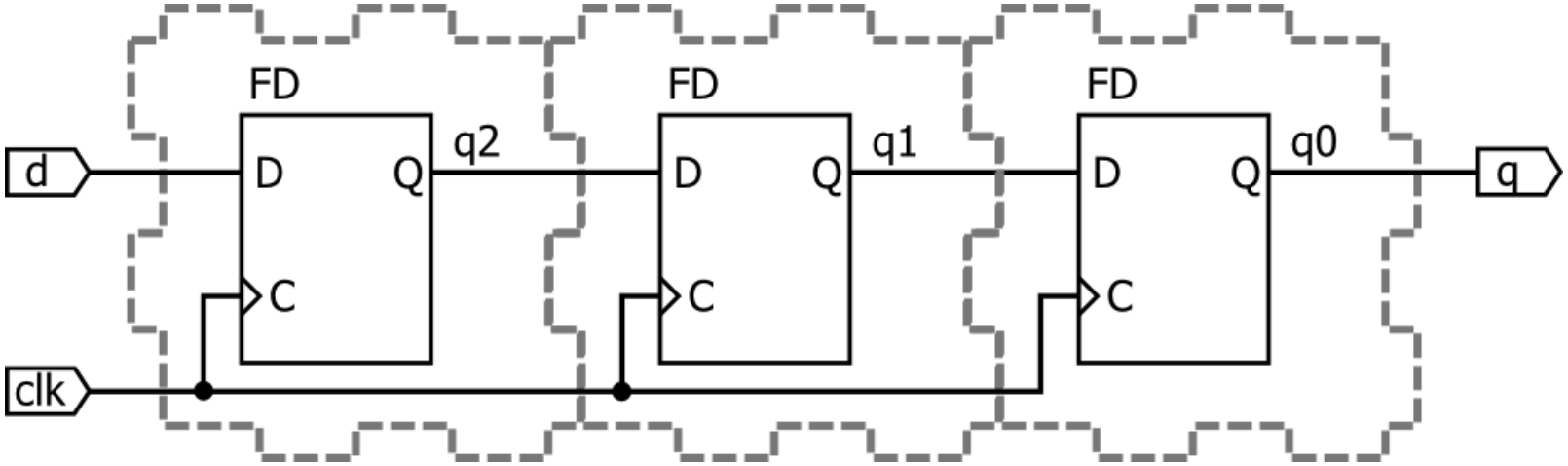
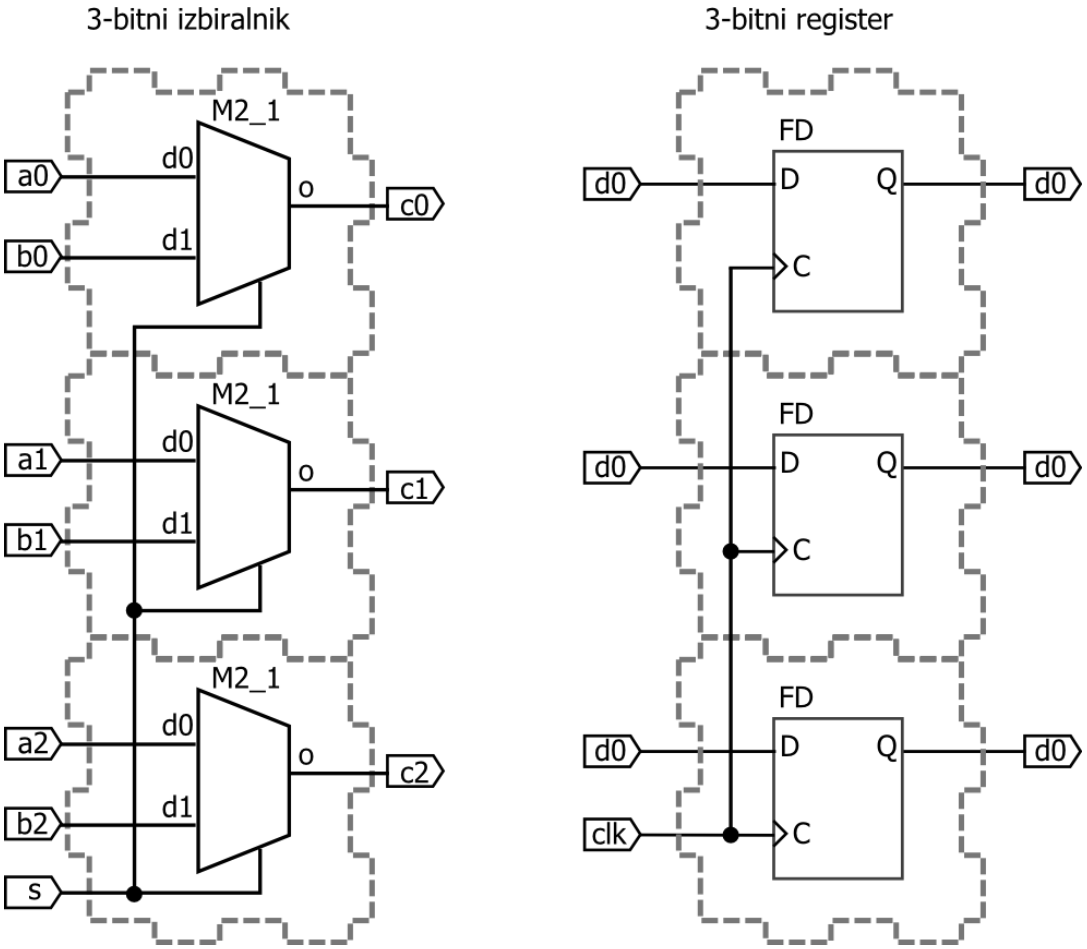
Zaporedna vezava

- Podatki se pri zaporednem prehodu čez gradnike zakasnijo
- Krmilni signali so vezani skupaj
- Npr. pomikalni register iz zaporednih flip-flopov



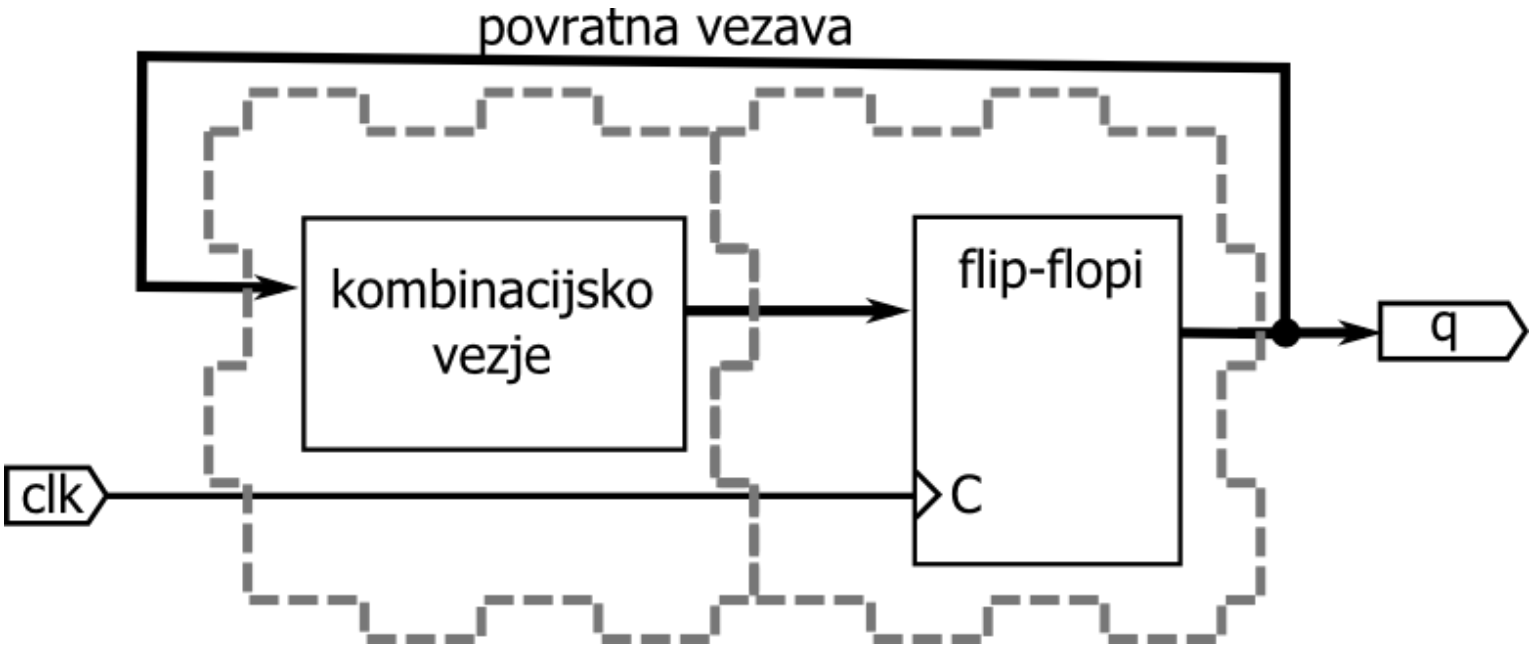
Vzporedna vezava

- posamezni podatkovni signali niso med seboj povezani
- zakasnitev taka, kot če bi imeli en gradnik



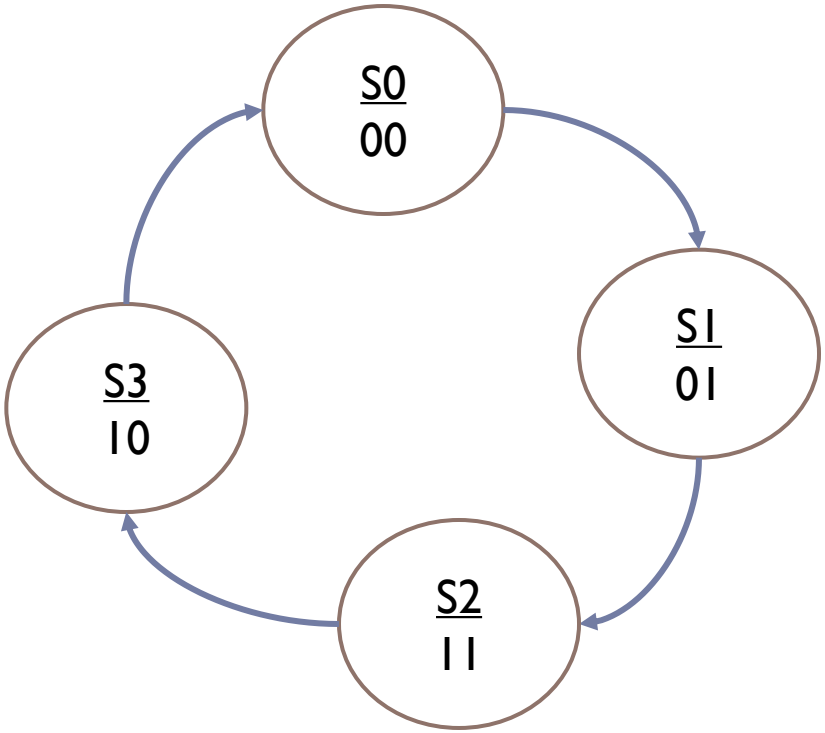
Povratna vezava

- Podatkovni izhod preko enega ali več gradnikov vezan na vhod istega gradnika
- V povratni vezavi mora biti sekvenčni gradnik (flip-flop)



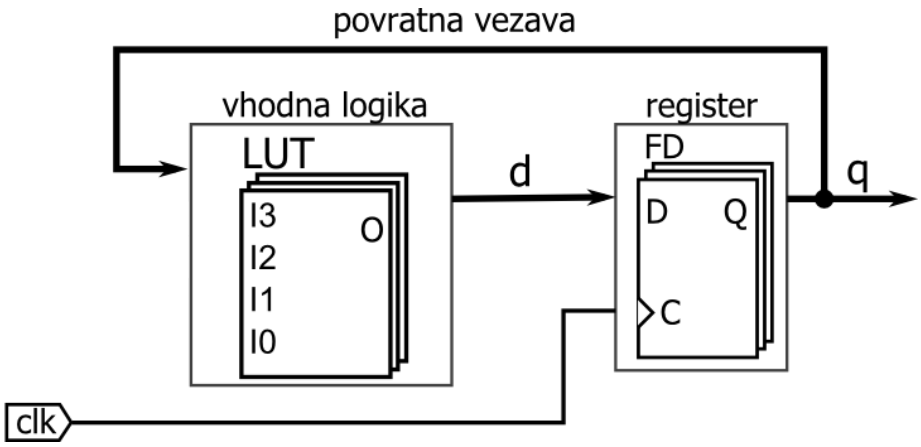
Povratna vezava

- Ciklična sekvenčna vezja – števci



Grayev števec

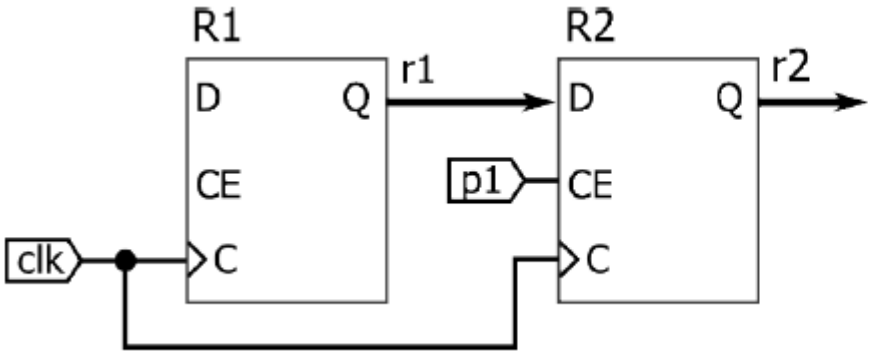
q1 q0	d1 d0
0 0	0 1
0 1	1 1
1 0	0 0
1 1	1 0

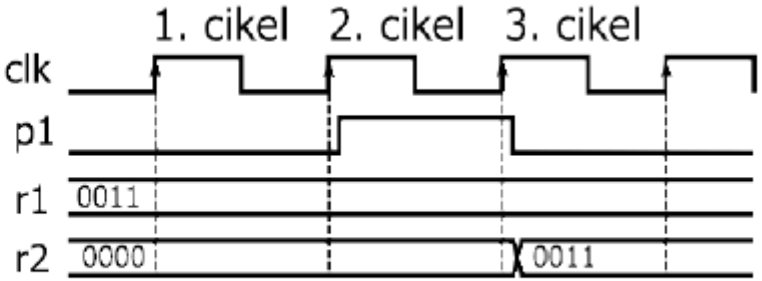


Registrski prenos – mikrooperacija prenosa

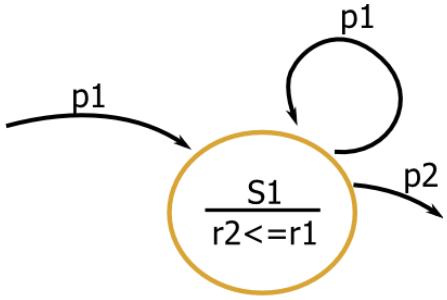
- Prenos podatkov med registri je elementarna operacija
  - prenos se izvrši ob fronti ure in dodatnim pogojem (ce = 1)

$$r2 <= r1 \mid ce = 1$$





- Mikrooperacija prenosa v diagramu stanj



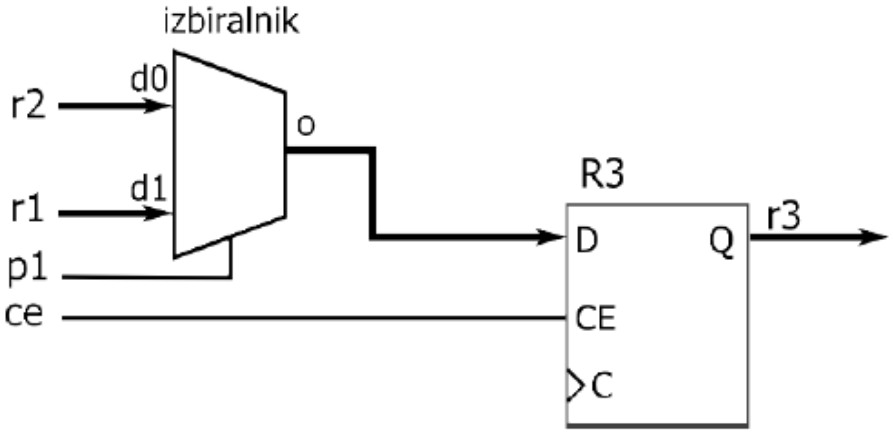
pogoj: stanje=S1

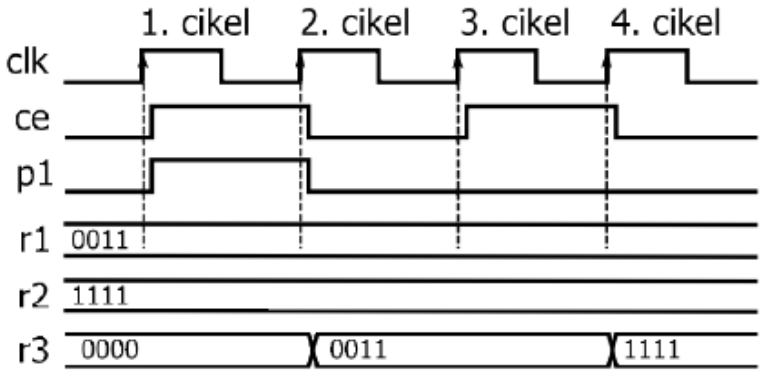
Mikrooperacija: registrski prenos z več izvori

- Vezje vsebuje izbiralnik

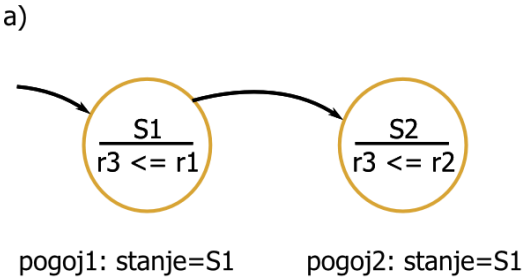
  r3 <= r1 | p1=1 and ce = 1

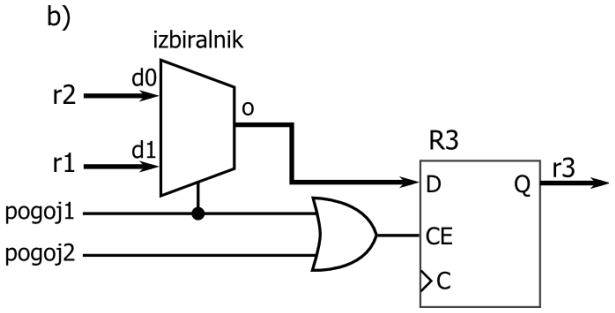
  r3 <= r2 | p1=0 and ce = 1





- Izbirni prenos v diagramu stanj

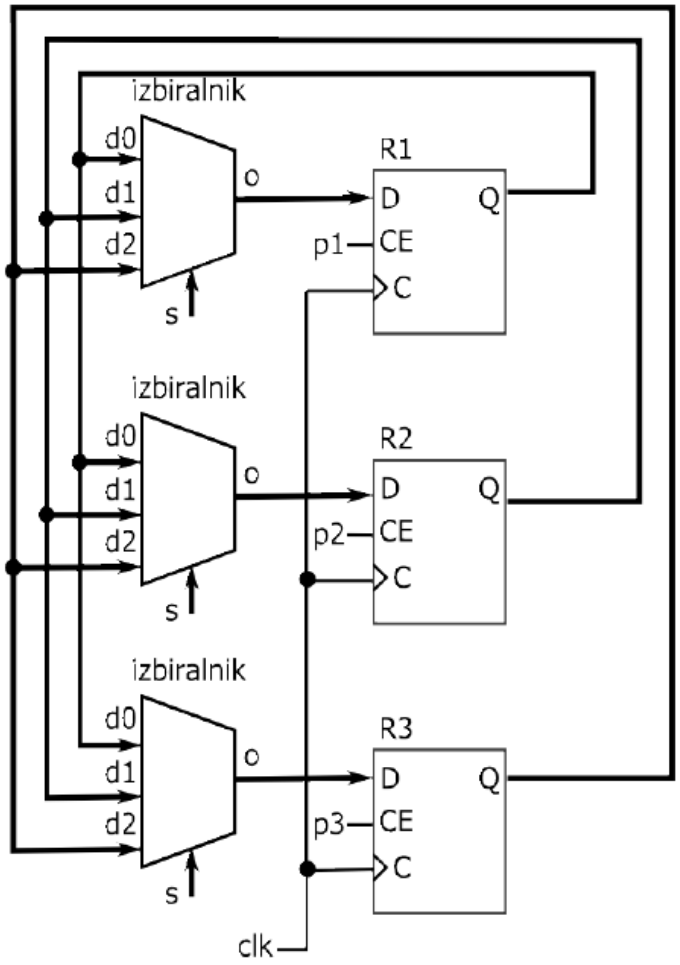




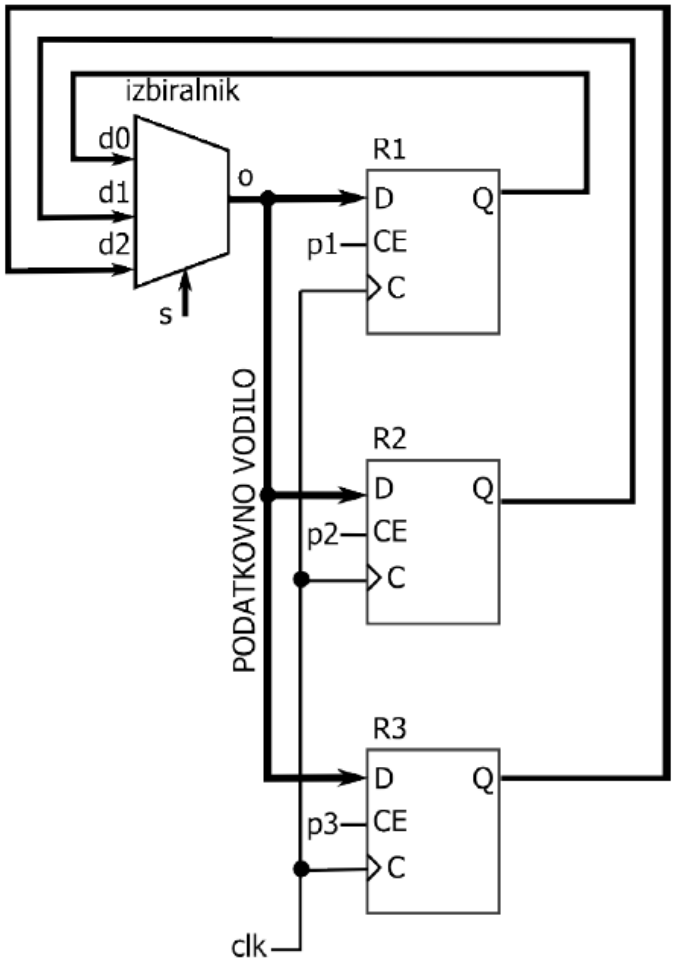
Registrski prenos z vodilom

- Vezje za prenos podatkov med poljubnima registroma

a) z izbiralniki na vsakem vhodu



b) s skupnim vodilom



Mikrooperacija pomika

- Vezja za zaporedni prenos podatkov
- Npr. zaporedni pomikalni register (SISO) ali
  paralelni prenos in zaporedno pomikanje (PISO)

$$r2 <= din \ : \ r1[3..1] \quad | \ shift = 0 \text{ and } ce = 1$$
$$r2 <= r1 \quad | \ shift = 1 \text{ and } ce = 1$$