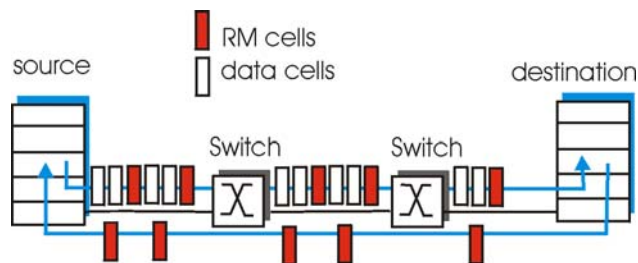


Case study: ATM ABR congestion control

ABR: available bit rate: **RM (resource management) cells:**

- “elastic service”
- if sender’s path “underloaded”:
 - sender should use available bandwidth
- if sender’s path congested:
 - sender throttled to minimum guaranteed rate
- sent by sender, interspersed with data cells
- bits in RM cell set by switches (“network-assisted”)
 - **NI bit**: no increase in rate (mild congestion)
 - **CI bit**: congestion indication
- RM cells returned to sender by receiver, with bits intact

Case study: ATM ABR congestion control



- two-byte ER (explicit rate) field in RM cell
 - congested switch may lower ER value in cell
 - sender’ send rate thus minimum supportable rate on path
- EFCI bit in data cells: set to 1 in congested switch
 - if data cell preceding RM cell has EFCI set, sender sets CI bit in returned RM cell