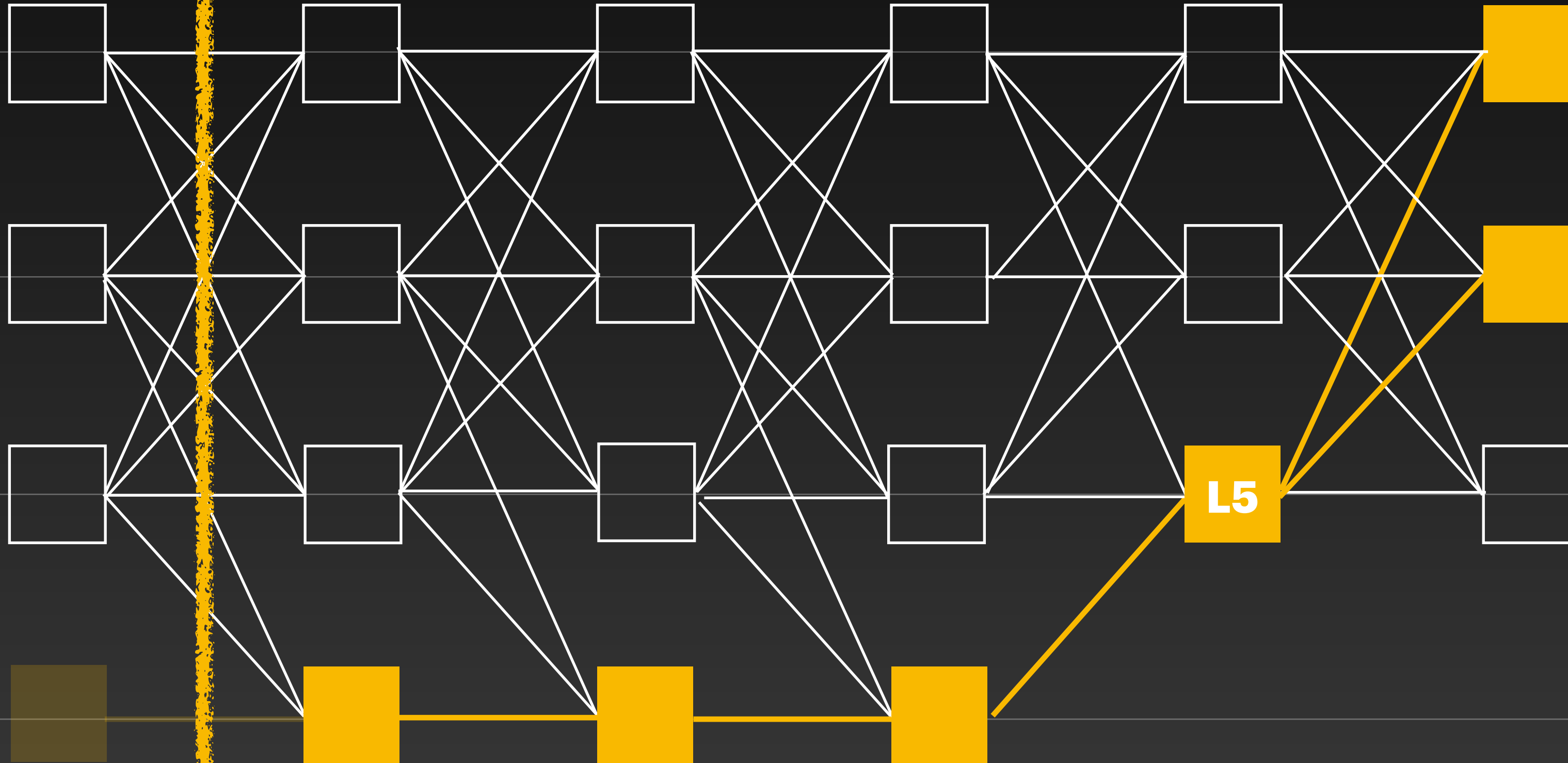
r2

r3

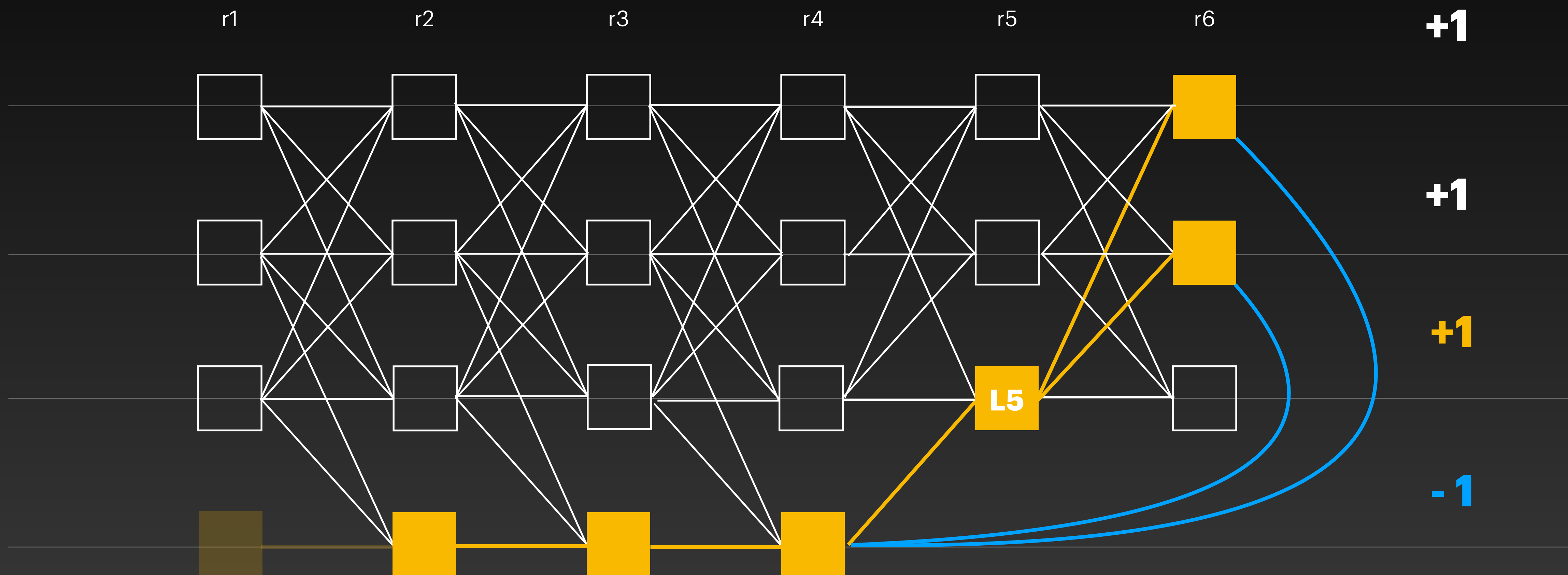
r4

r5

r6



Ancestor Selection



Selection

Mandatory: High scores OR timeout

optional: Low scores

Selection

Mandatory: High scores OR timeout OR $(2f+1)$ optional links

optional: Low scores

Pull Selection

- The most obvious thing
- Ask to who clearly has the block

Formalisation



