Nothing-at-Stake Problem in PoS

Unlike PoW, validating on multiple forks costs nothing in PoS

Fork A

Fork B

Rational Validator Behavior
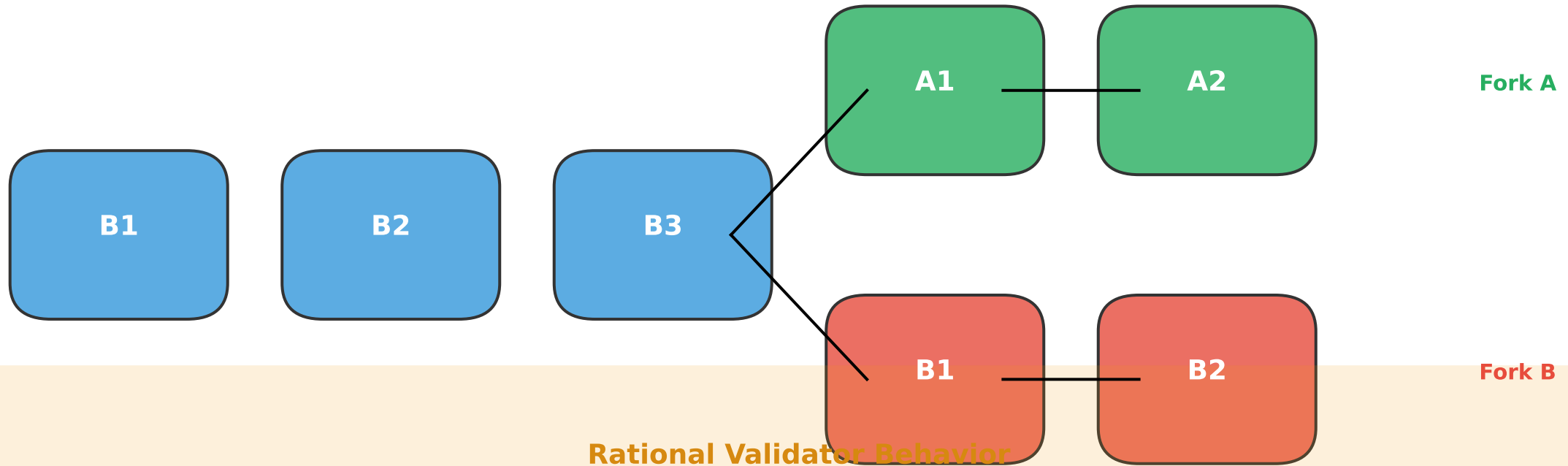
PoW: Must choose one fork (mining power is scarce)

PoS: Can validate ALL forks simultaneously (no extra cost)

Result: Validators have no incentive to converge on single chain

Solution: Slashing penalties for double-voting

Validators lose stake if caught validating multiple forks