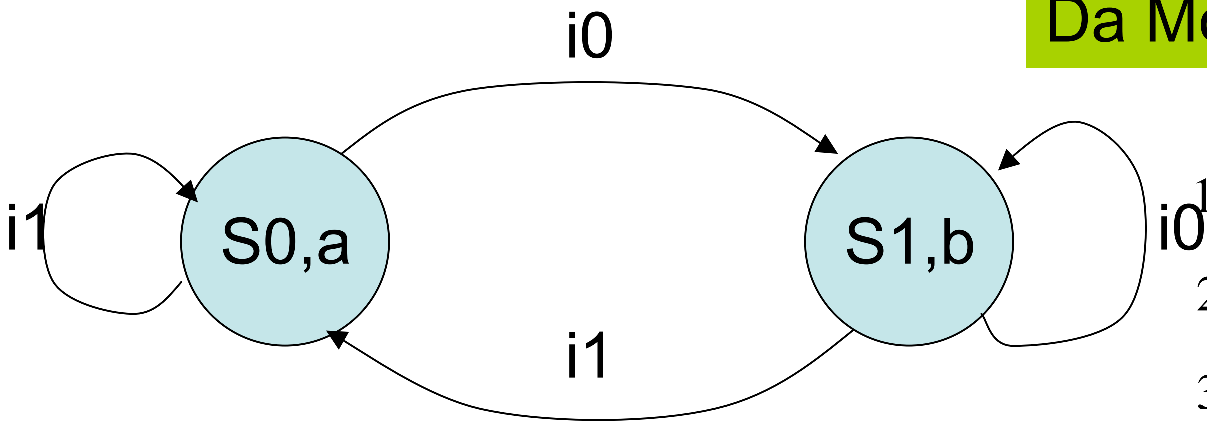
Moore Mealy Moore

Esempi

Da Moore a Mealy



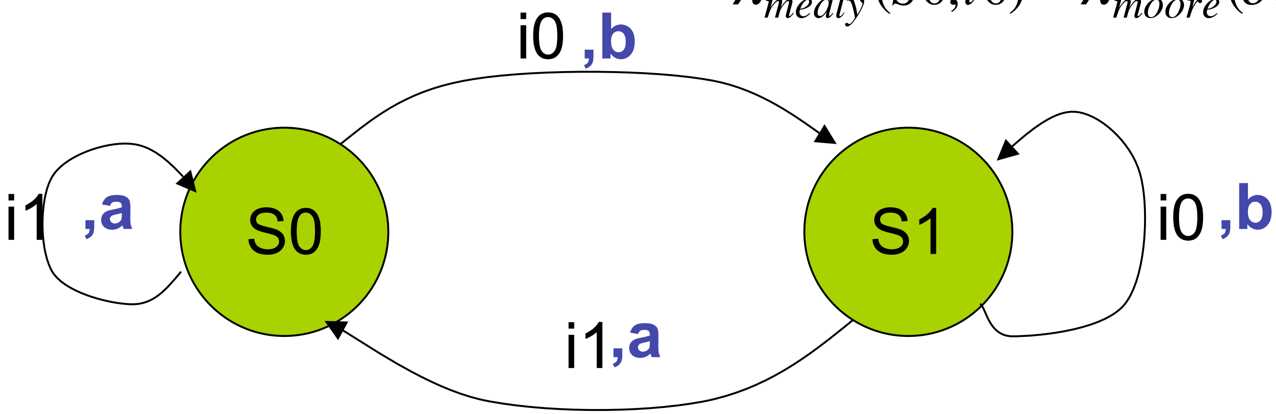
1) $Q_{mealy} \equiv Q_{moore}$

2) $\delta_{mealy} \equiv \delta_{moore}$

3) $\lambda_{mealy}(S_i, i_j) = \lambda_{moore}(\delta(S_i, i_j))$

1: Q e δ sono identici in More e Mealy

$$\lambda_{mealy}(S0, i0) = \lambda_{moore}(\delta(S0, i0)) = \lambda_{moore}(S1) = b$$



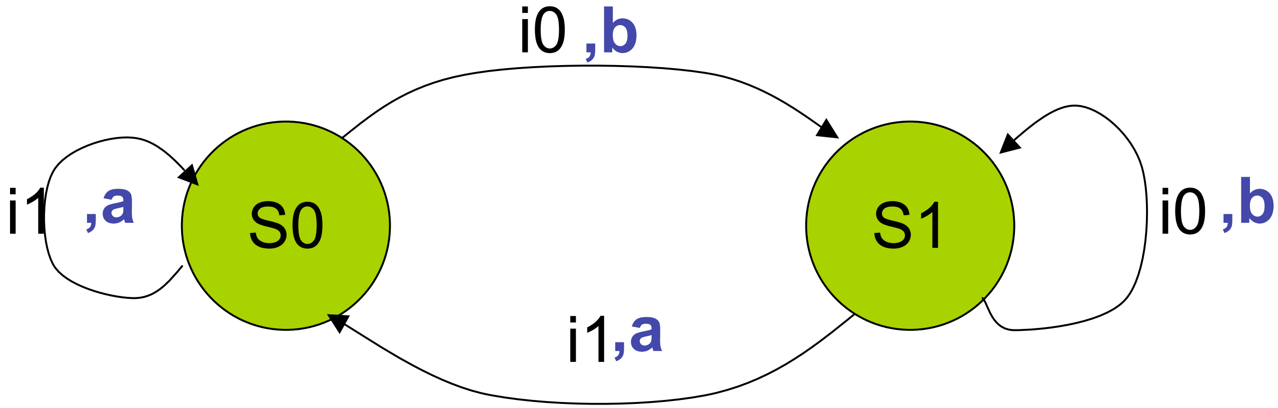
$$\lambda_{mealy}(S1, i0) = b$$

$$\lambda_{mealy}(S1, i1) = a$$

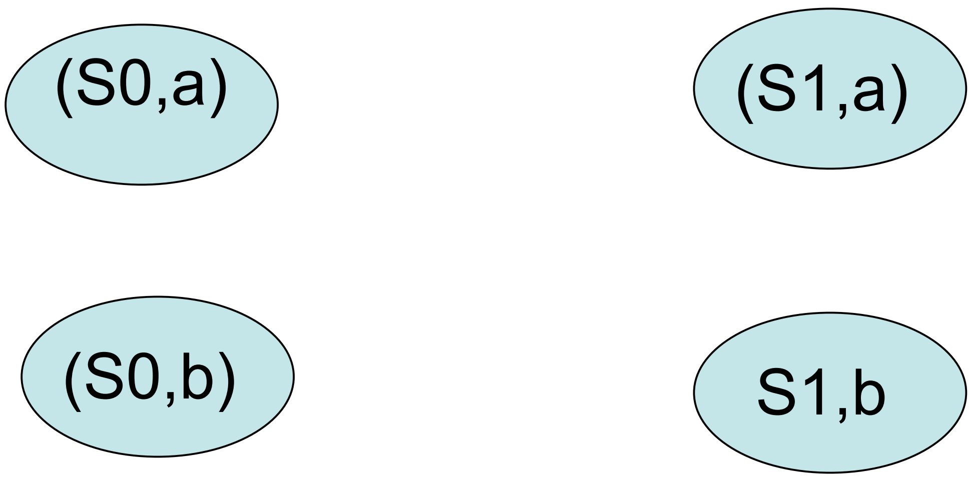
$$\lambda_{mealy}(S0, i1) = a$$

2: calcolo della funzione λ utilizzando la formula 3

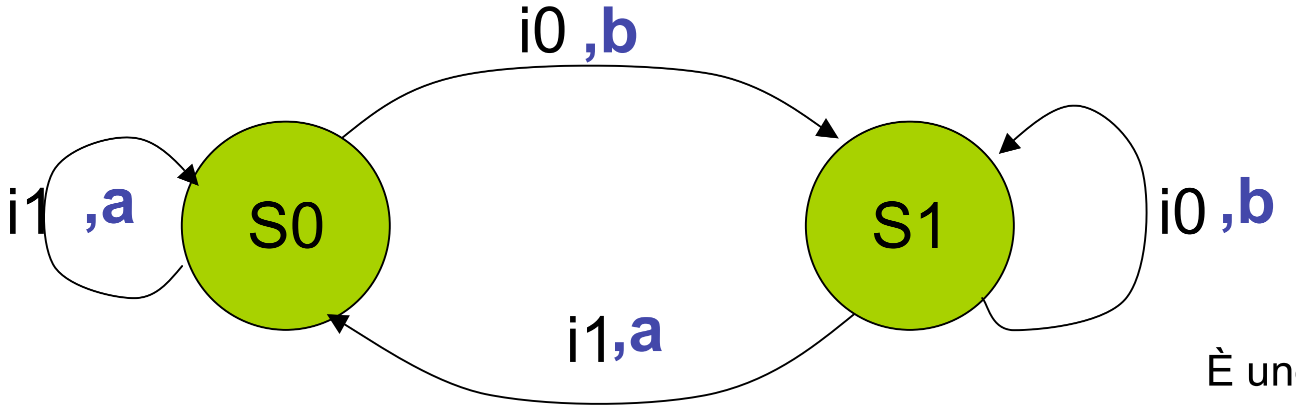
Da Mealy a Moore



1. $Q_{moore} \rightarrow Q_{mealy} x \Delta$



Da Mealy a Moore

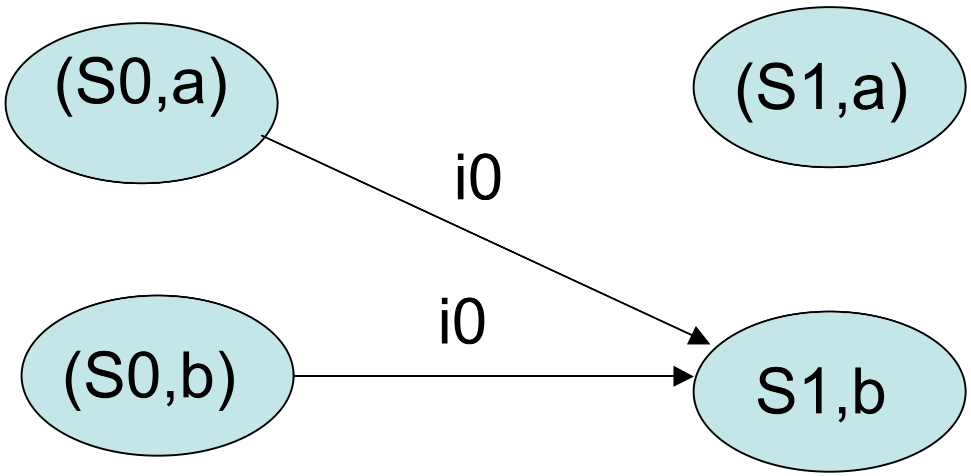


È uno stato di Moore

$$2)\ \ \delta_{moore}((S_i,o_j),i_k) = (\delta_{mealy}(S_i,i_k), \lambda_{mealy}((S_i,i_k))$$

È uno stato di Mealy

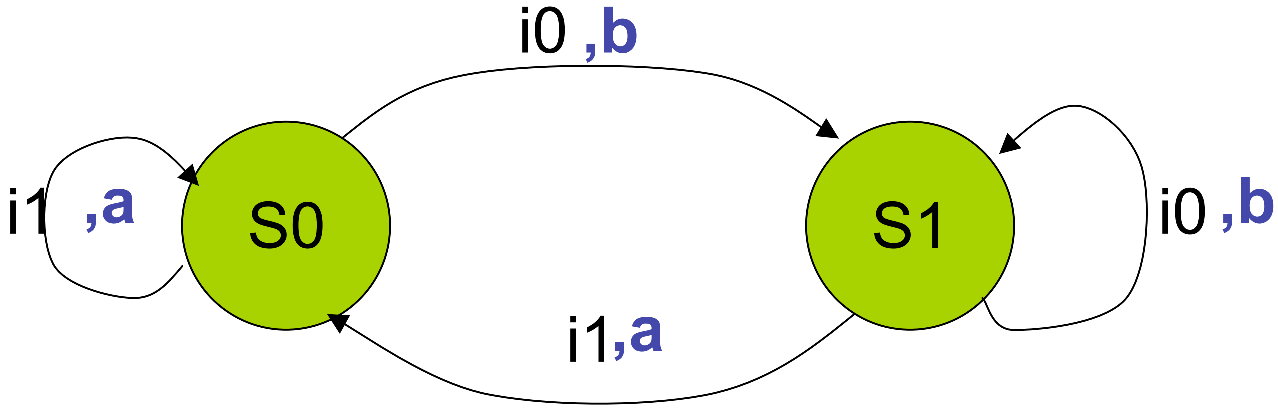
E' un output di Mealy

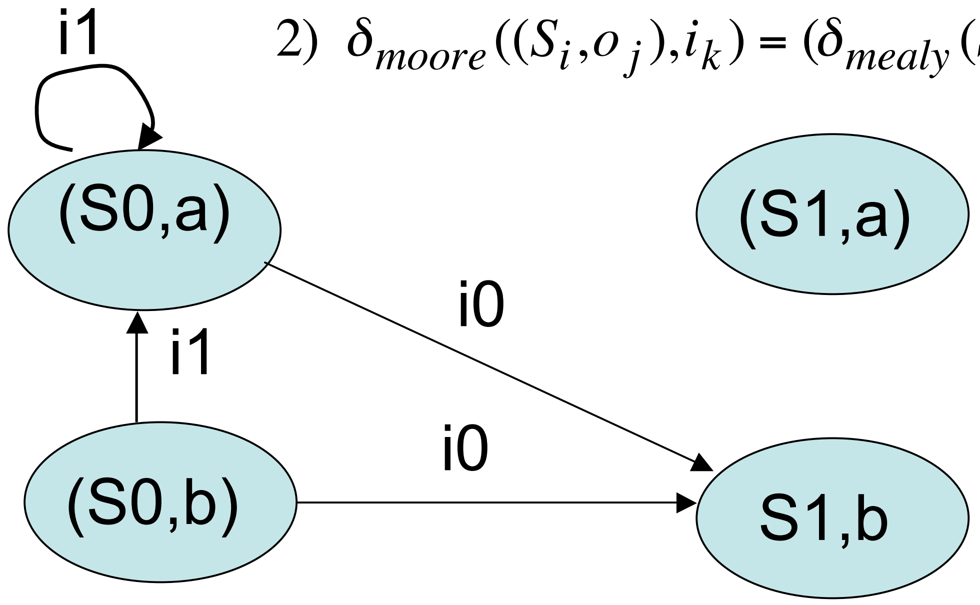


$$\delta_{moore}((S0,a),i0) = (\delta_{mealy}(S0,i0), \lambda_{mealy}(S0,i0)) = (S1,b)$$

$$\delta_{moore}((S0,b),i0) = (\delta_{mealy}(S0,i0), \lambda_{mealy}(S0,i0)) = (S1,b)$$

Da Mealy a Moore



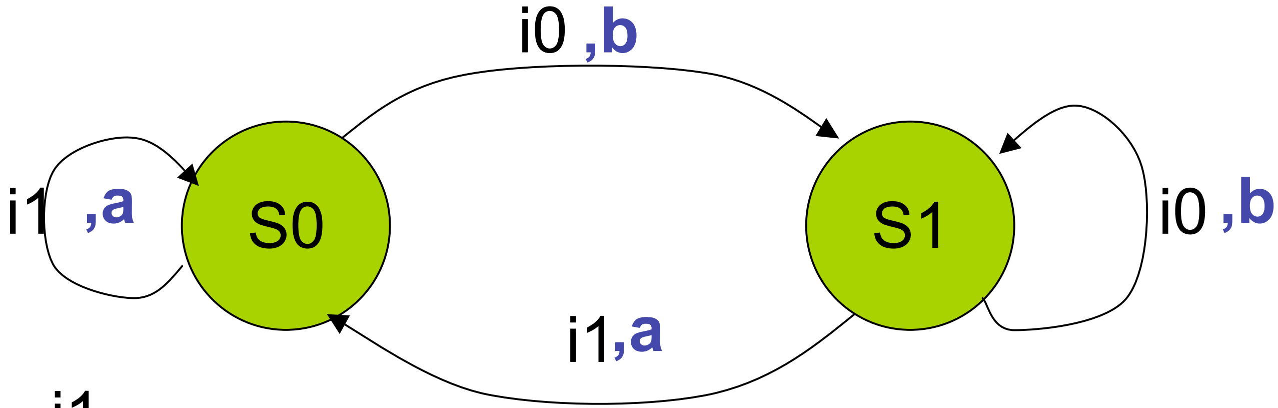


2) $\delta_{moore}((S_i,o_j),i_k) = (\delta_{mealy}(S_i,i_k),\lambda_{mealy}((S_i,i_k))$

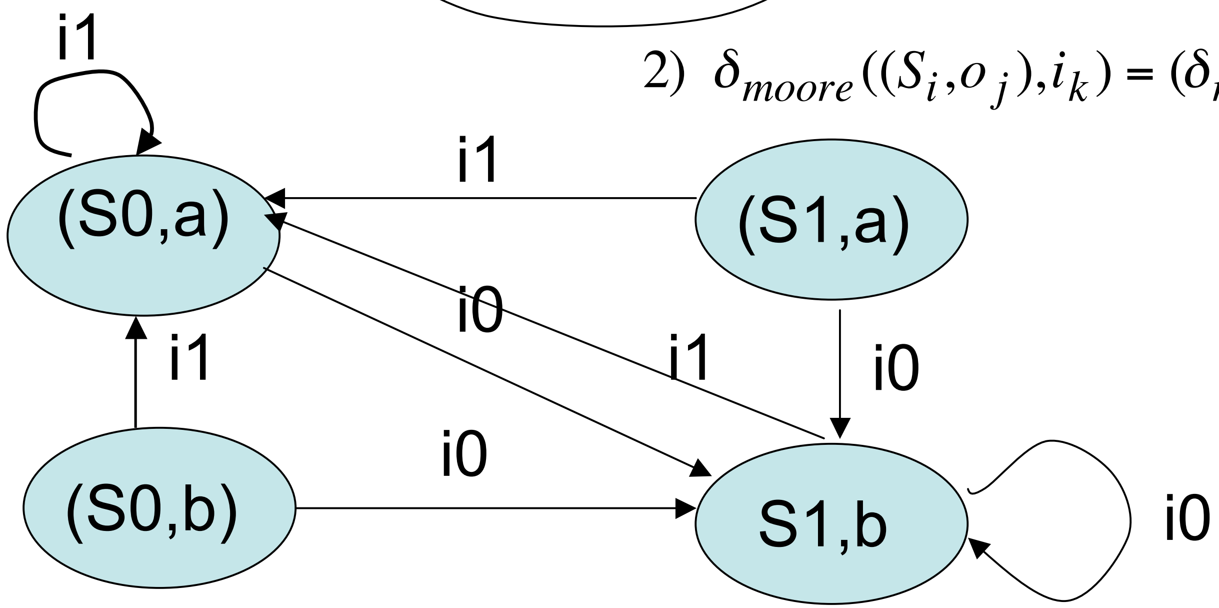
$$\delta_{moore}((S0,a),i1) = (\delta_{mealy}(S0,i1),\lambda_{mealy}(S0,i1)) = (S0,a)$$

$$\delta_{moore}((S0,b),i1) = (\delta_{mealy}(S0,i1),\lambda_{mealy}(S0,i1)) = (S0,a)$$

Da Mealy a Moore



2) $\delta_{moore}((S_i,o_j),i_k) = (\delta_{mealy}(S_i,i_k),\lambda_{mealy}((S_i,i_k))$



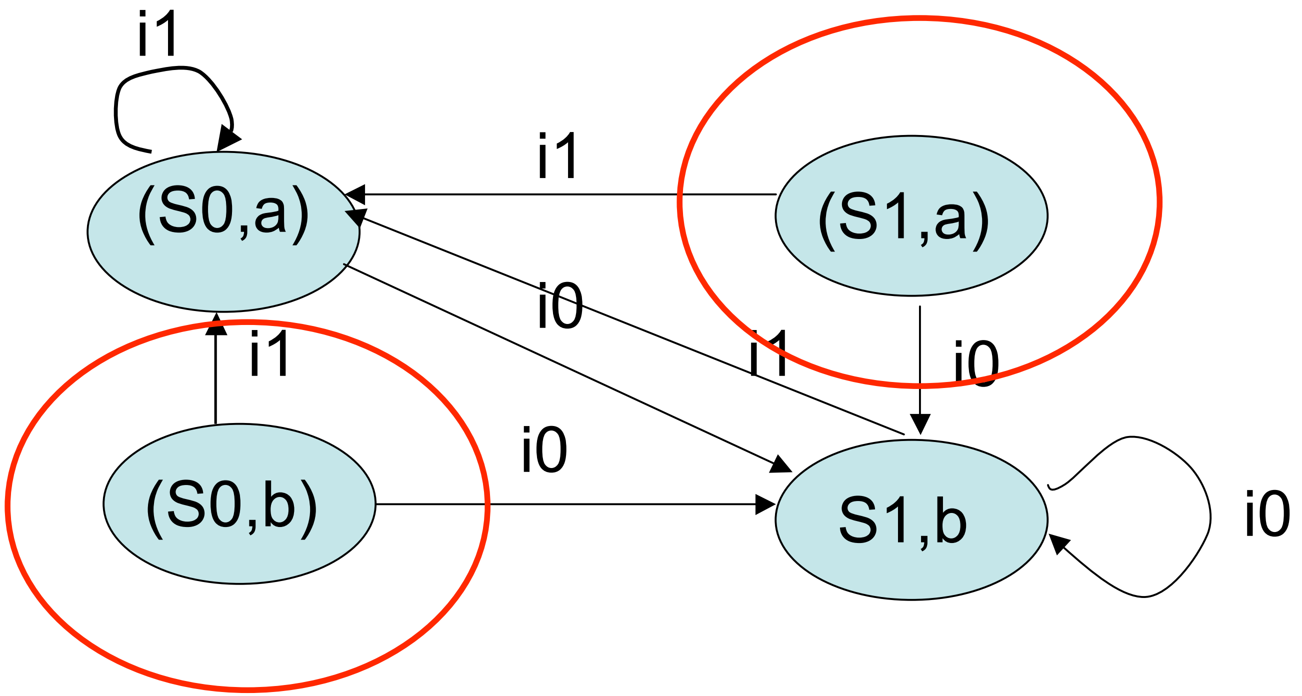
$\delta_{moore}((S1,a),i0) = (\delta_{mealy}(S1,i0),\lambda_{mealy}(S1,i0)) = (S1,b)$

$\delta_{moore}((S1,b),i0) = (\delta_{mealy}(S1,i0),\lambda_{mealy}(S1,i0)) = (S1,b)$

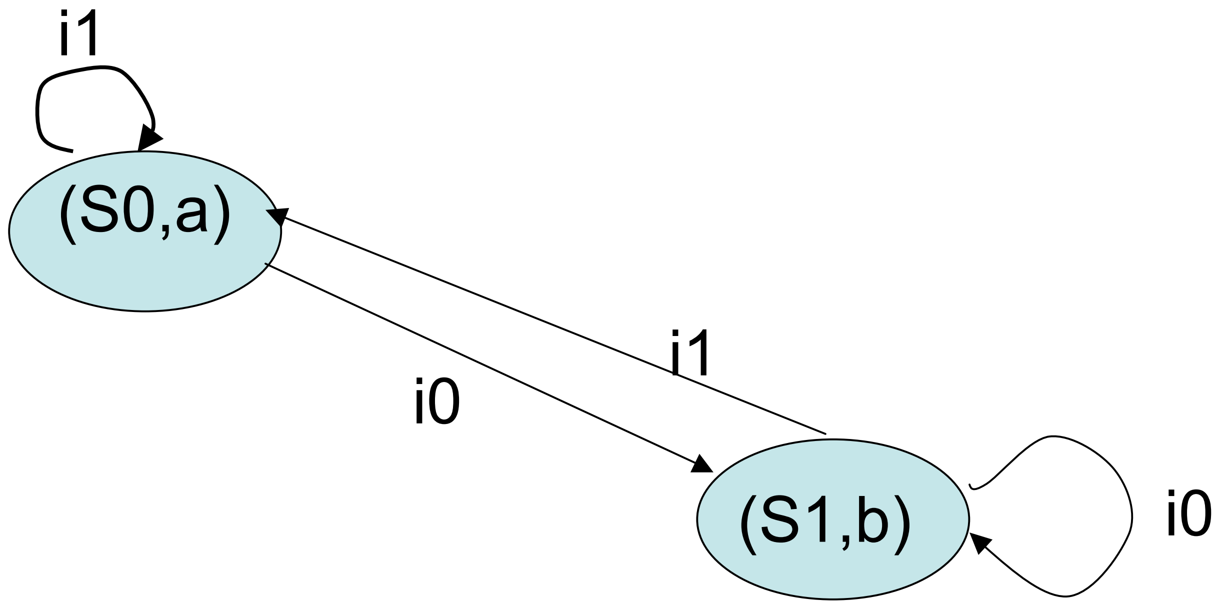
$\delta_{moore}((S1,a),i1) = (\delta_{mealy}(S1,i1),\lambda_{mealy}(S1,i1)) = (S0,a)$

$\delta_{moore}((S1,b),i1) = (\delta_{mealy}(S1,i1),\lambda_{mealy}(S1,i1)) = (S0,a)$

3. Minimizzazione



Questo automa ha degli stati ridondanti, (S0,b) e (S1,a) che possono essere eliminati (sono stati che non hanno alcuna freccia entrante, dunque non possono mai essere raggiunti)


i1
(S0,a)
i1
i0
(S1,b)
i0