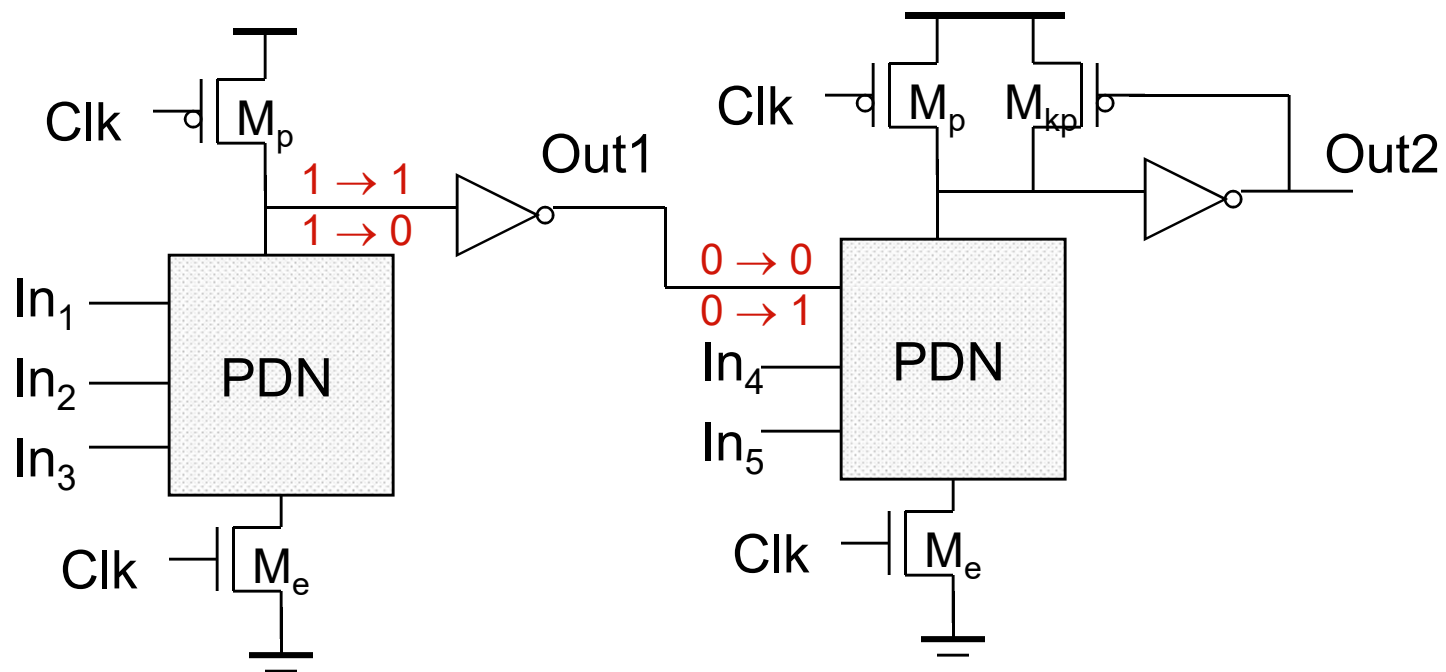
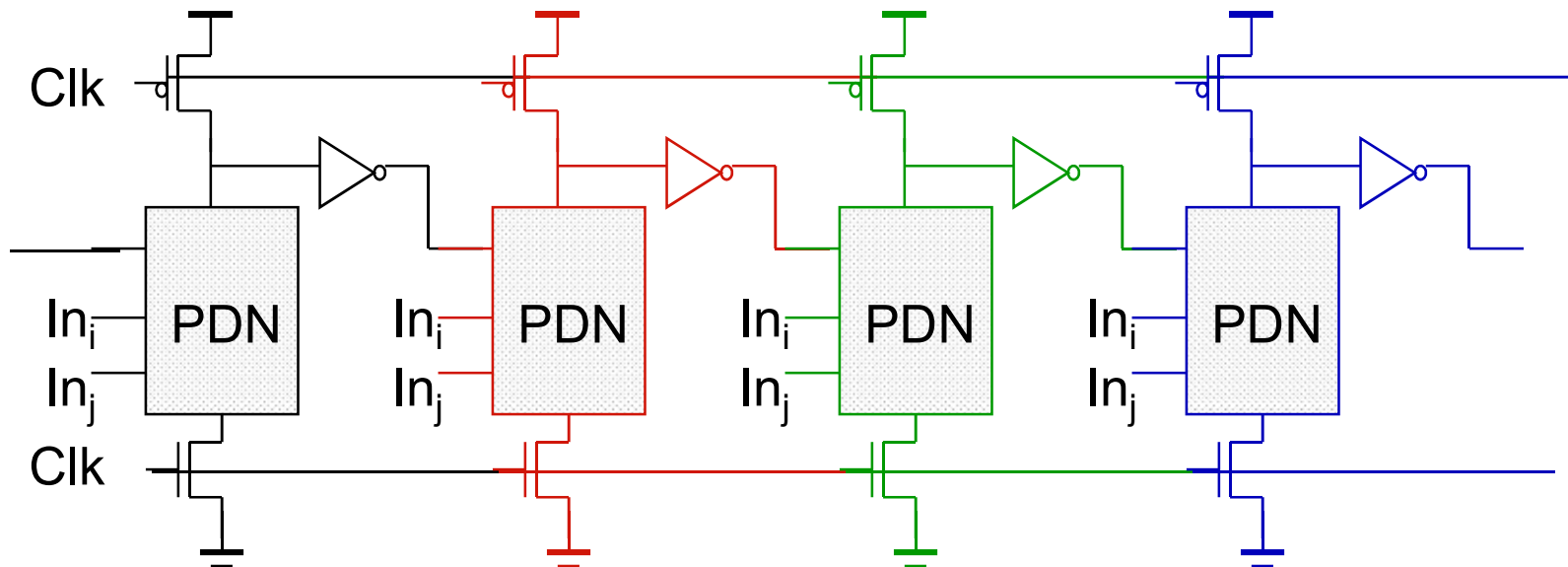


Domino Logic



Why Domino?

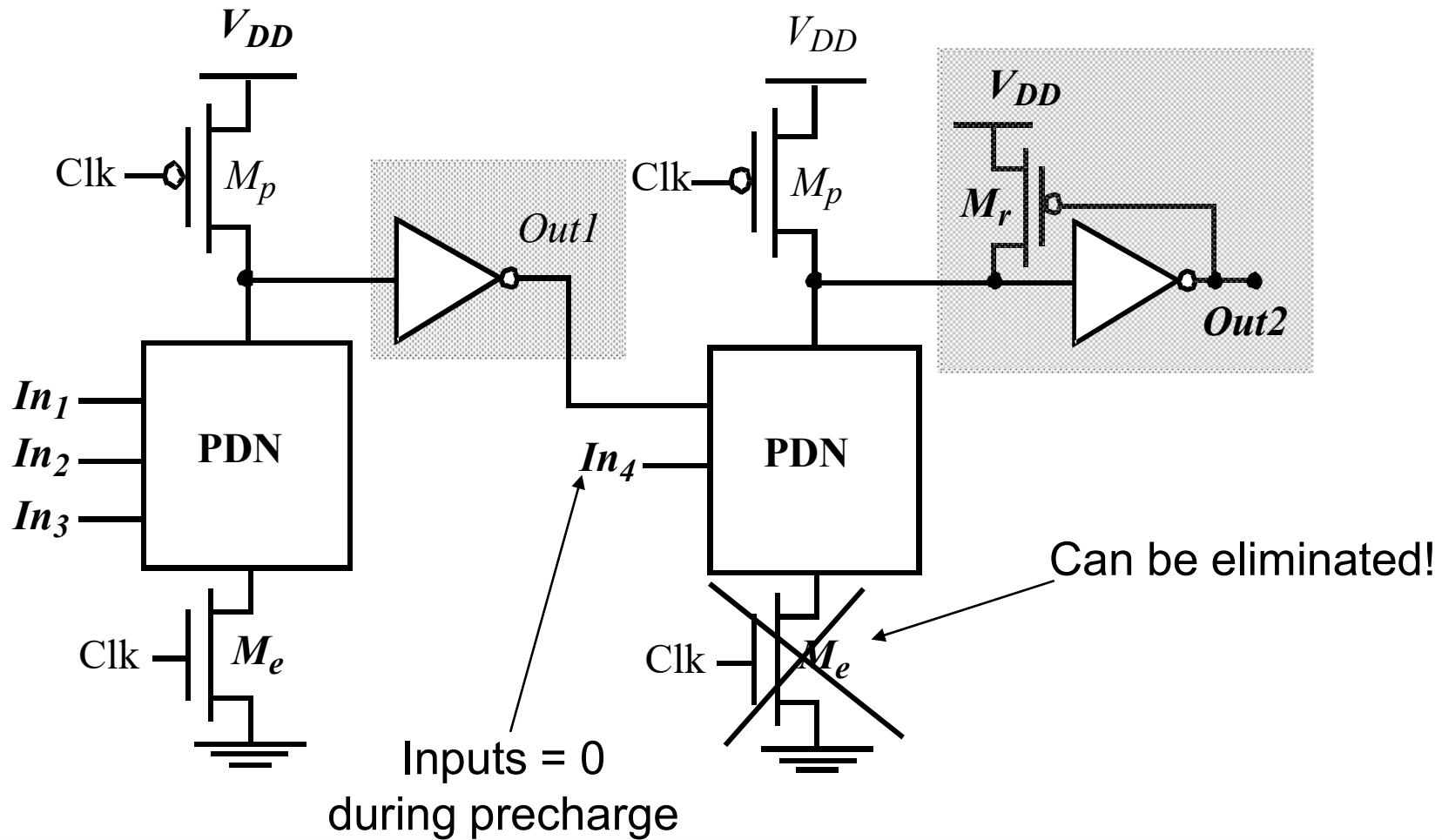


Like falling dominos!

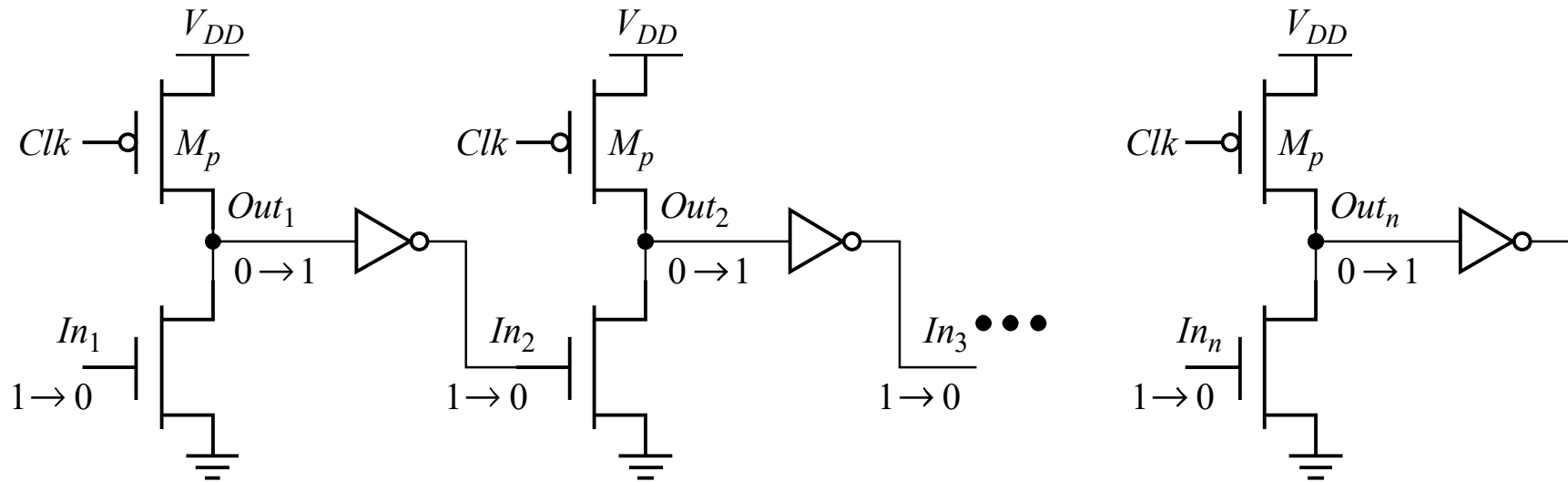
Properties of Domino Logic

- ❑ Only non-inverting logic can be implemented
- ❑ Very high speed
 - static inverter can be skewed, only L-H transition
 - Input capacitance reduced – smaller logical effort

Designing with Domino Logic

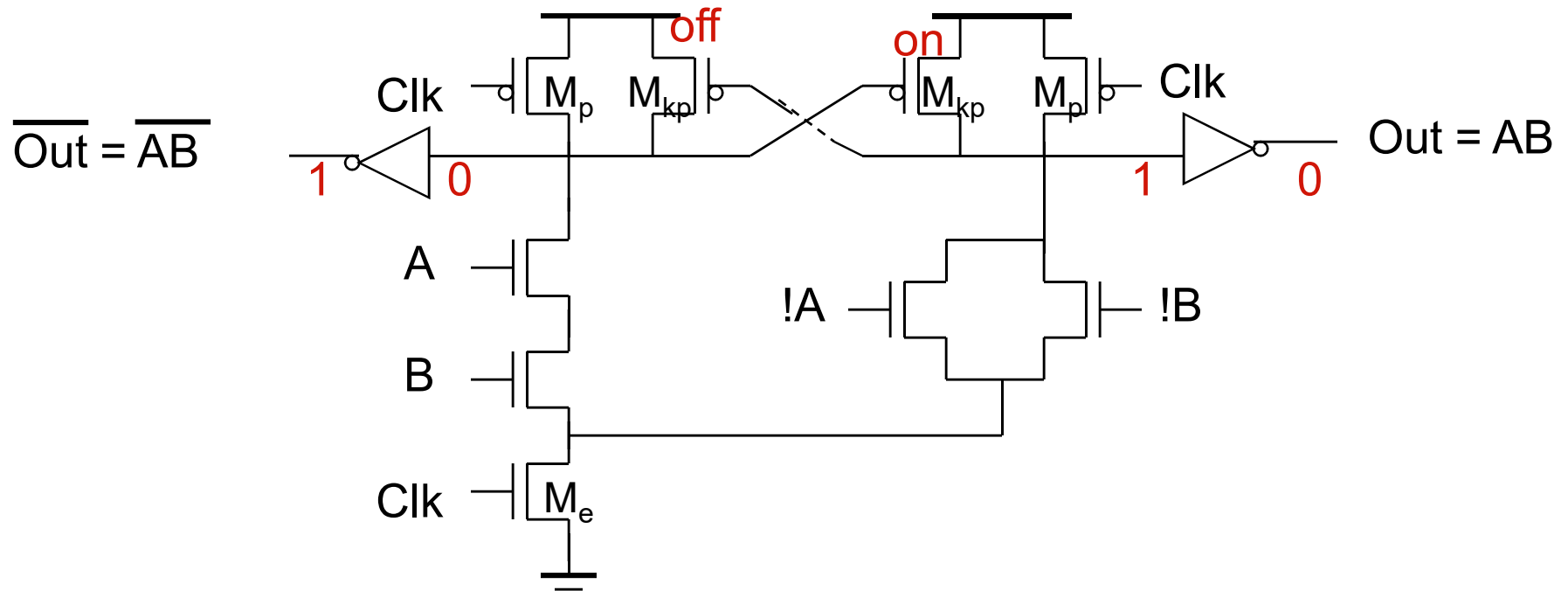


Footless Domino



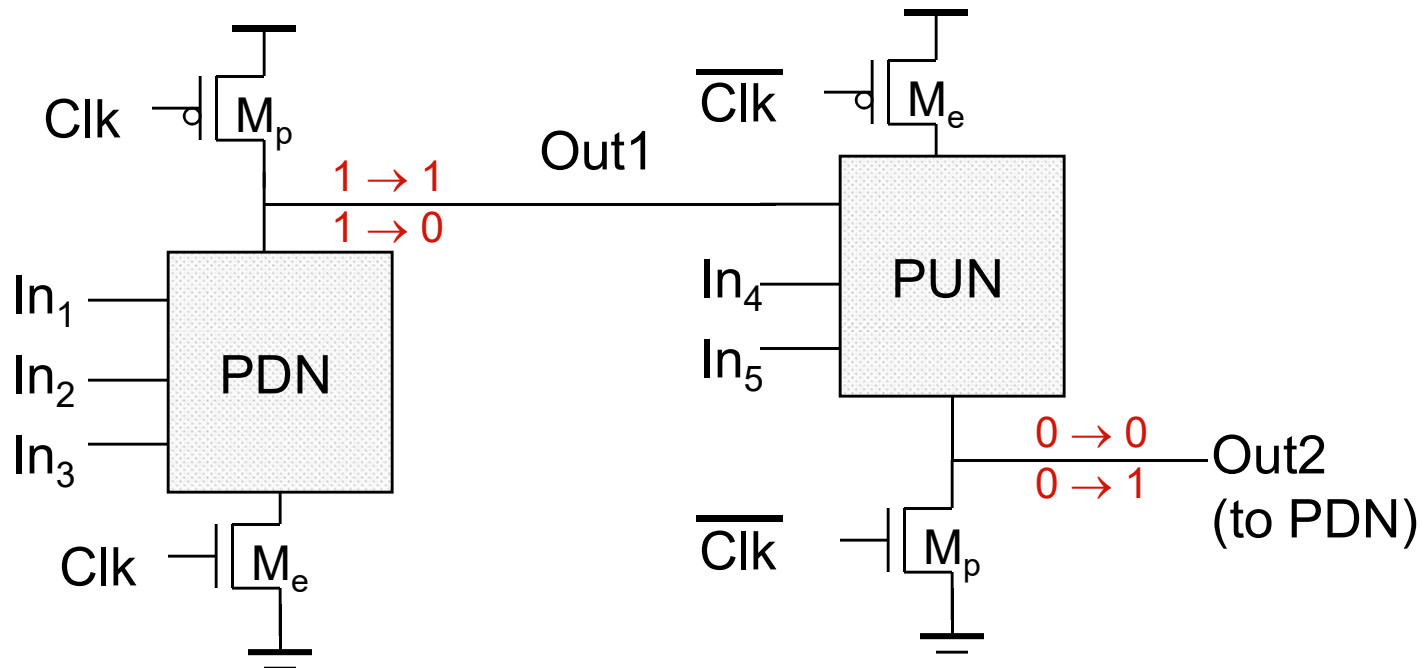
The first gate in the chain needs a foot switch
Precharge is rippling – short-circuit current
A solution is to delay the clock for each stage

Differential (Dual Rail) Domino



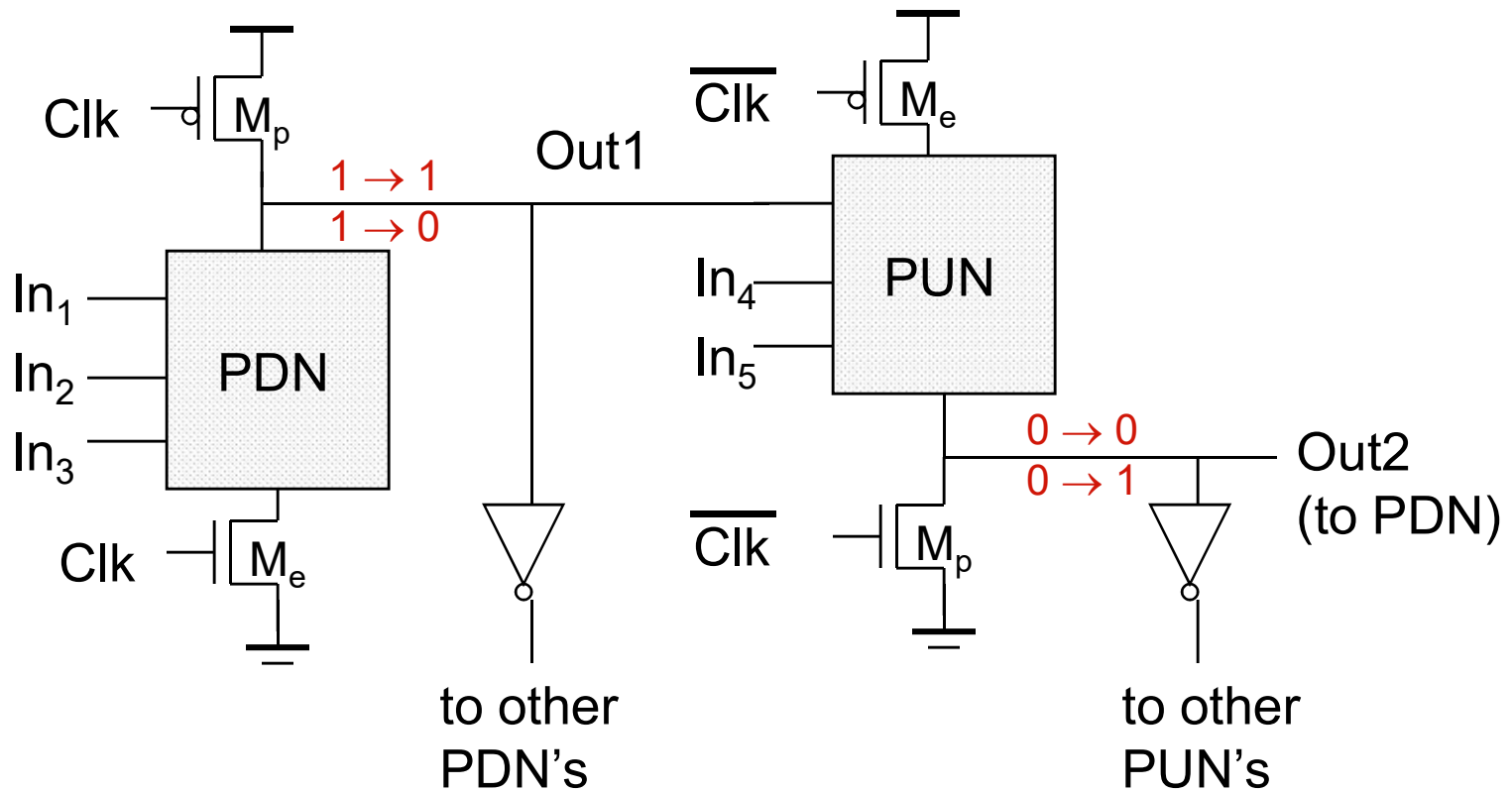
Solves the problem of non-inverting logic

np-CMOS



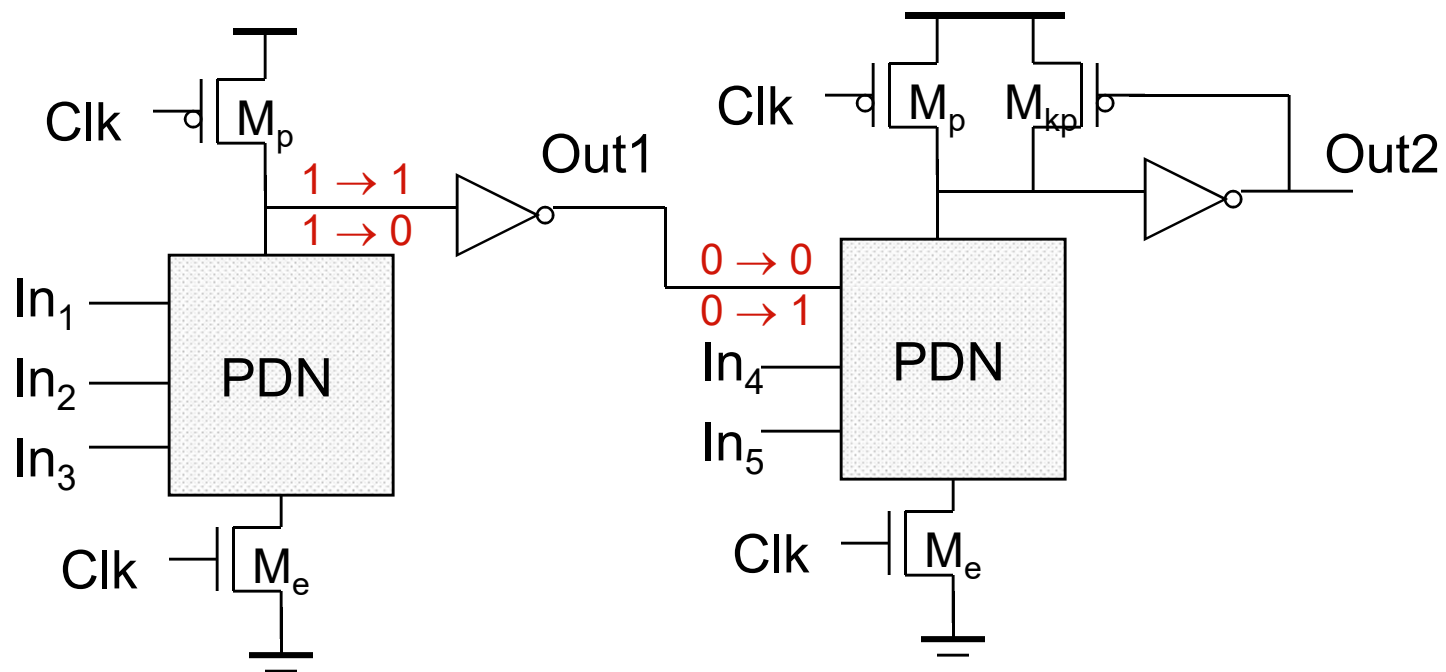
Only $0 \rightarrow 1$ transitions allowed at inputs of PDN
Only $1 \rightarrow 0$ transitions allowed at inputs of PUN

NORA Logic

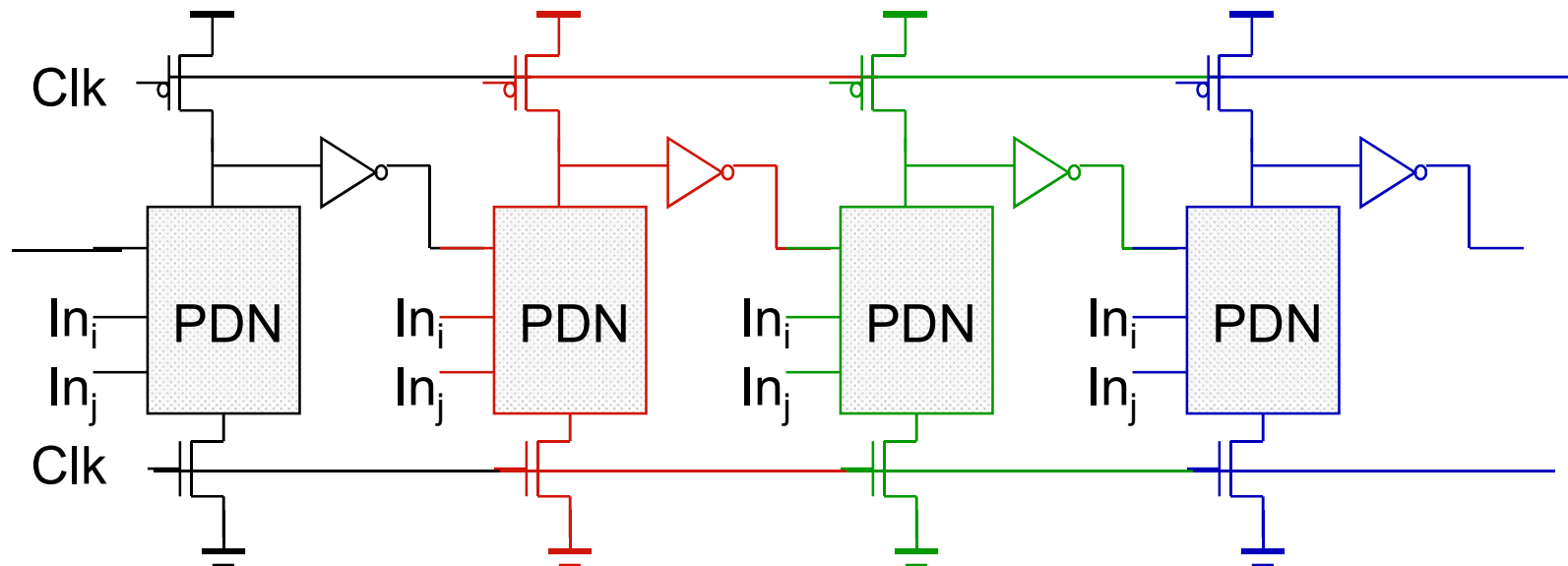


WARNING: Very sensitive to noise!

Domino Logic



Why Domino?

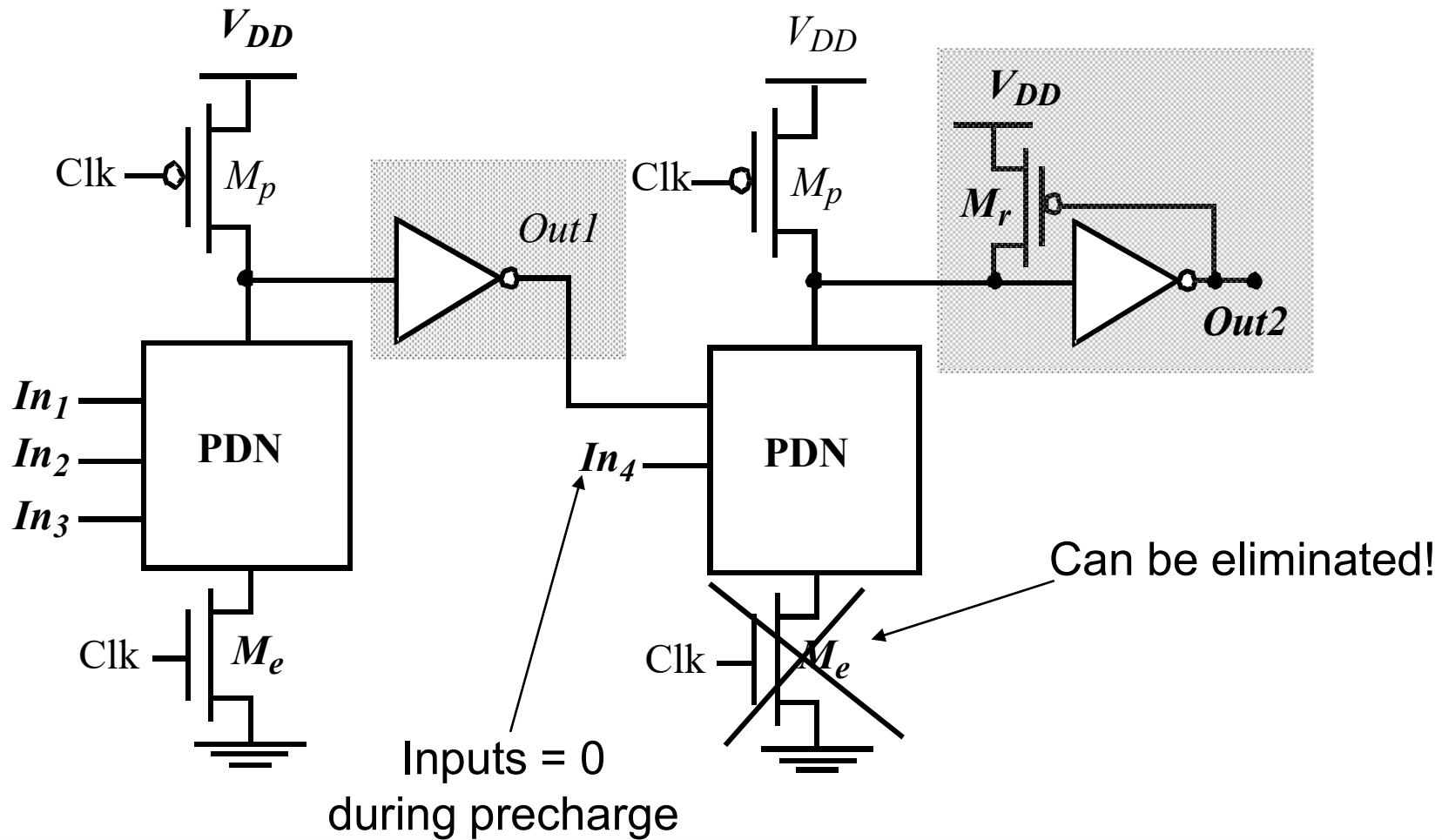


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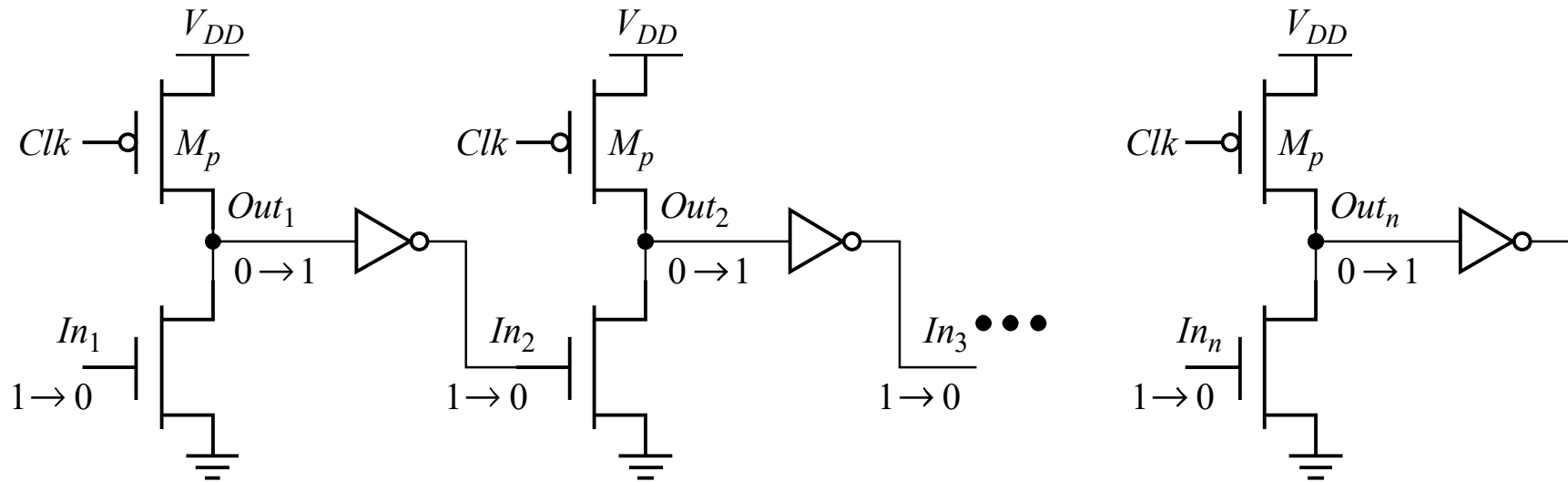
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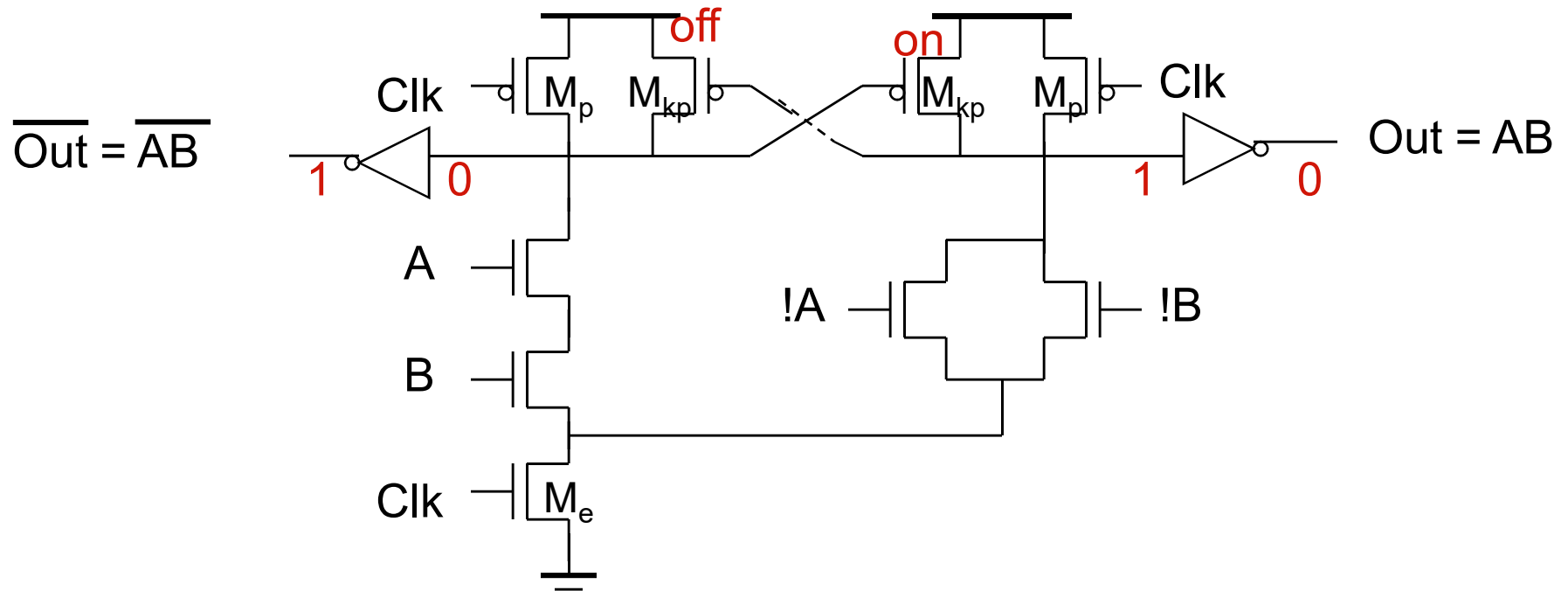


Footless Domino



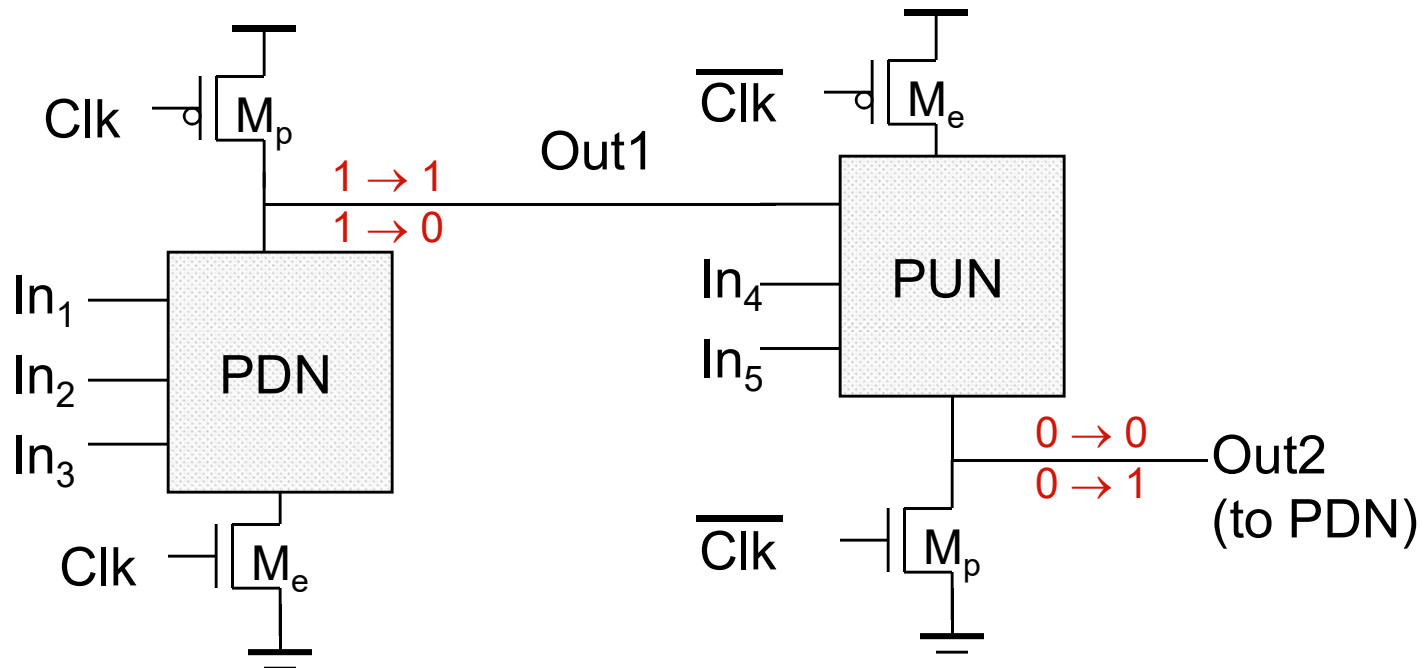
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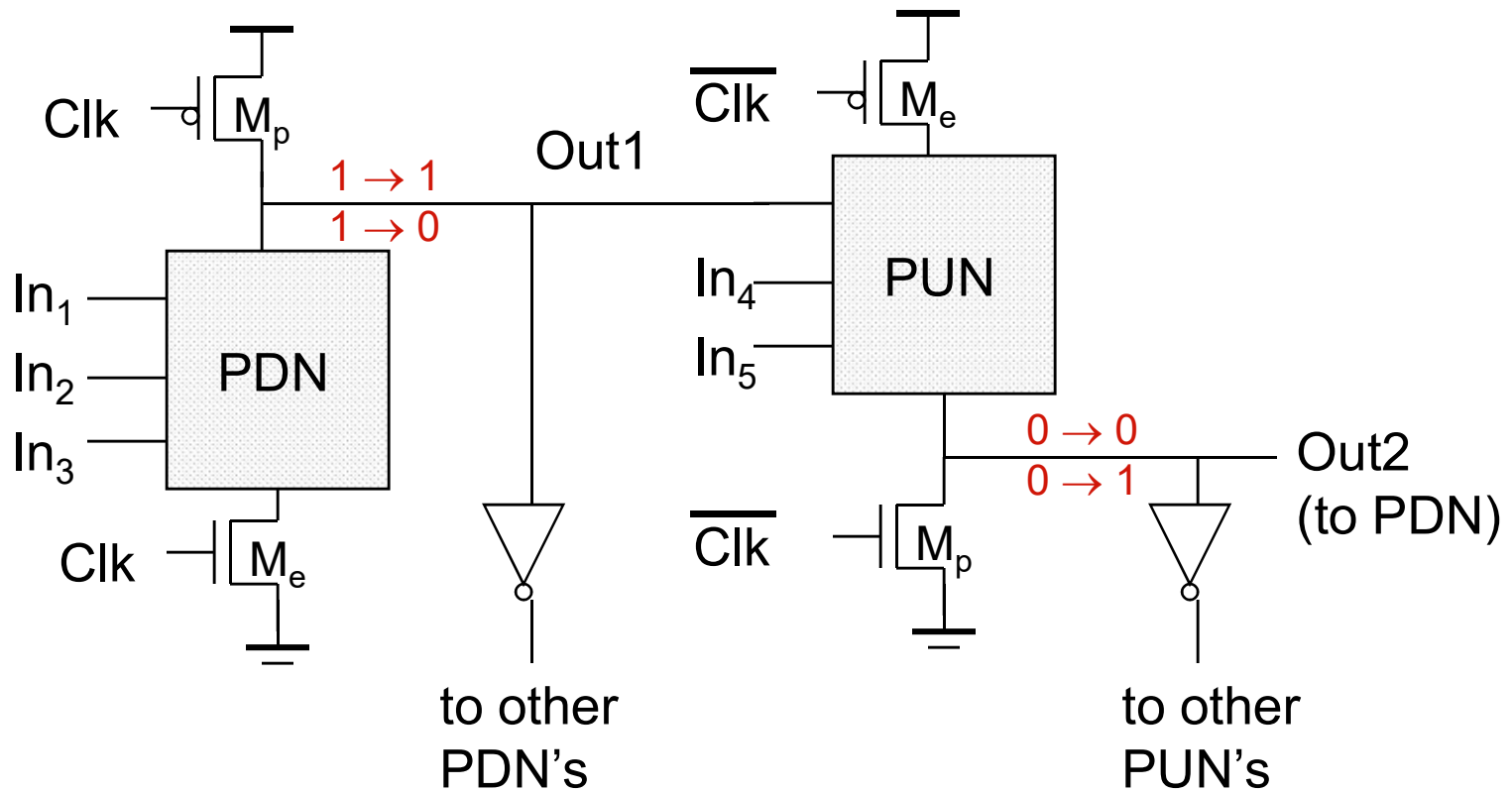
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np-CMOS



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