

FACULTY of ELECTRICAL
ENGINEERING
OSIJEK

ARHITEKTURA RAČUNALA 1

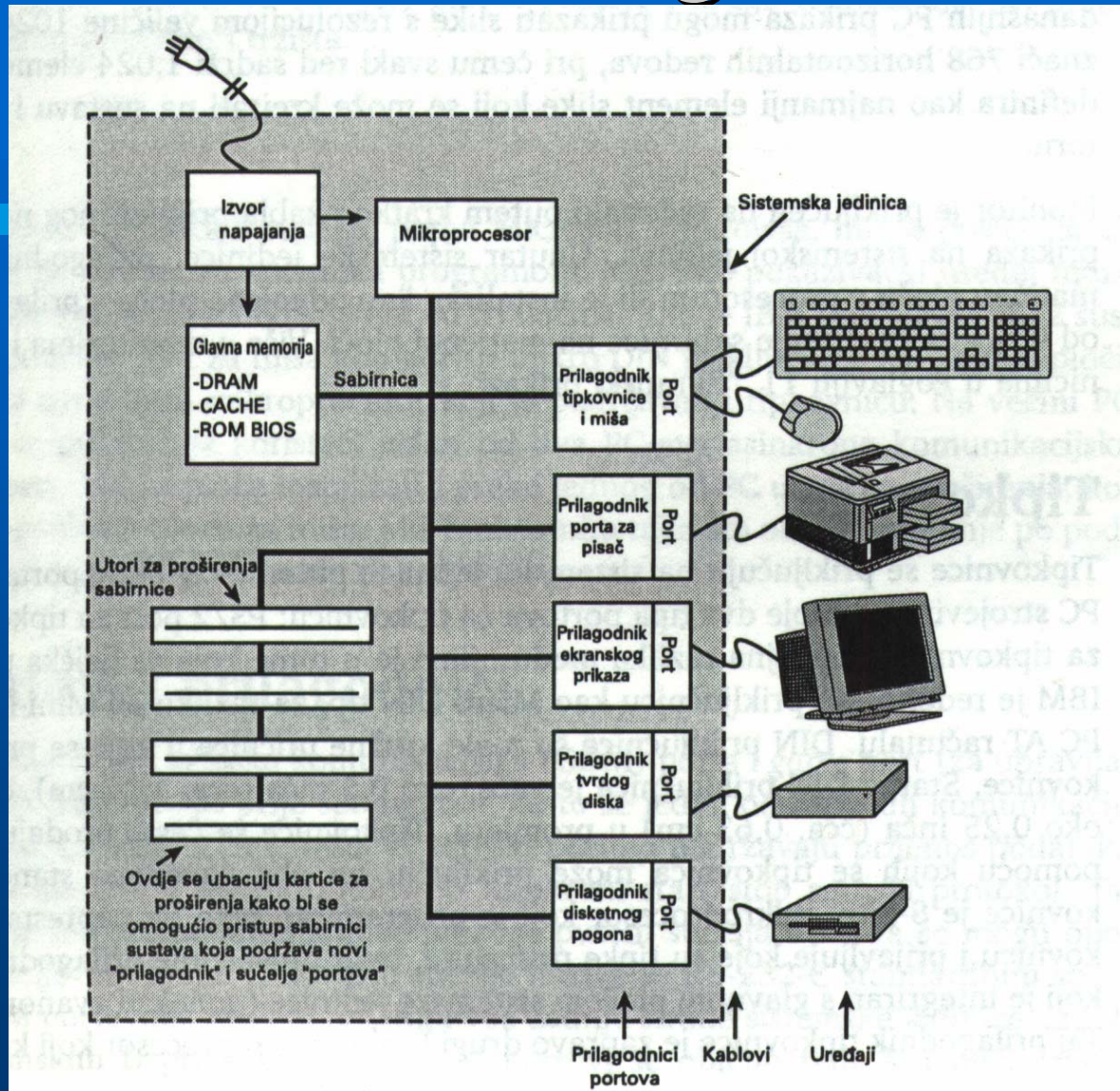
#1. GRAĐA RAČUNALA

Prof.dr.sc. Željko Hocenski

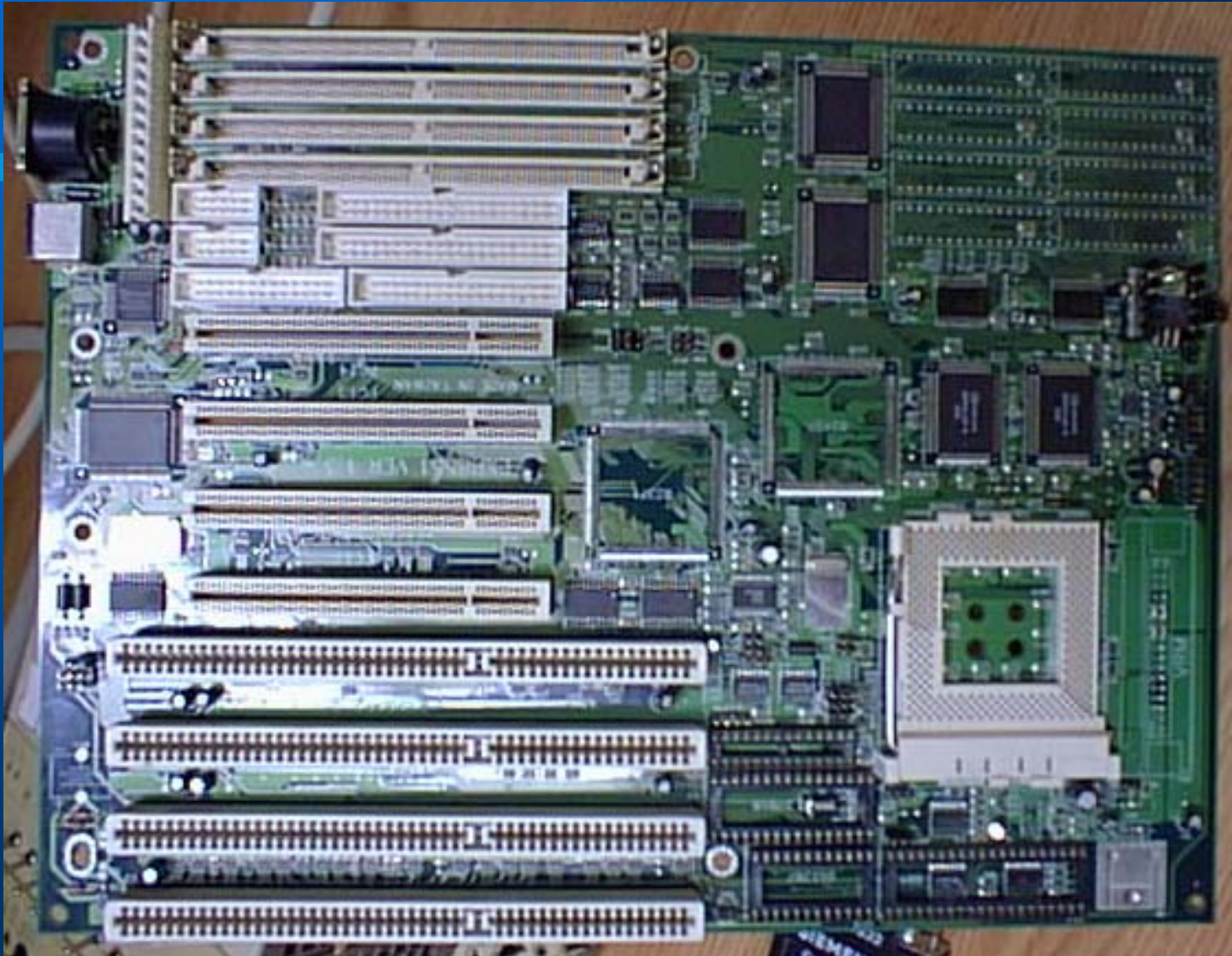


Osobno računalo

Shema osobnog računala



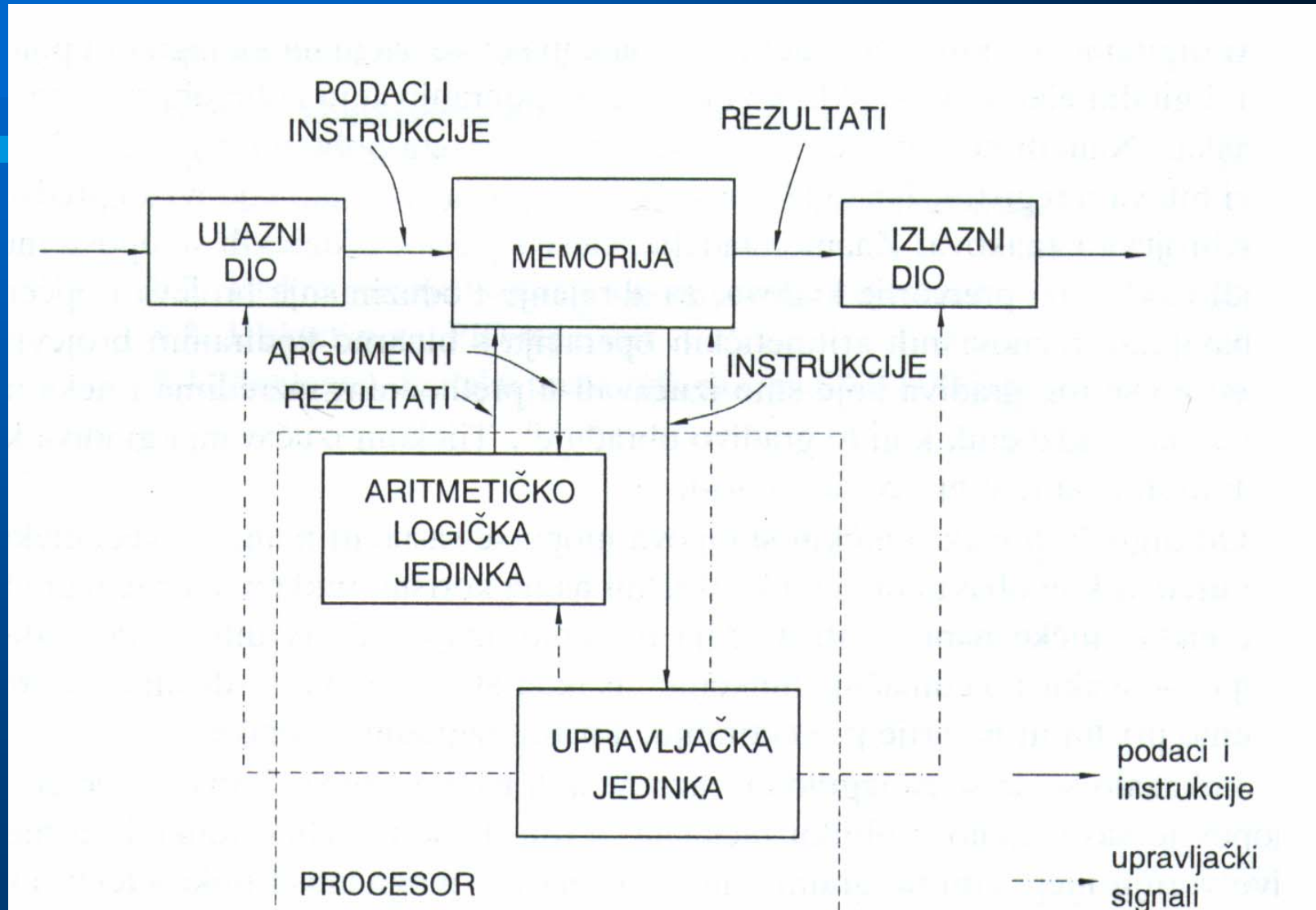
Matičná ploča



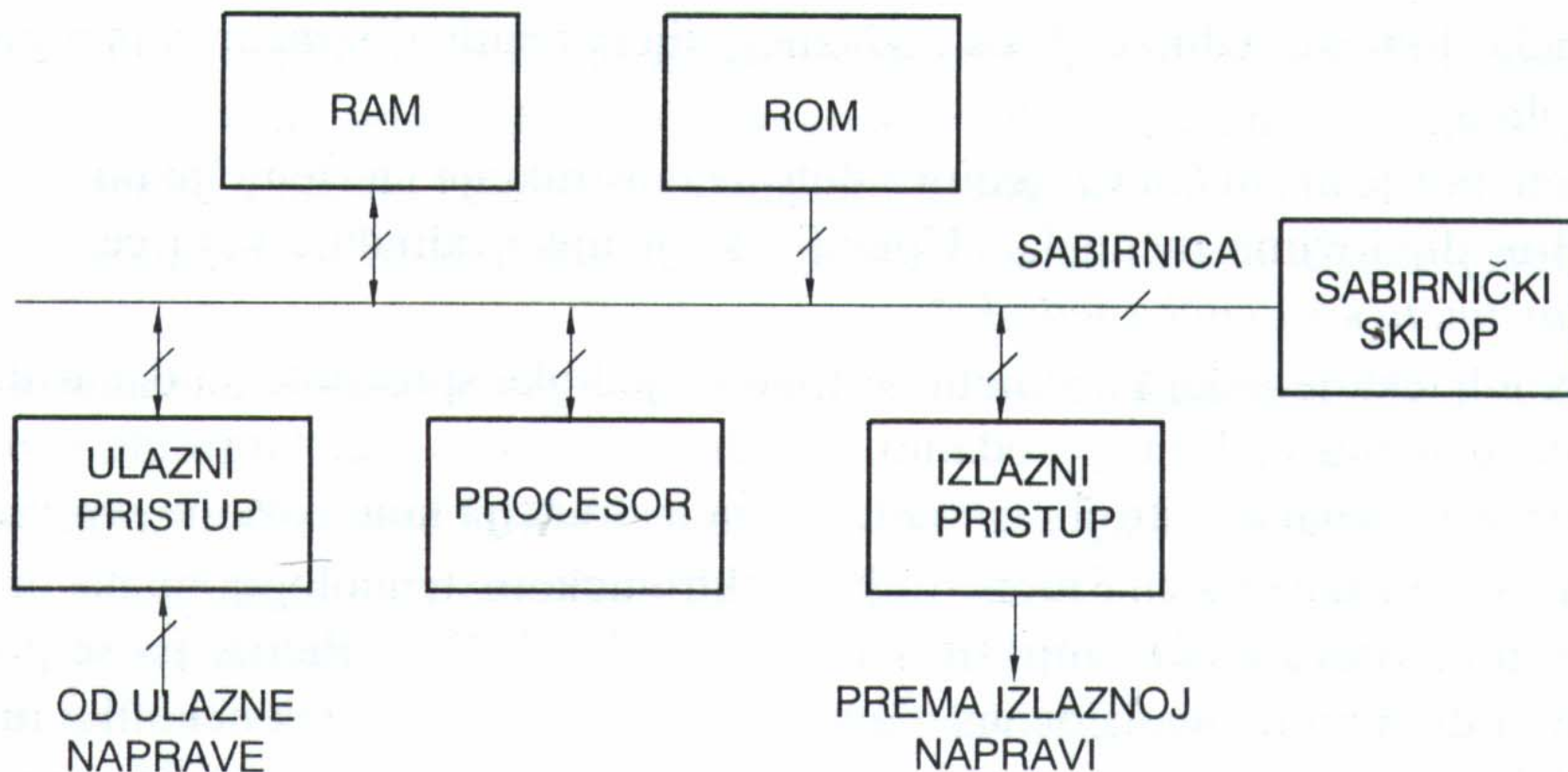


Vanjski priključci

Von Neumannov model računala



Sklopovlje računalna povezano sabirnicom



The diagram illustrates the internal structure and data flow of a computer system, divided into two main sections: the memory unit (top) and the processor (bottom).

Memory Unit (Top):

- BAJTOVI MEMORIJE (Byte Memory):** Represented as a vertical stack of memory cells.
- REGISTAR ADRESE (Address Register):** A single-cell register that receives a 32-bit address from the processor's address register and outputs it to the memory.
- REGISTAR SADRŽAJA (Content Register):** A multi-cell register that receives data from the memory and outputs it to the processor's data register.

Processor (Bottom):

- ADRESNI MEĐUREGISTAR (Address Register):** Outputs a 32-bit address to the memory's address register.
- PODATKOVNI MEĐUREGISTAR (Data Register):** Receives 32-bit data from the memory's content register.

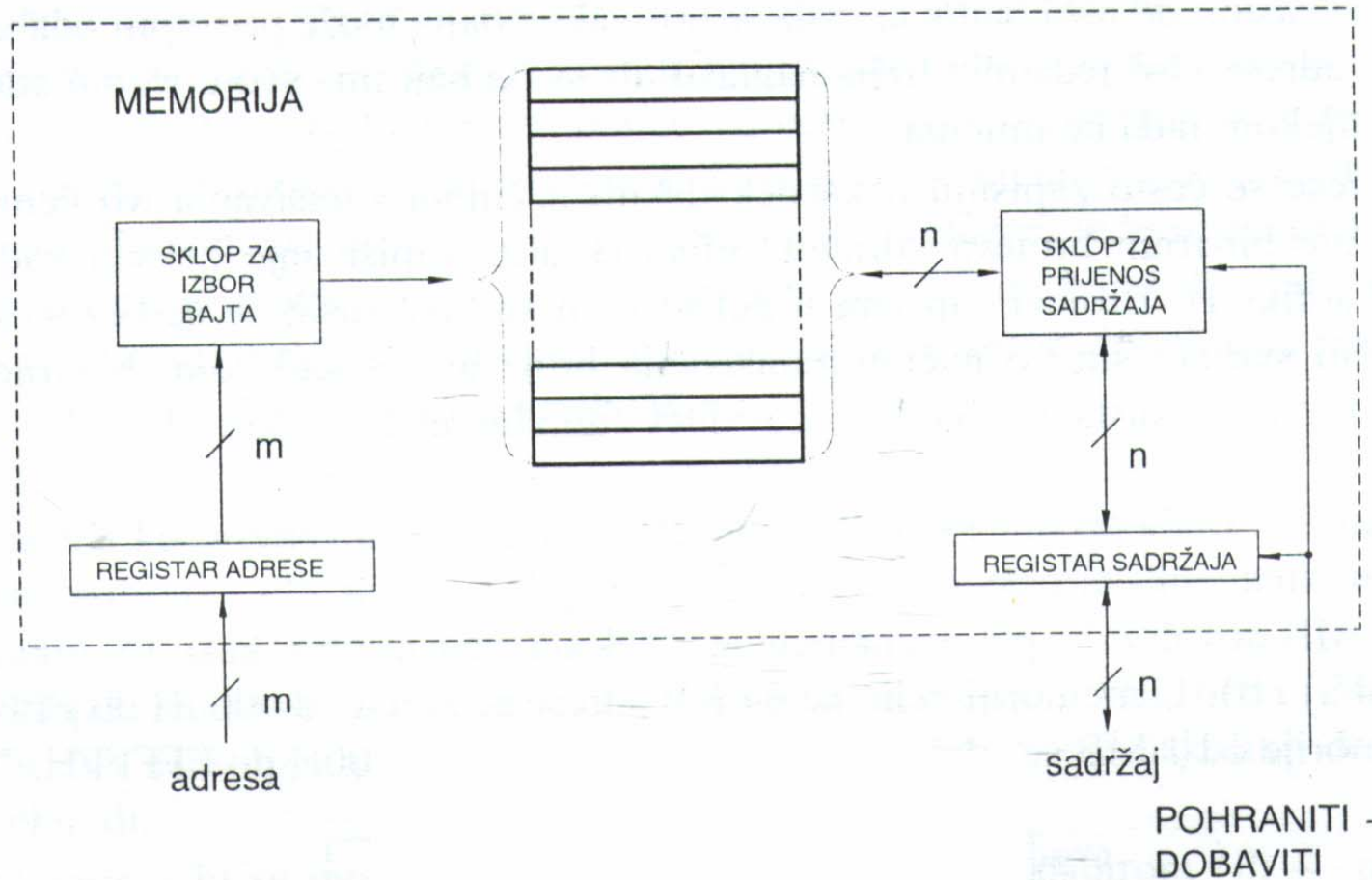
Data Paths and Buses:

- adresni dio sabirnice (Address Bus):** A 32-bit bus connecting the processor's address register to the memory's address register.
- podatkovni dio sabirnice (Data Bus):** A 32-bit bus connecting the memory's content register to the processor's data register.
- upravljački dio sabirnice (Control Bus):** A k-bit bus used for control signals.

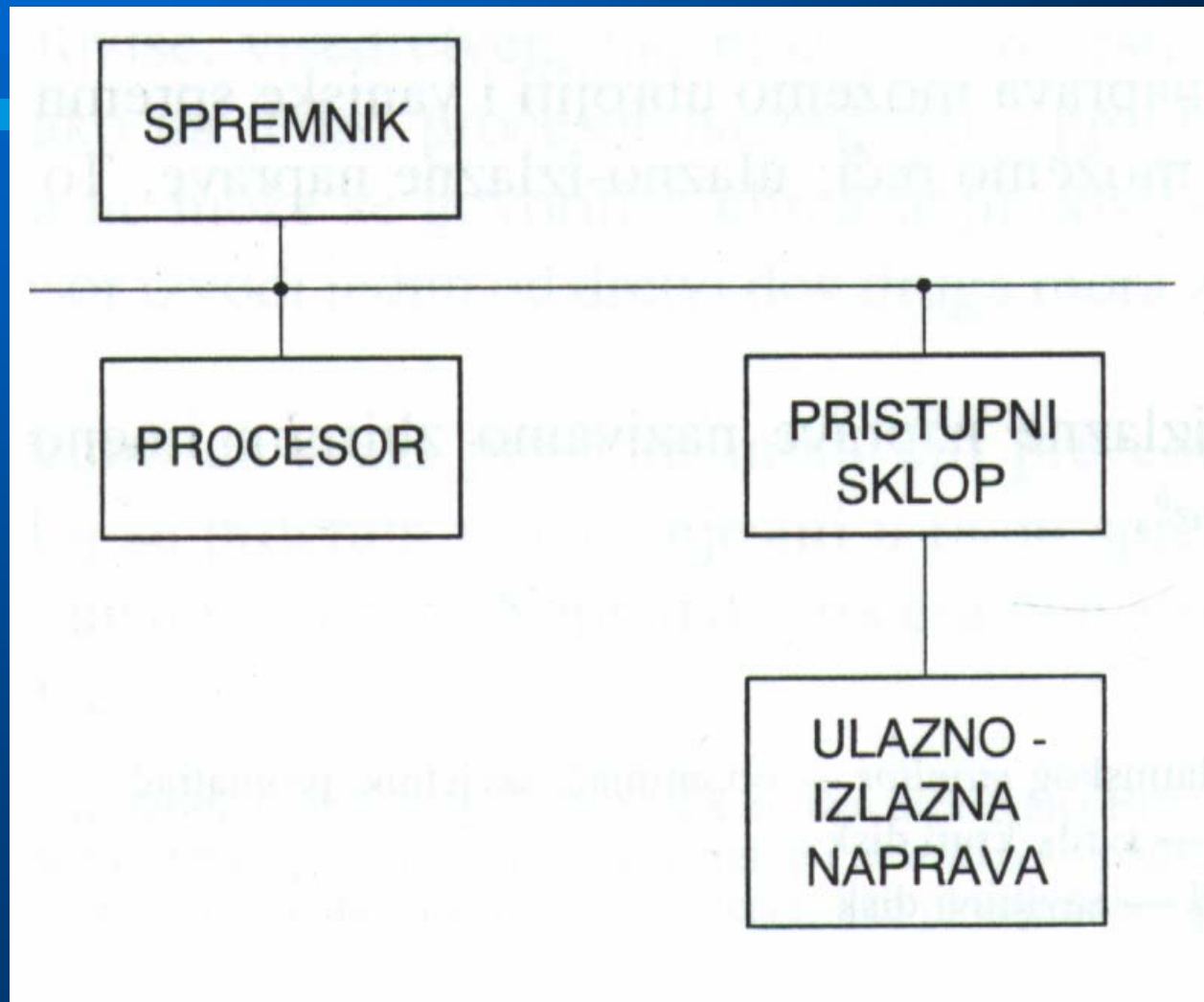
Operations:

- POHRANITI (Store):** Indicated by an arrow from the processor's data register to the memory's content register.
- DOBAVITI (Load):** Indicated by an arrow from the memory's content register to the processor's data register.

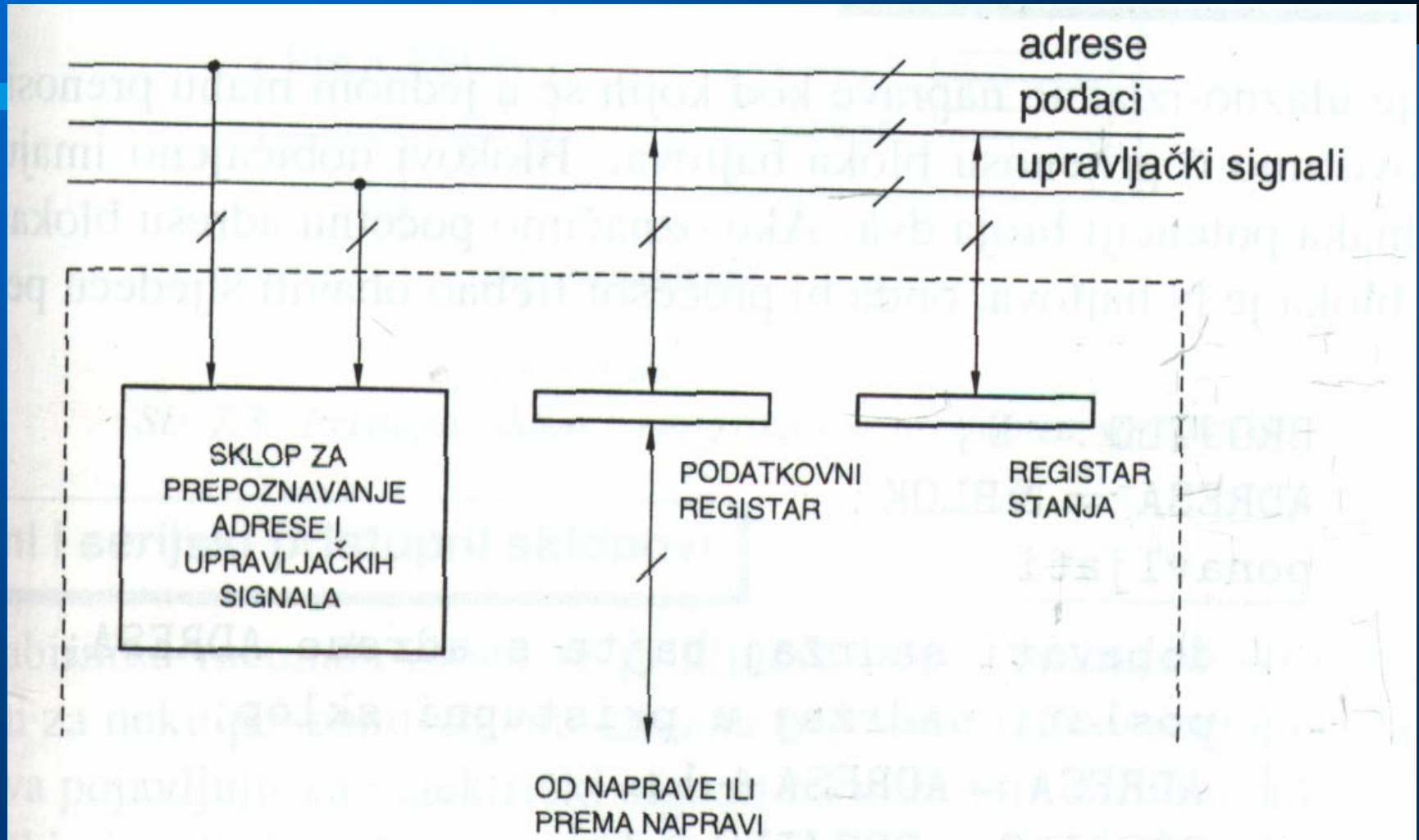
Grada memorije



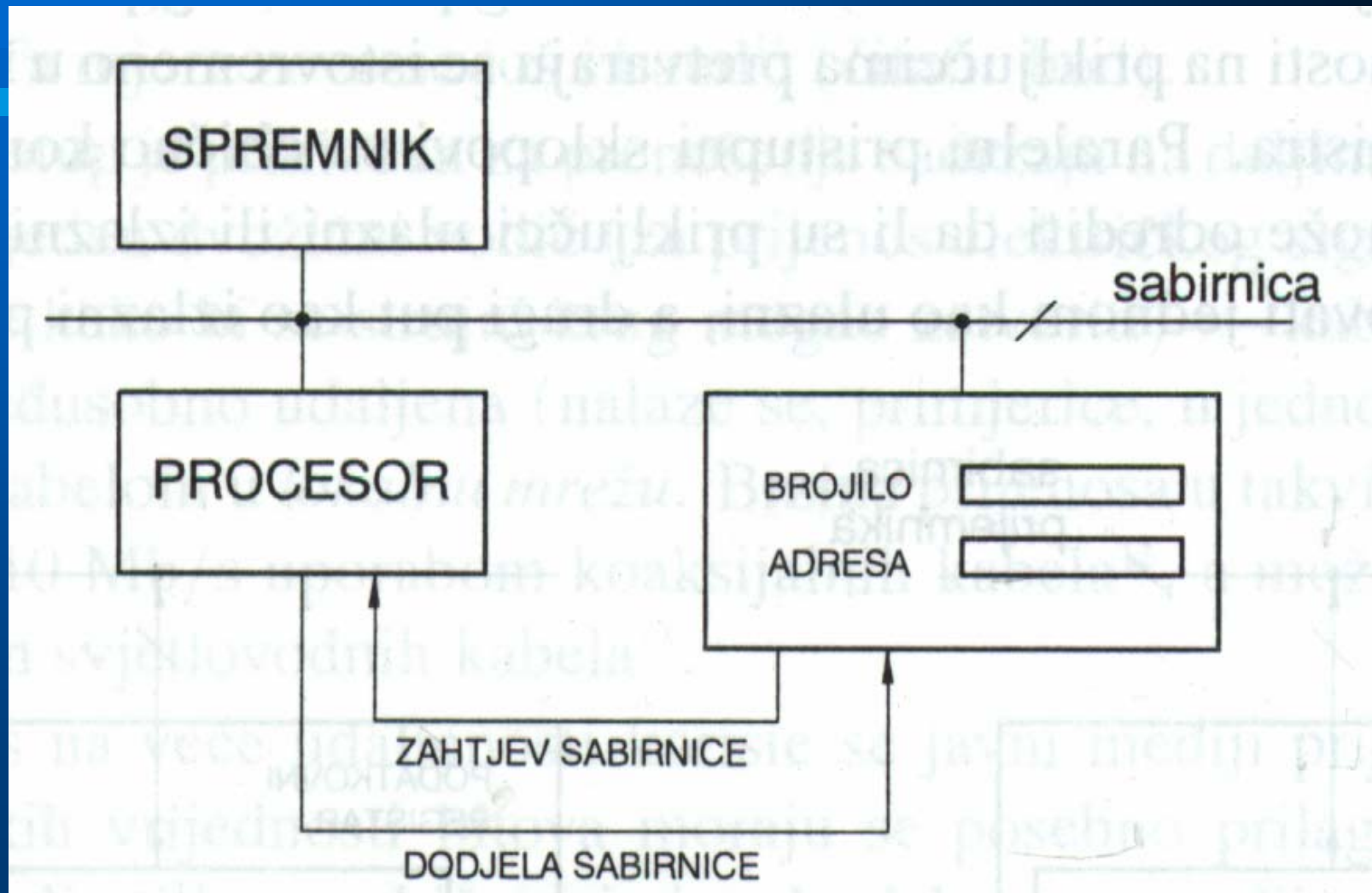
Povezivanje ulazno-izlazne jedinice



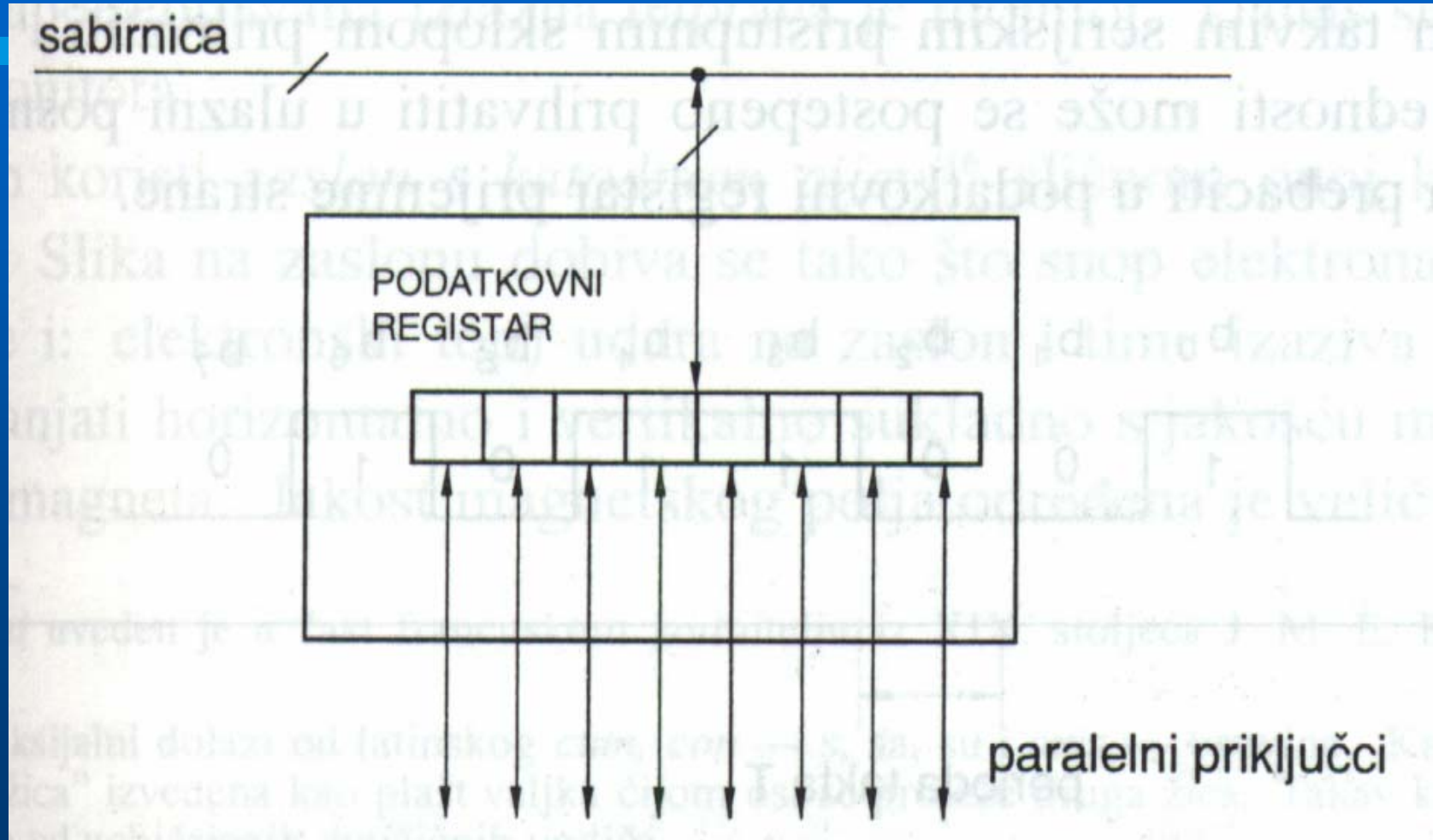
Izgled pristupnog sklopa



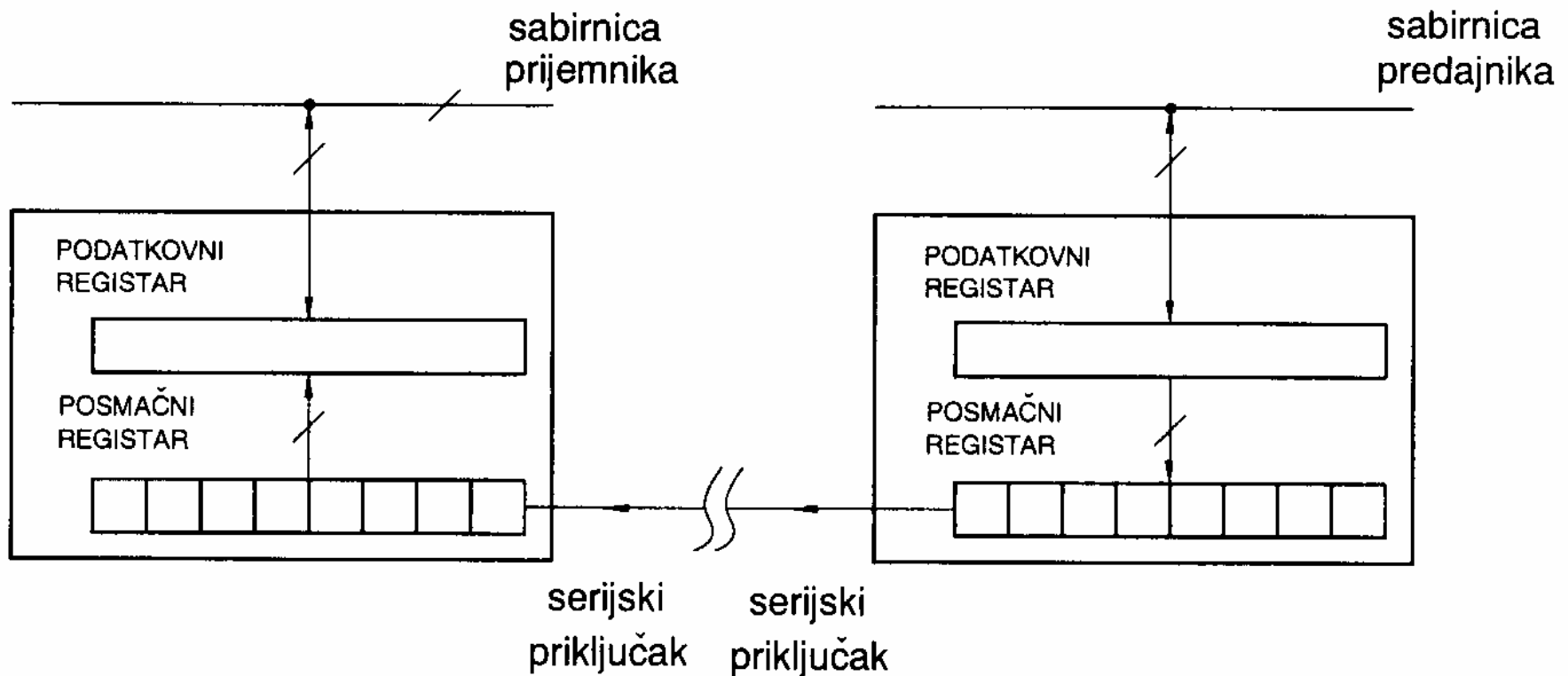
Pristupni sklop s neposrednim pristupom spremniku



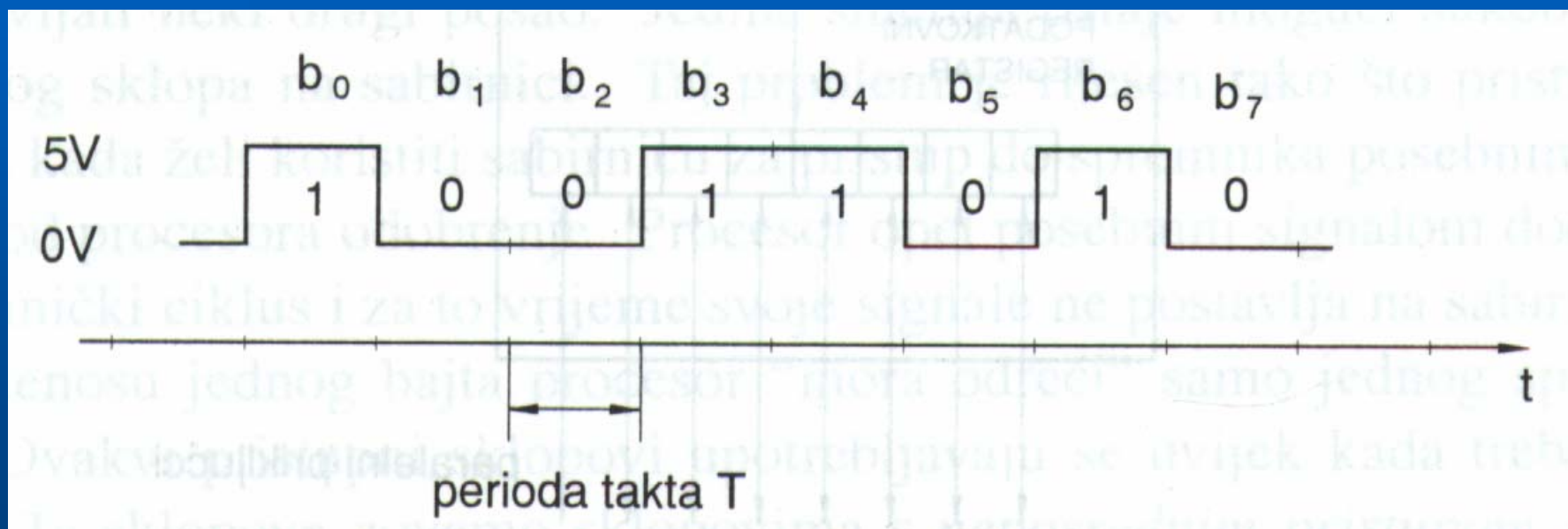
Paralelni pristupni sklop



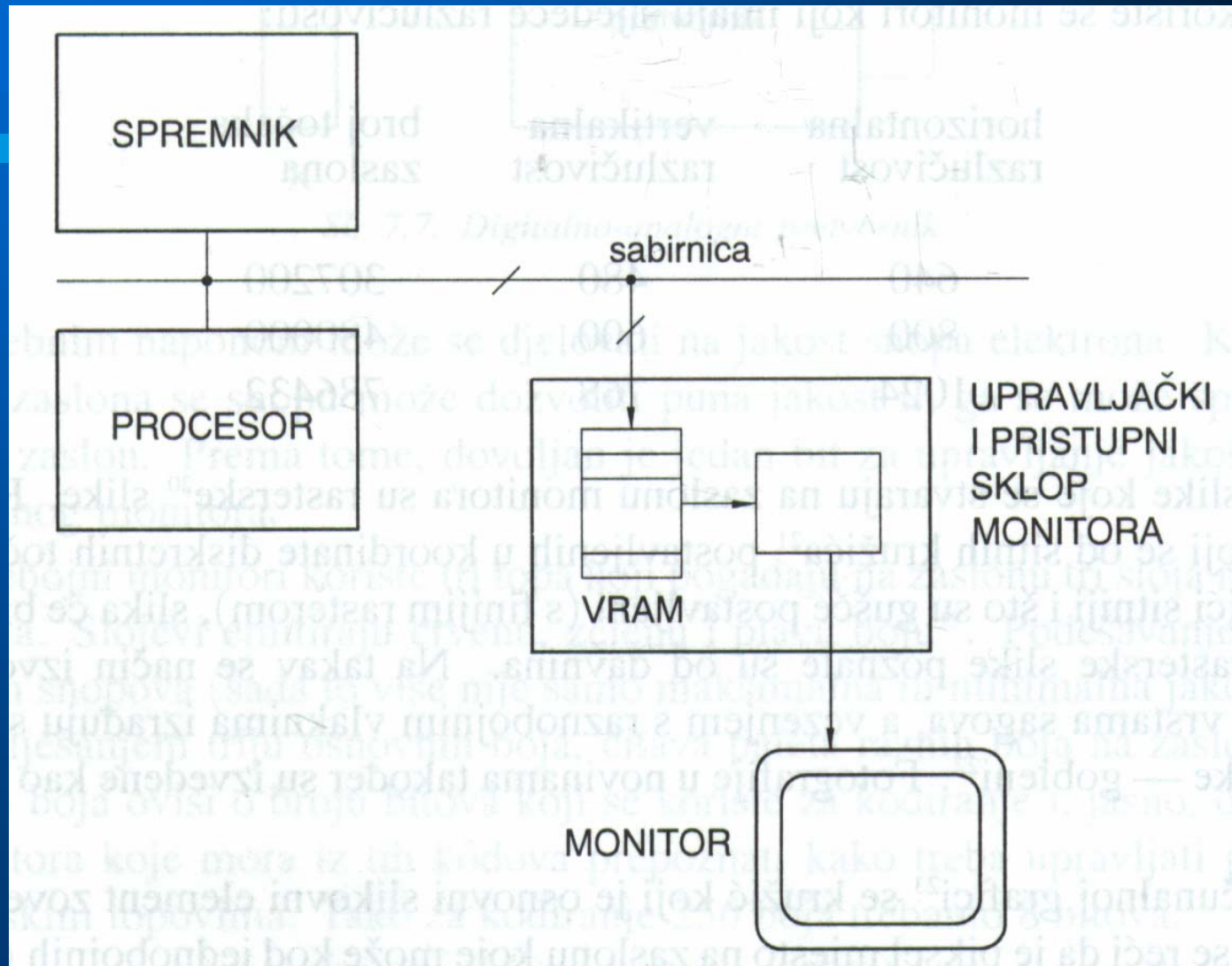
Serijski pristupni sklop



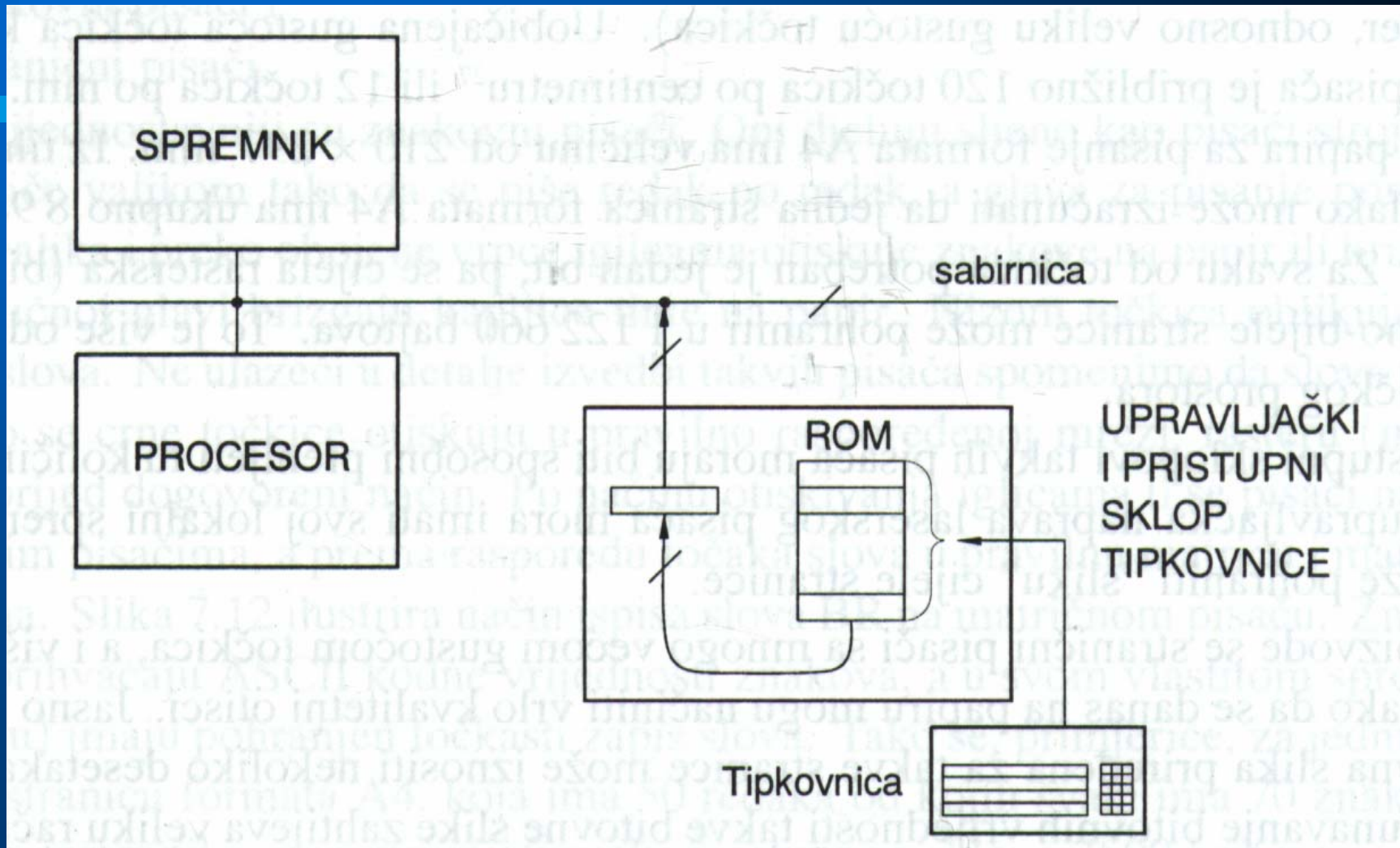
Vremenski dijagram serijskog prijenosa



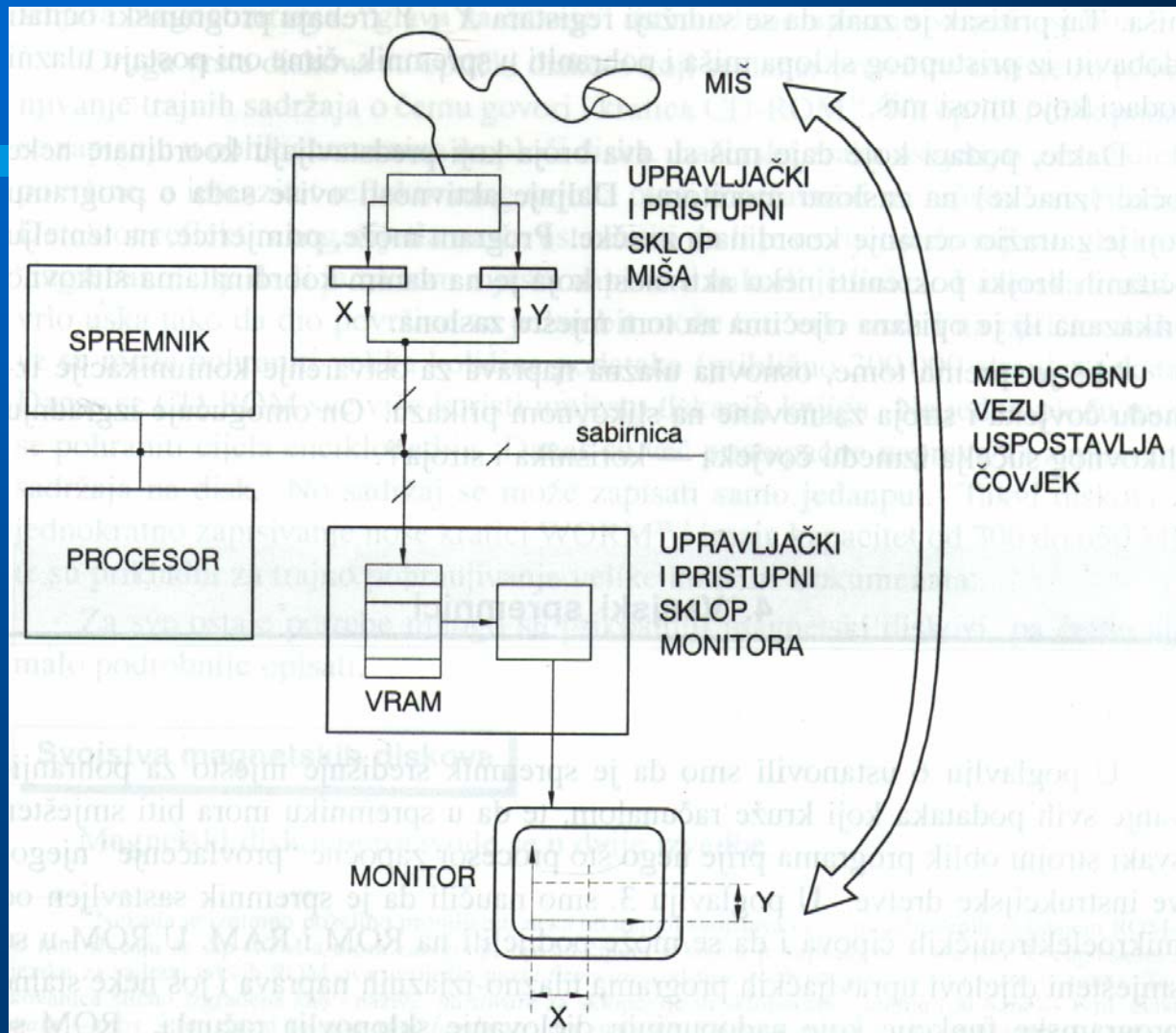
Pristupni sklop monitora



Pristupni sklop tipkovnice



Veza između miša i monitora



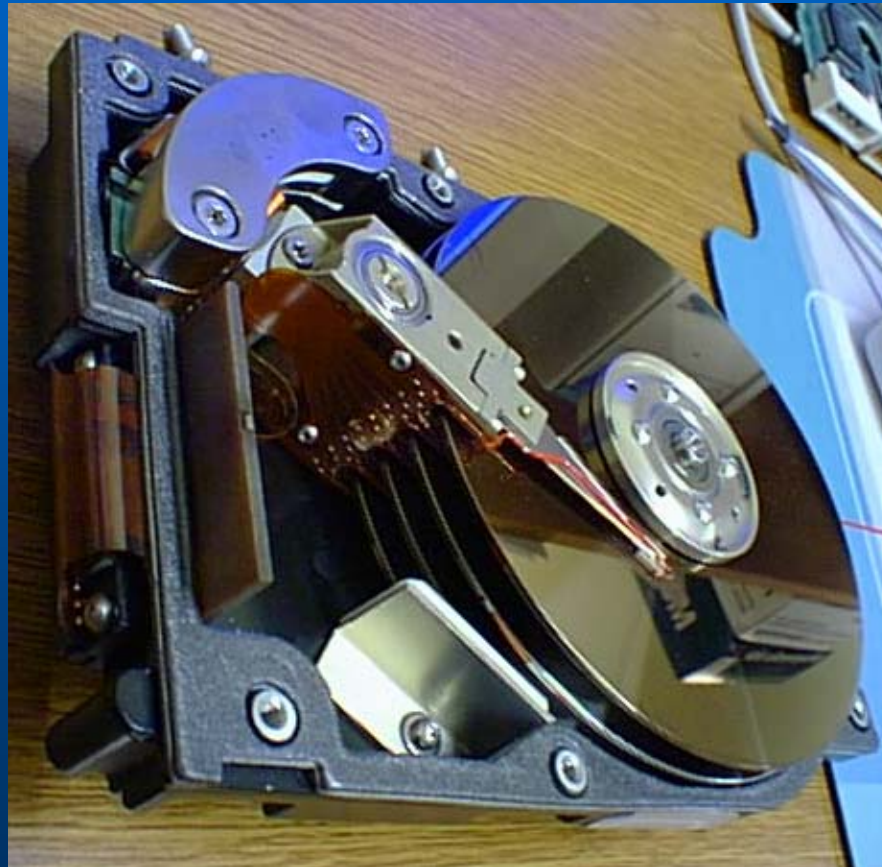
Tvrdi disk



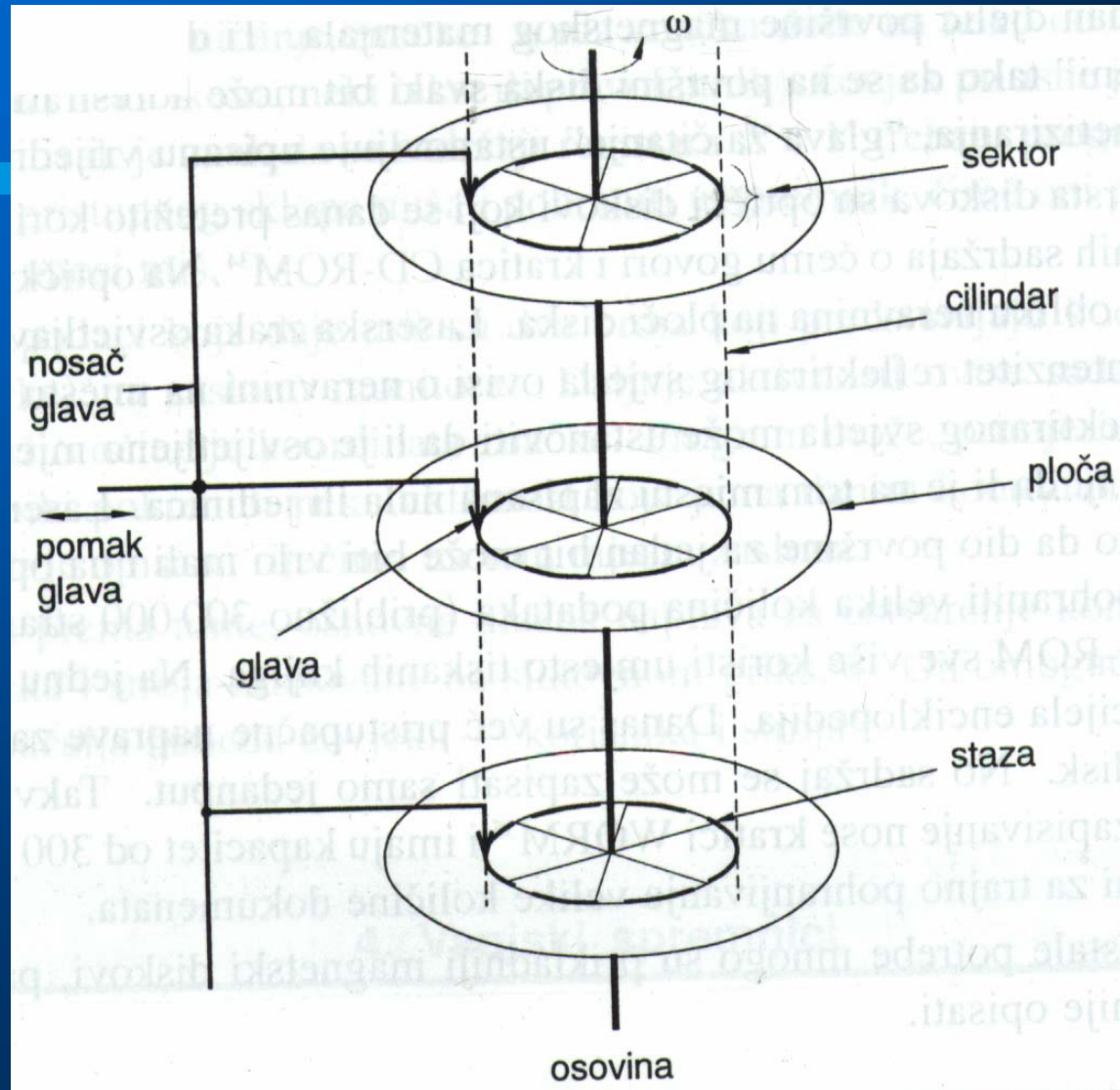
Pogon tvrdog diska



Pogon tvrdog diska



Mehanički izgled diska



Priključivanje diska

