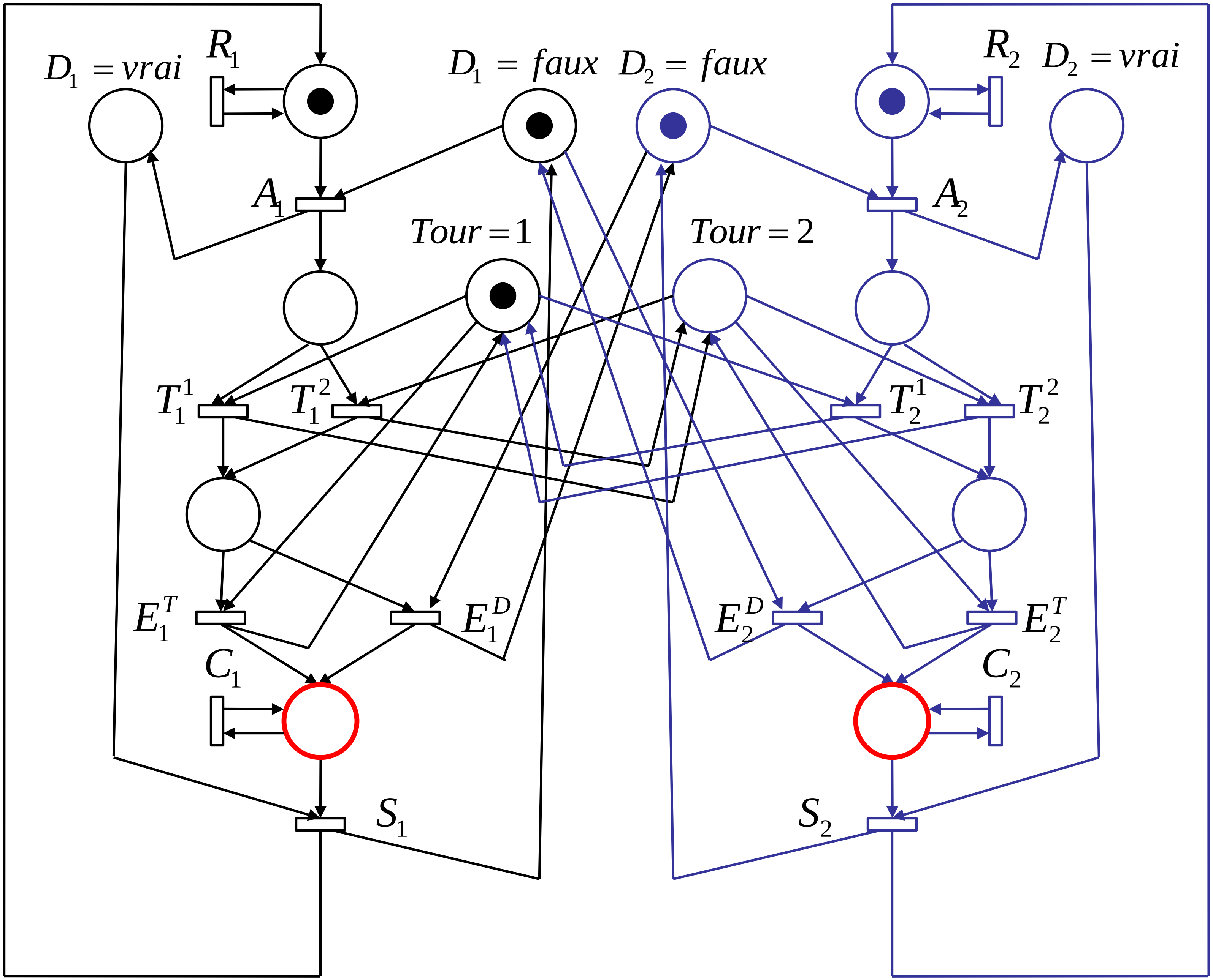
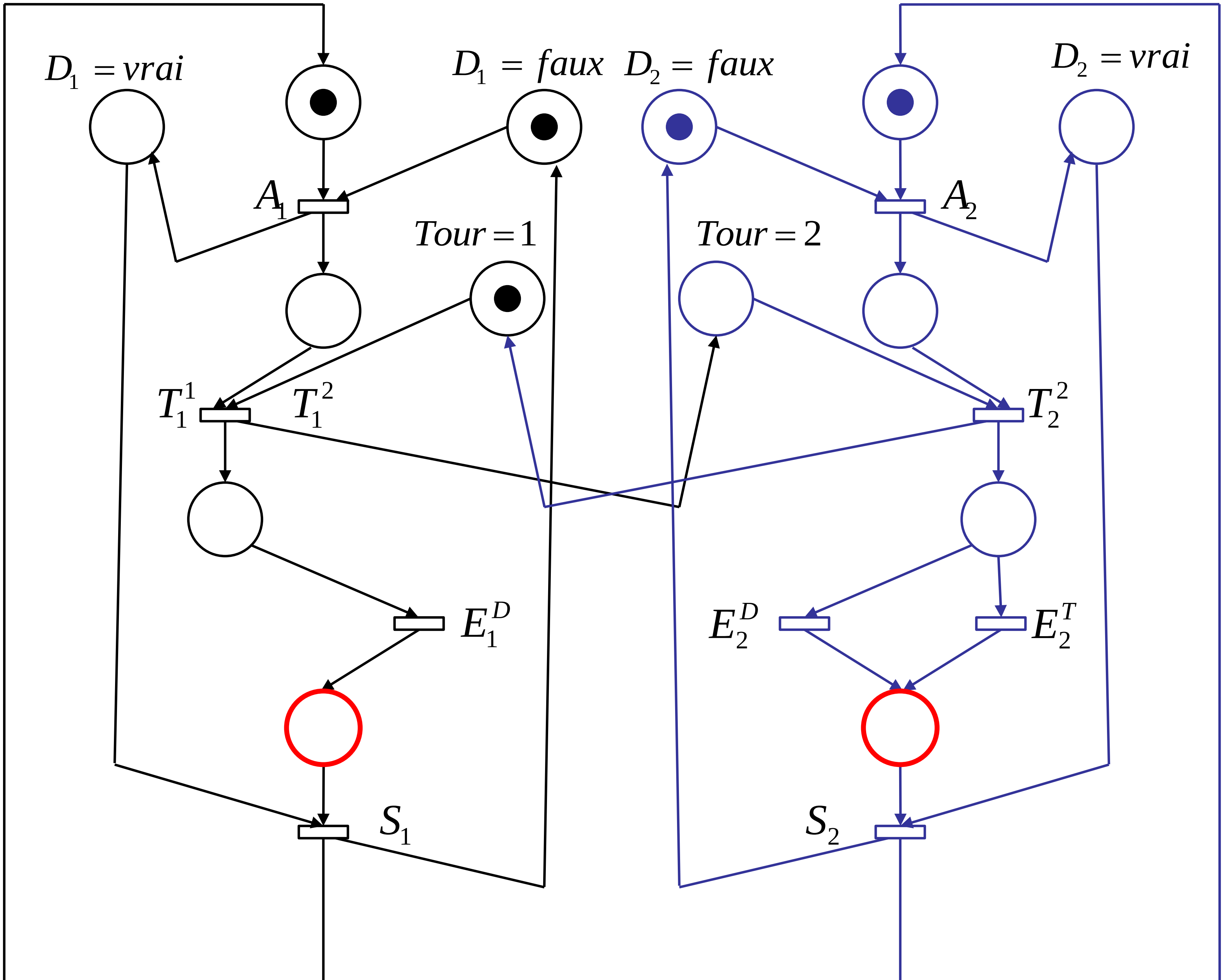


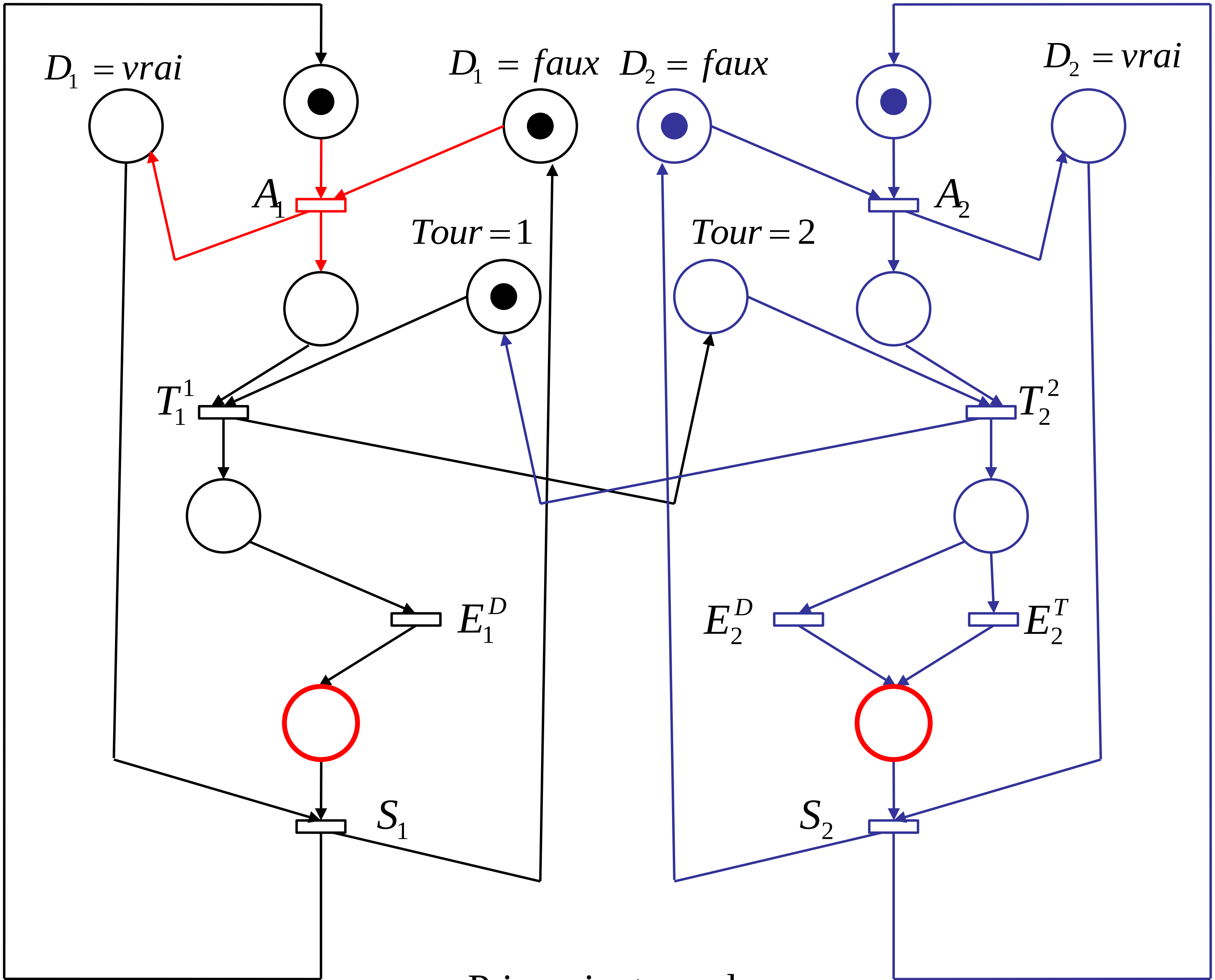
L'exclusion mutuelle est-elle garantie ?

J.-M. Delosme - SED



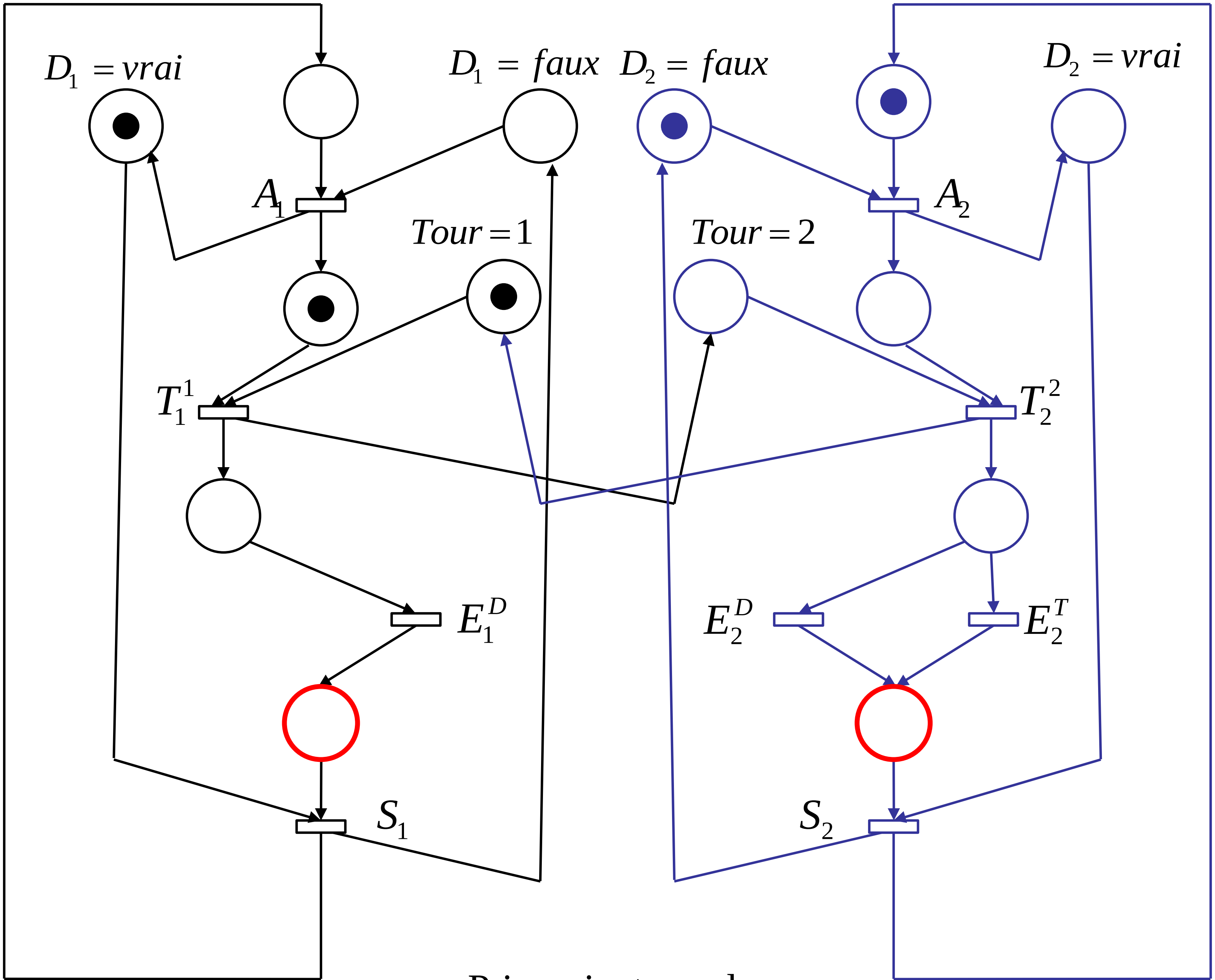
P-invariants seuls

J.-M. Delosme - SED



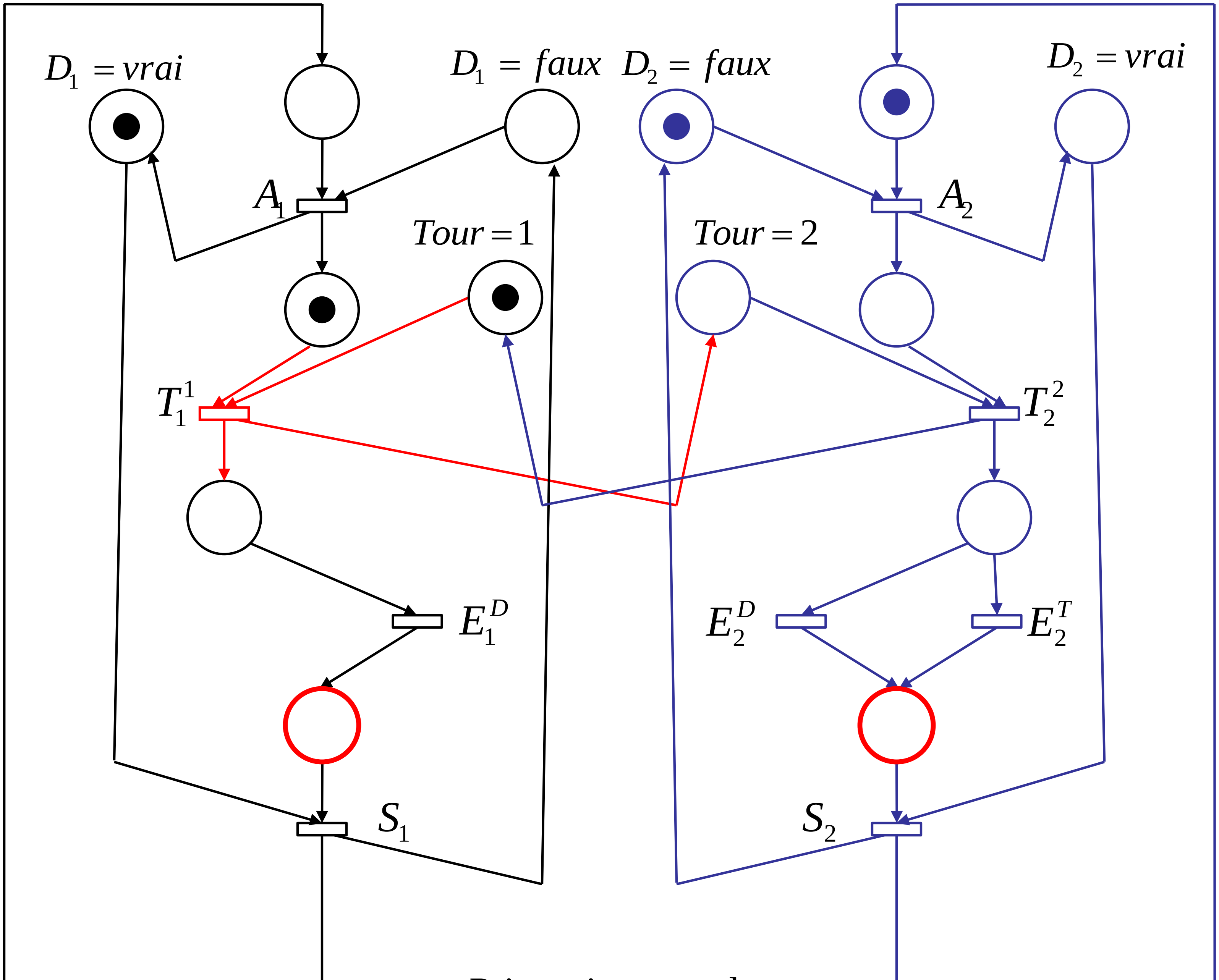
P-invariants seuls

J.-M. Delosme - SED



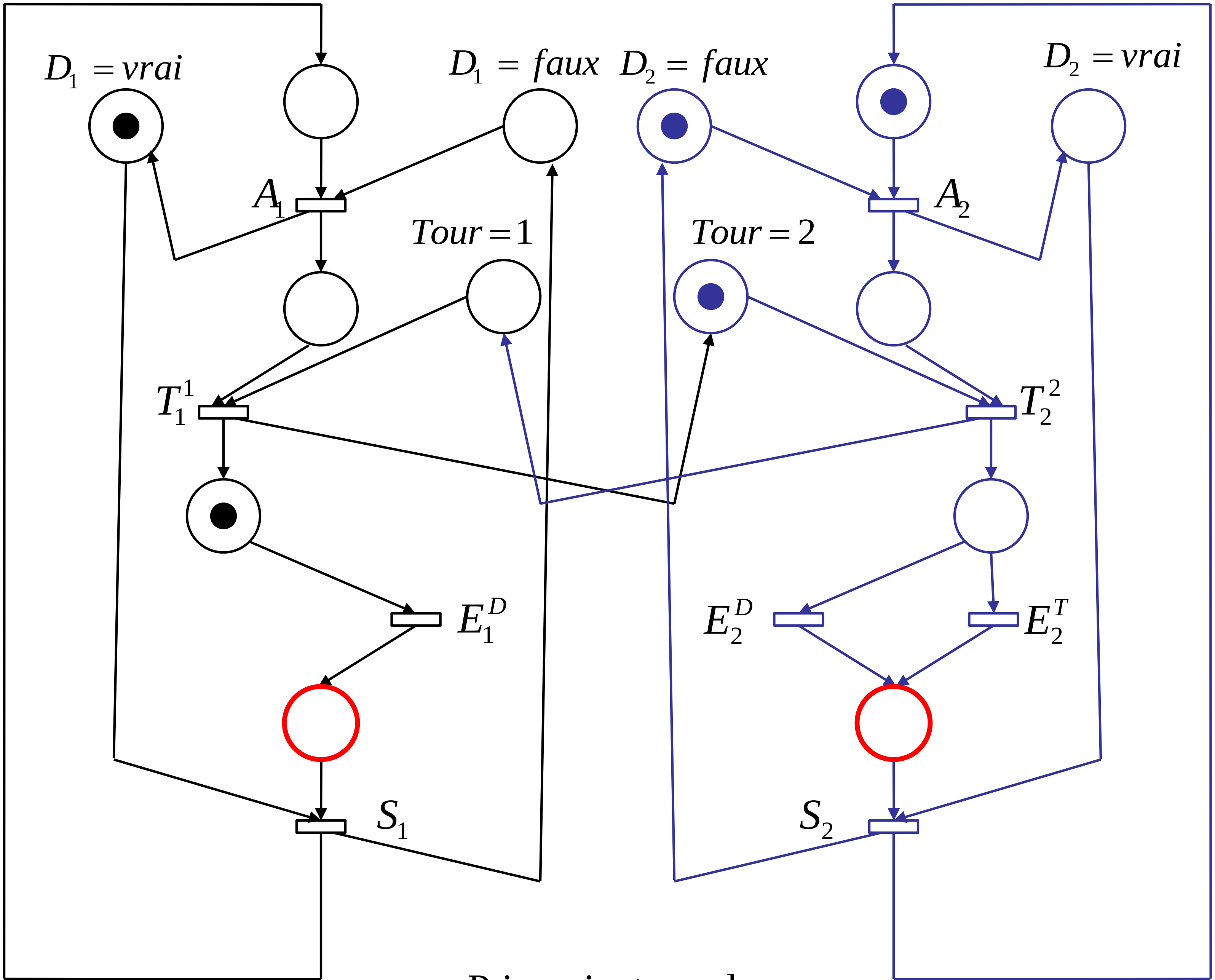
P-invariants seuls

J.-M. Delosme - SED



P-invariants seuls

J.-M. Delosme - SED



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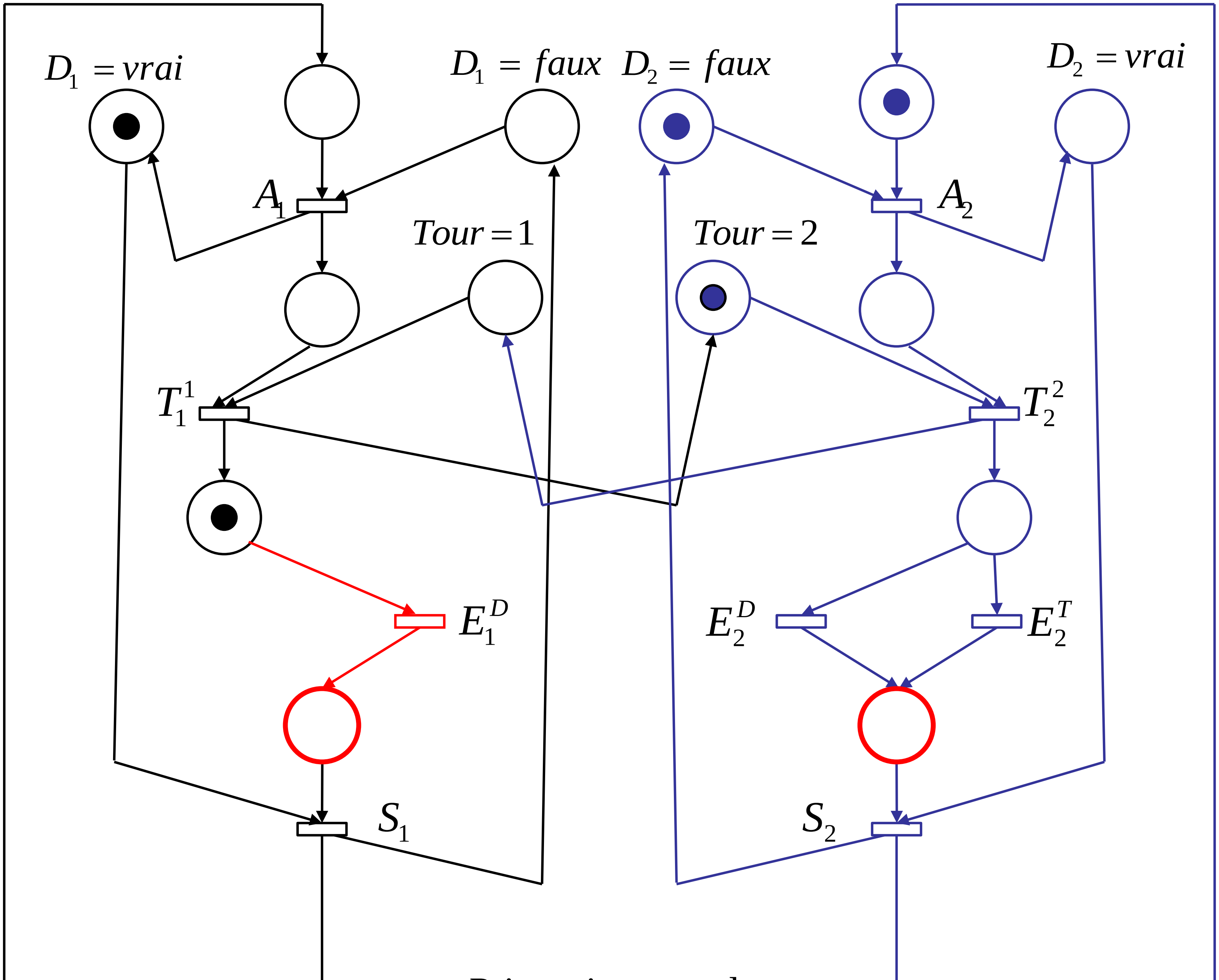

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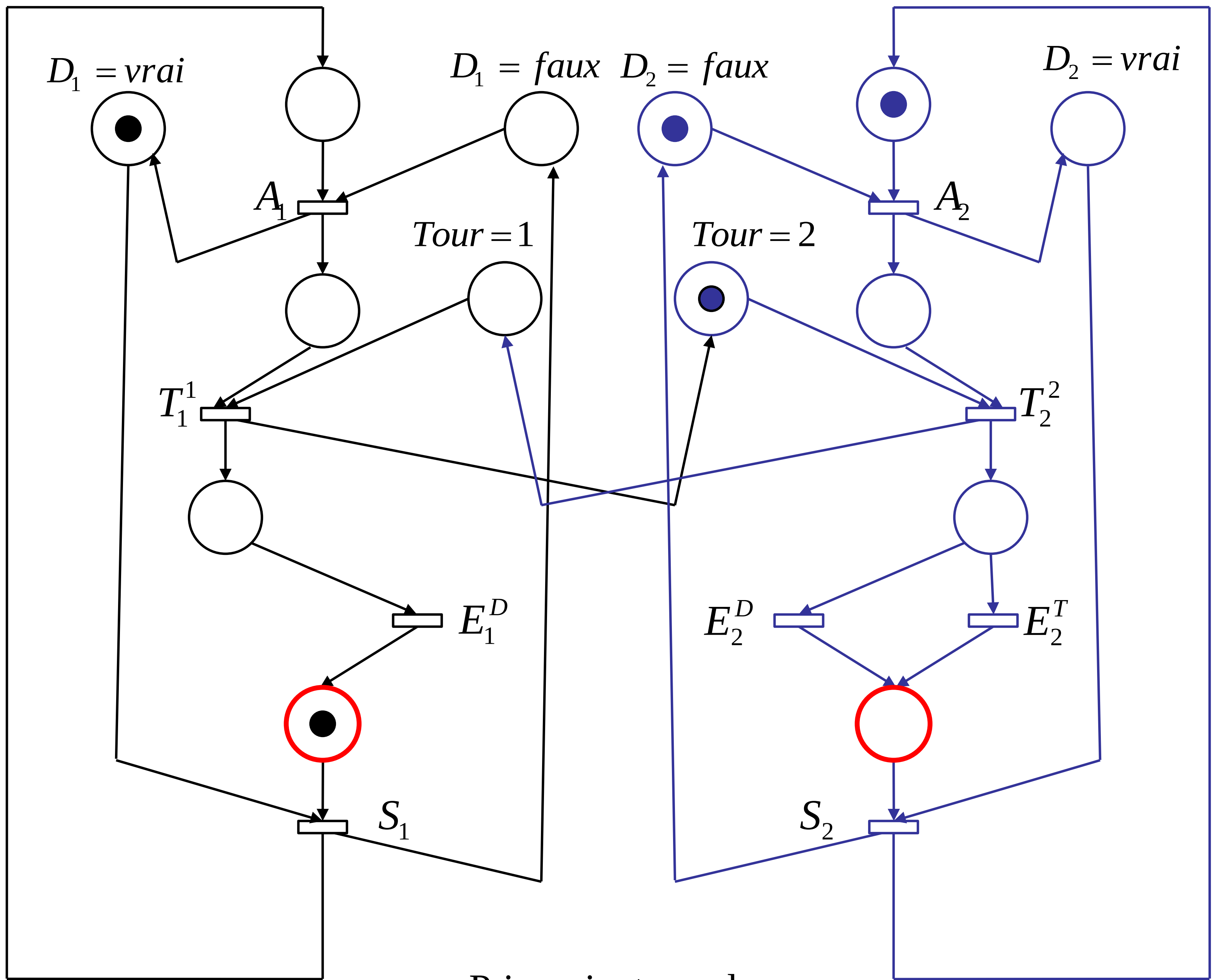

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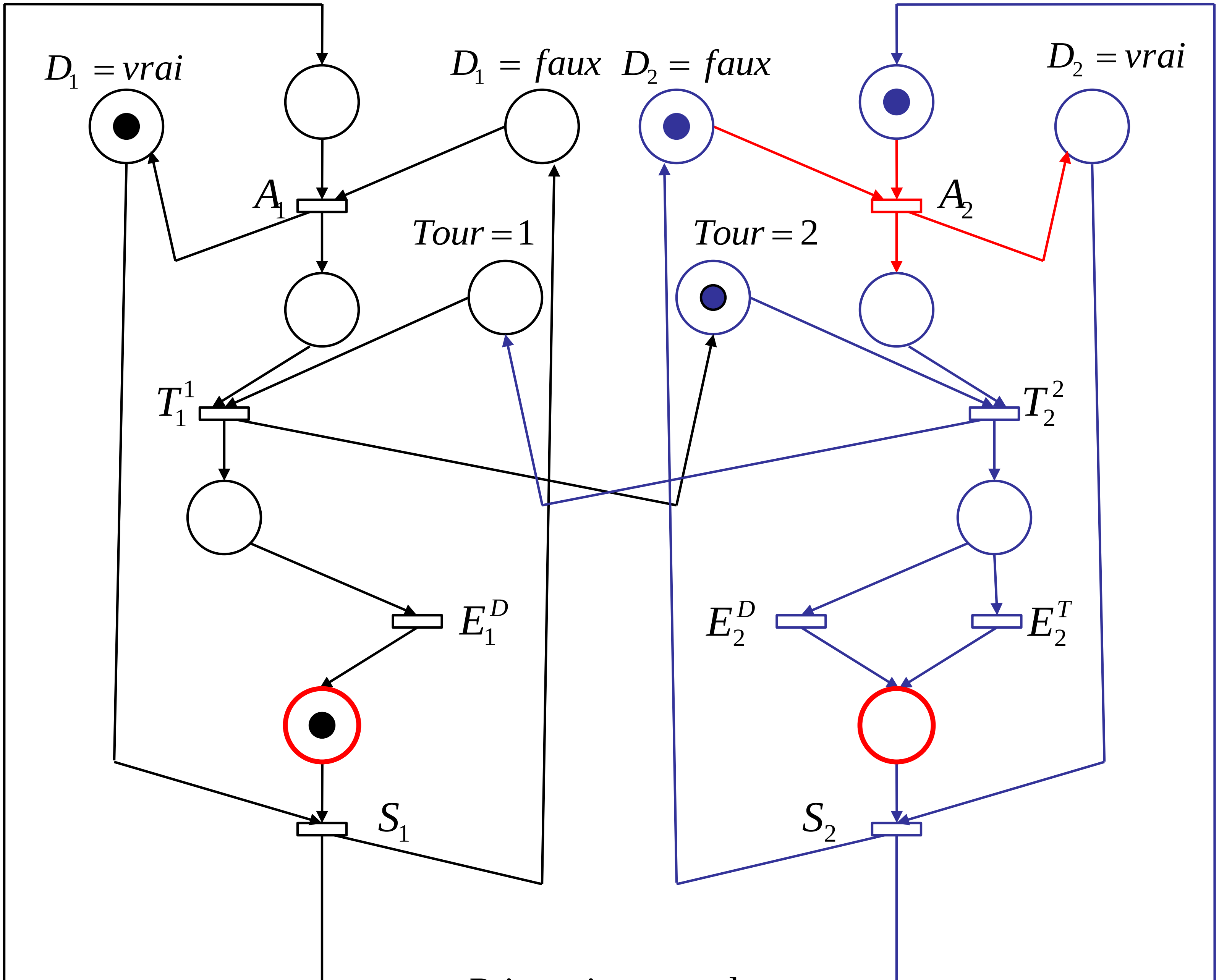
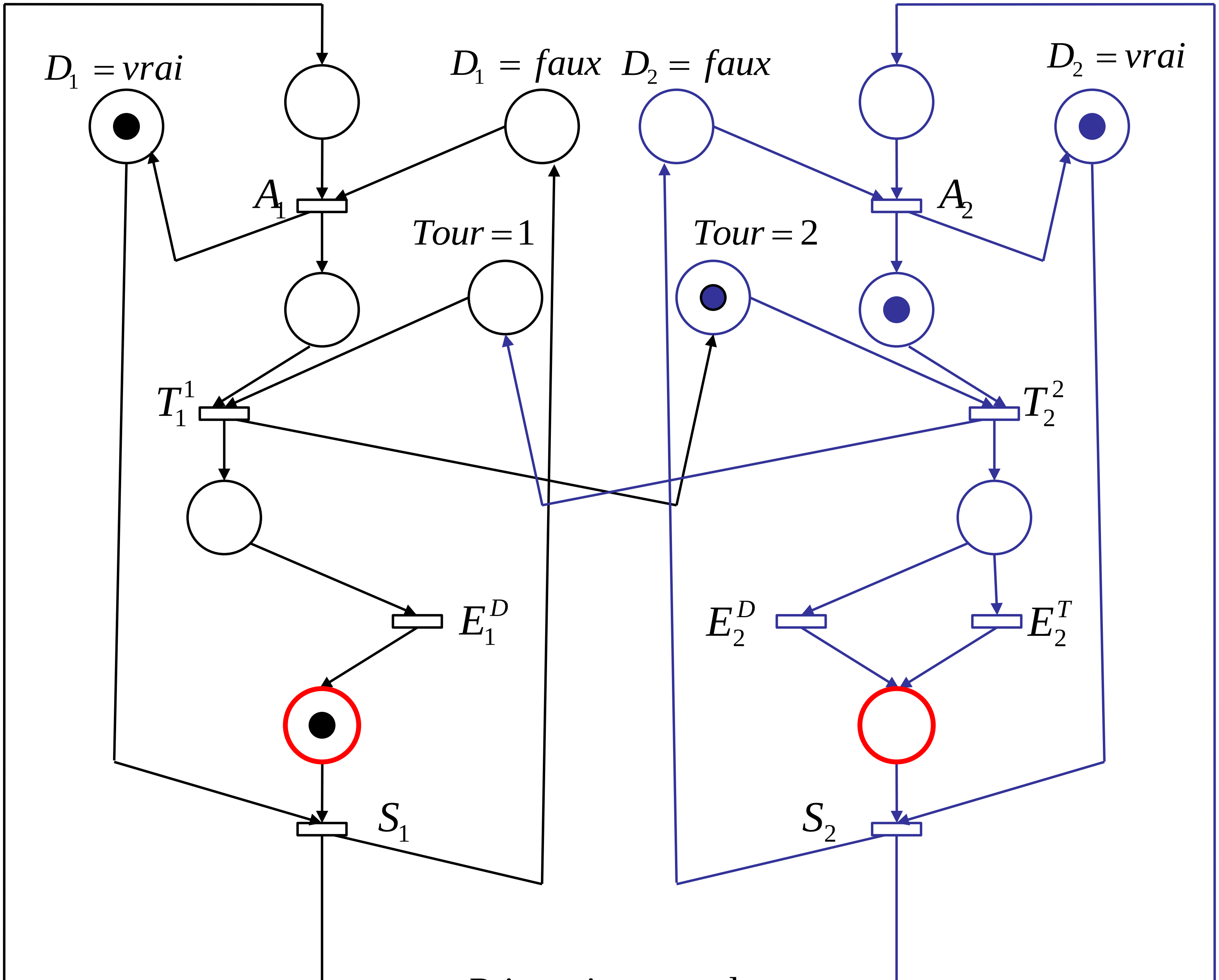


P-invariants seuls



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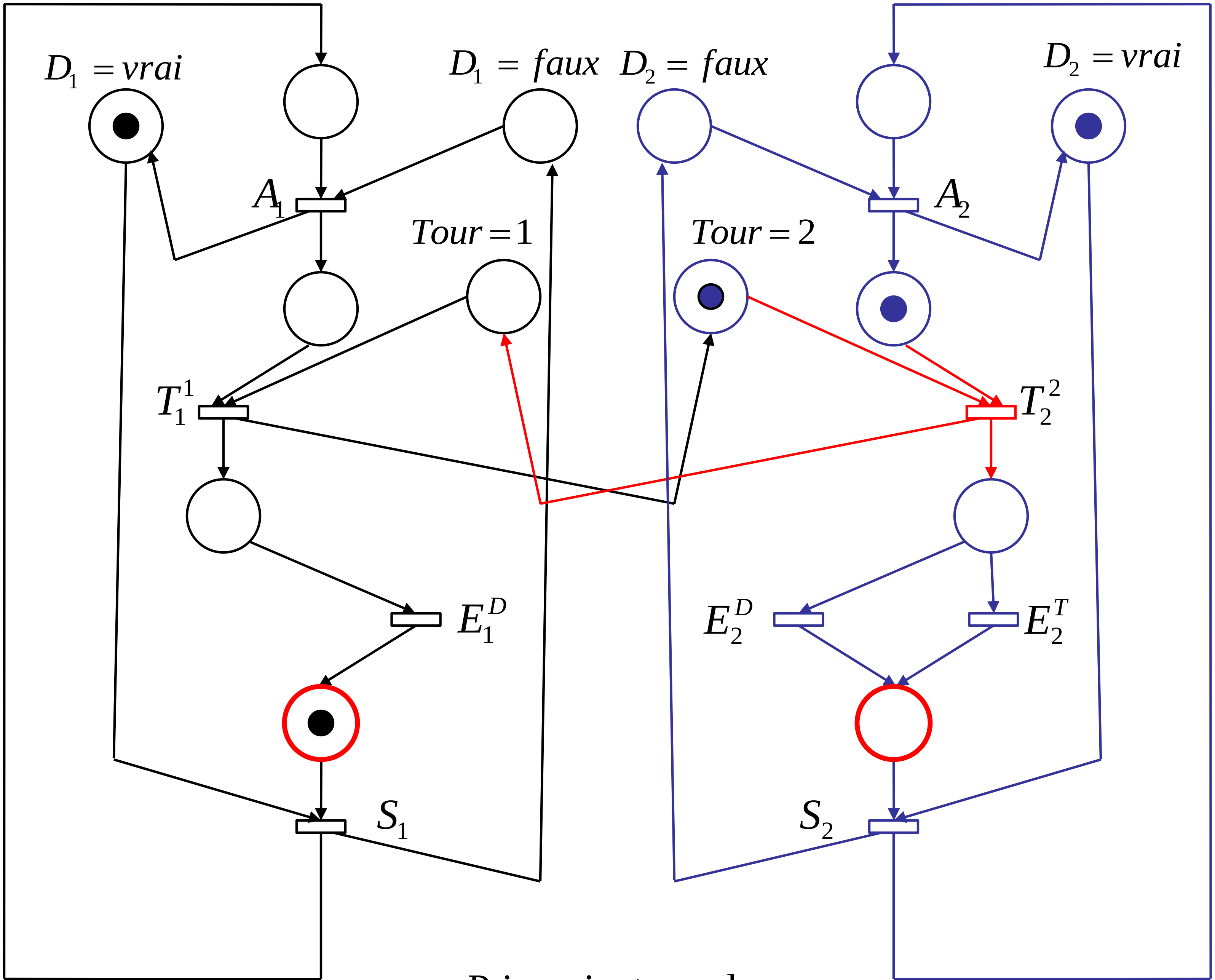

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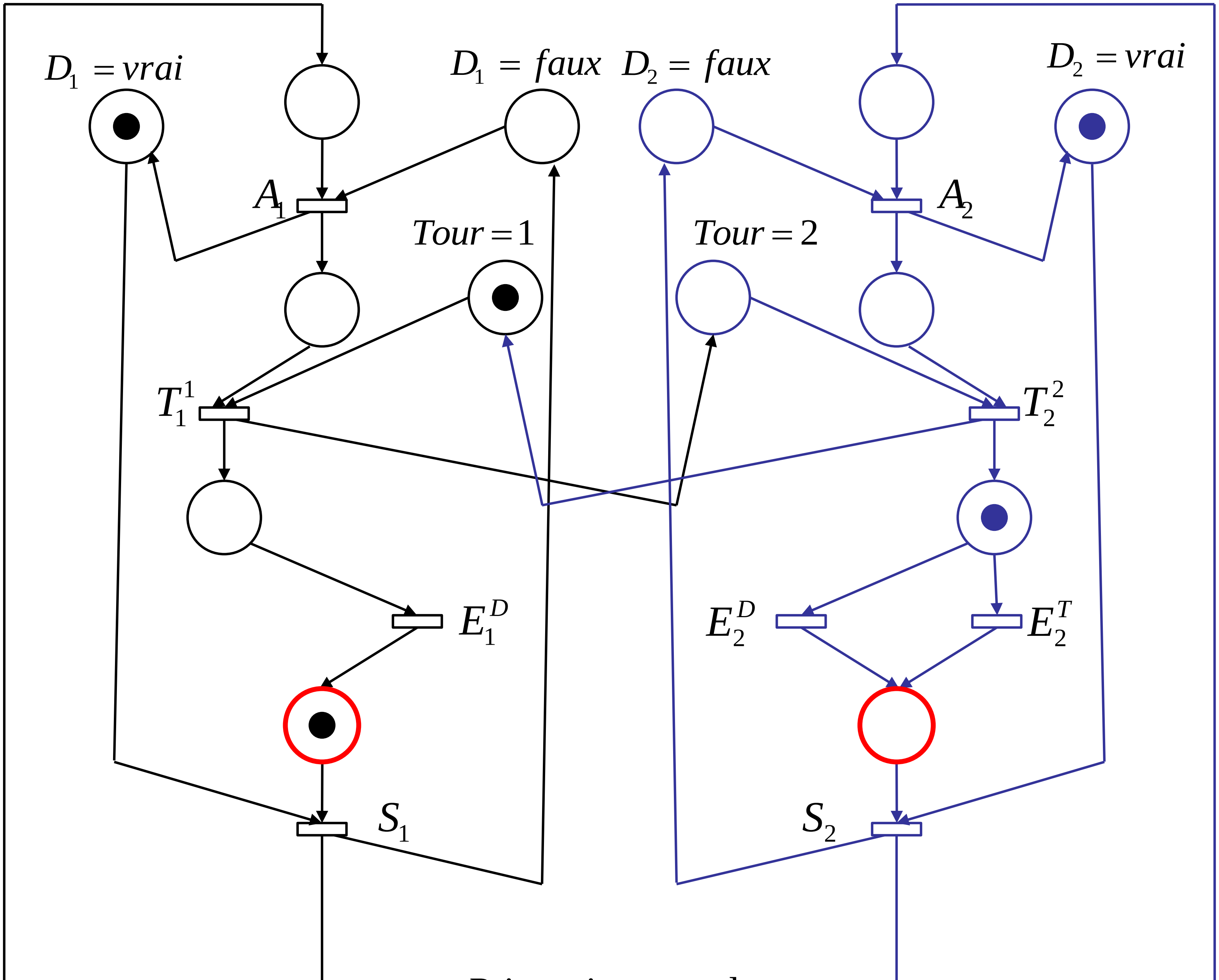
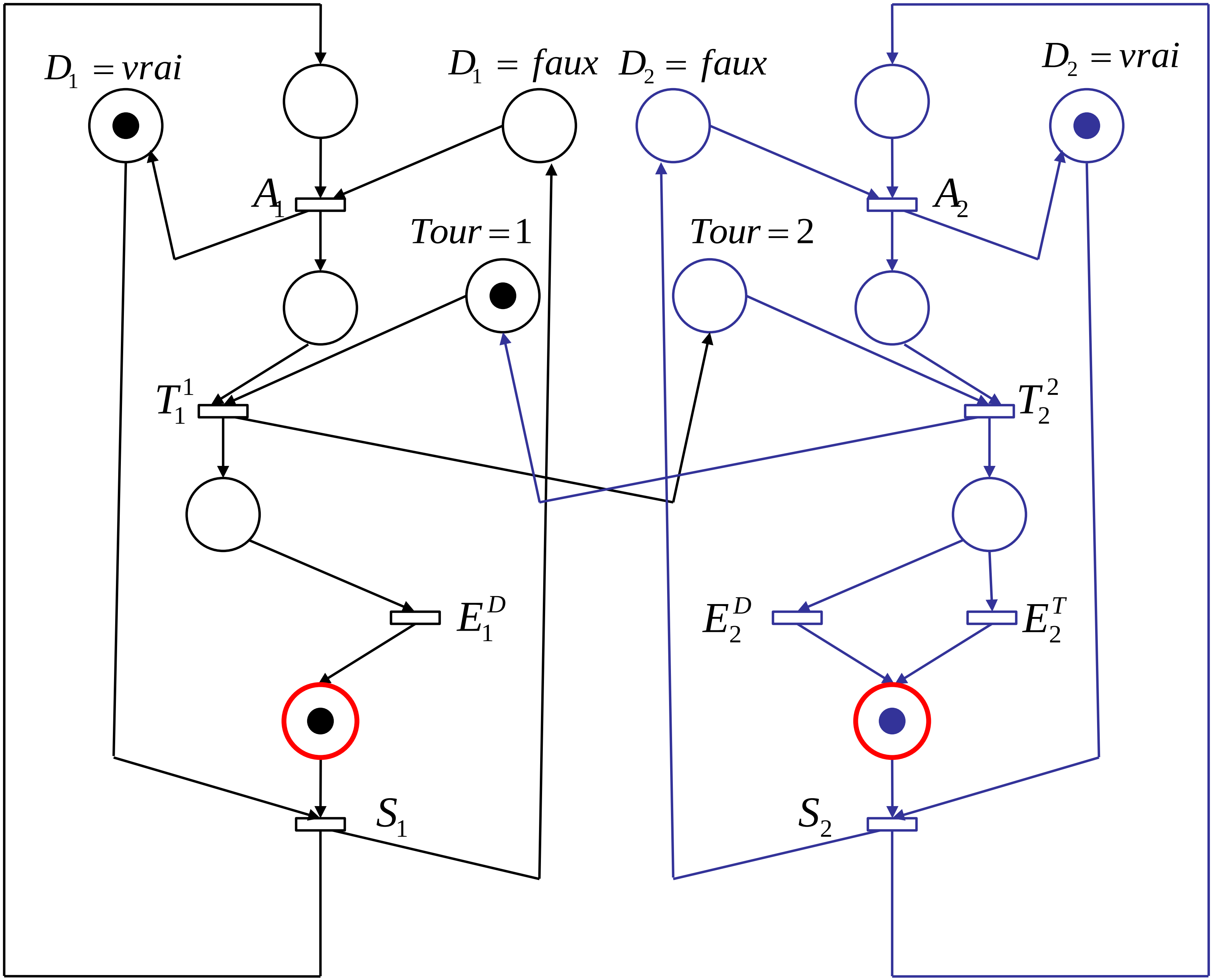
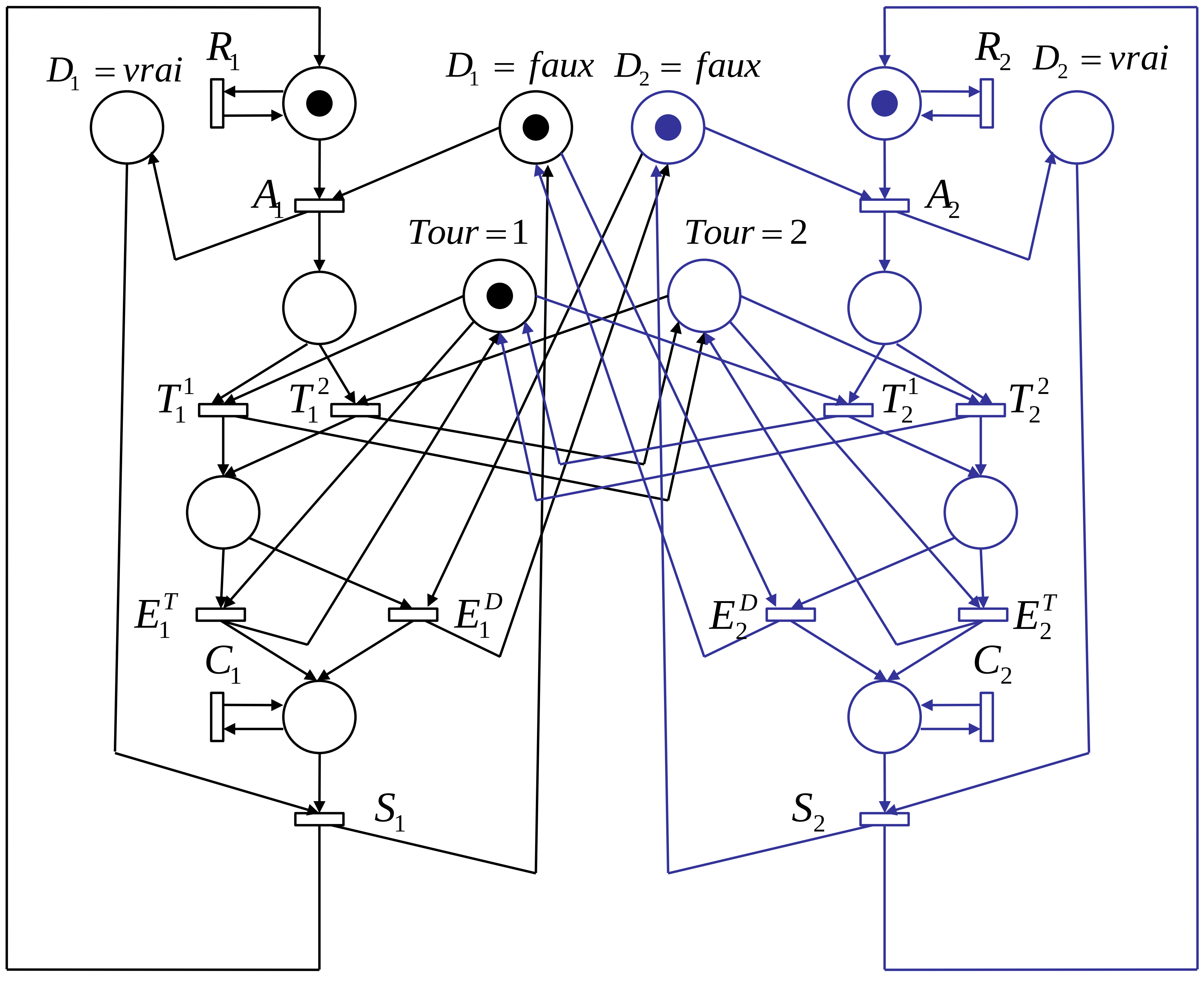


P-invariants seuls

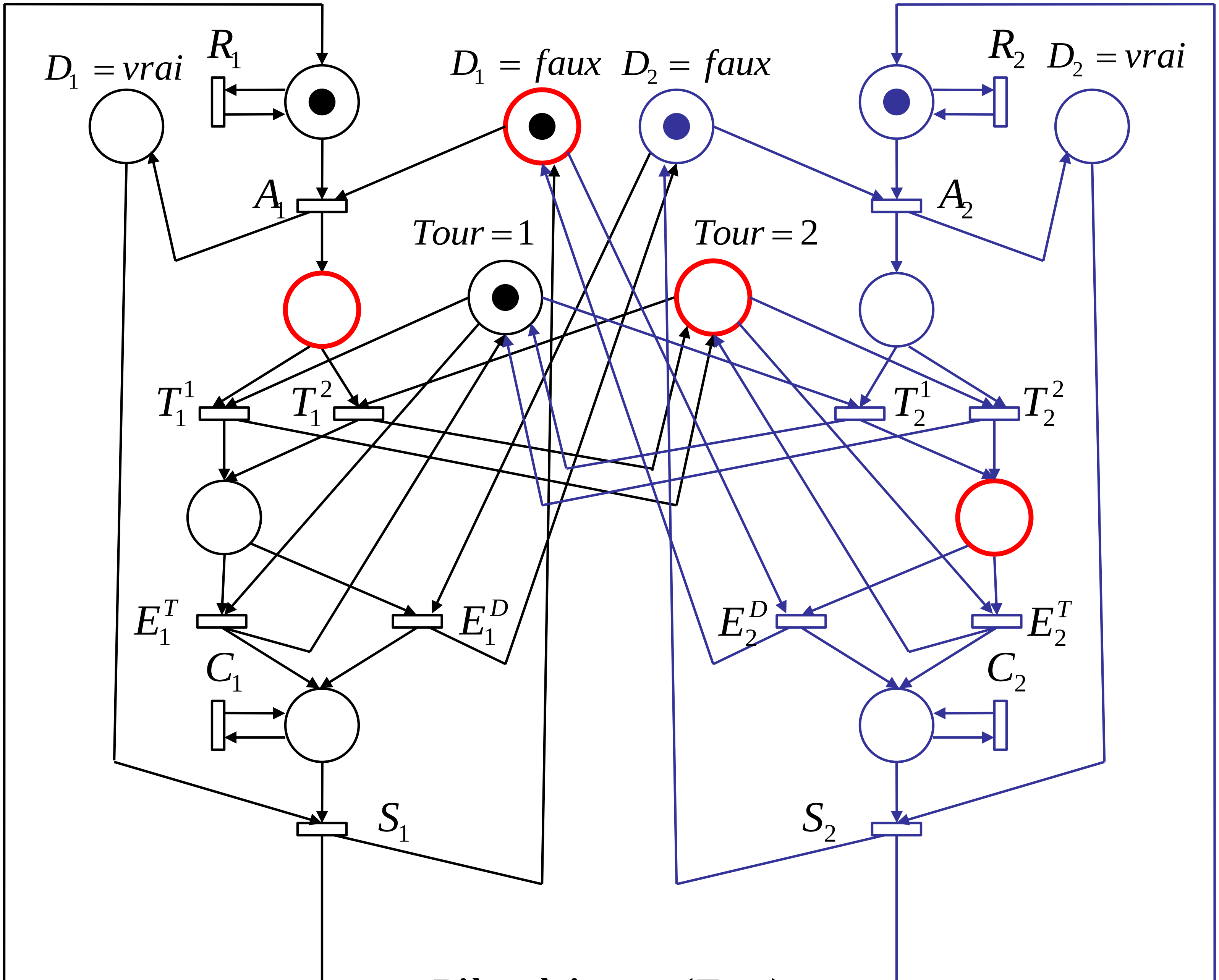


Les P-invariants ne suffisent pas.

J.-M. Delosme - SED

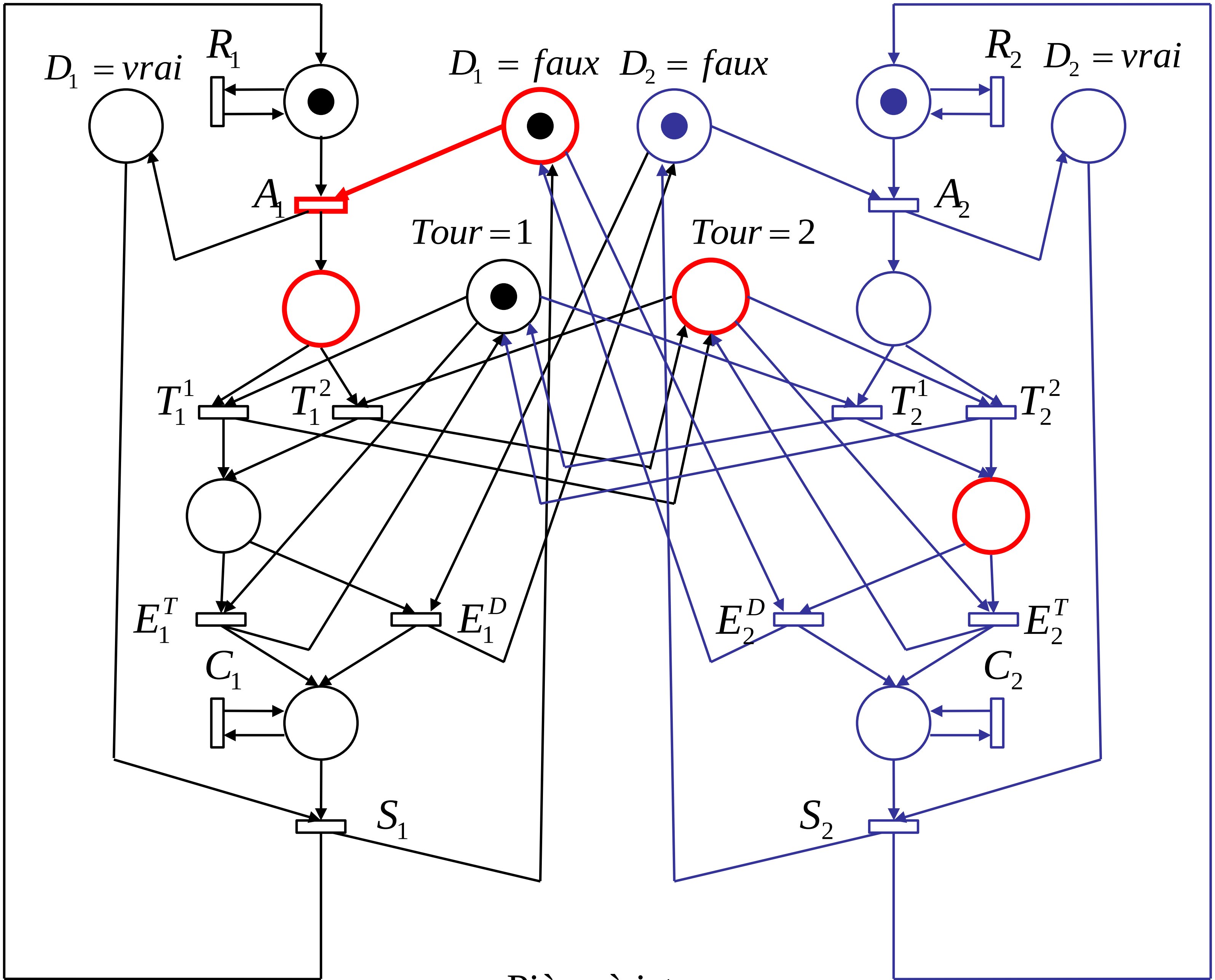


J.-M. Delosme - SED



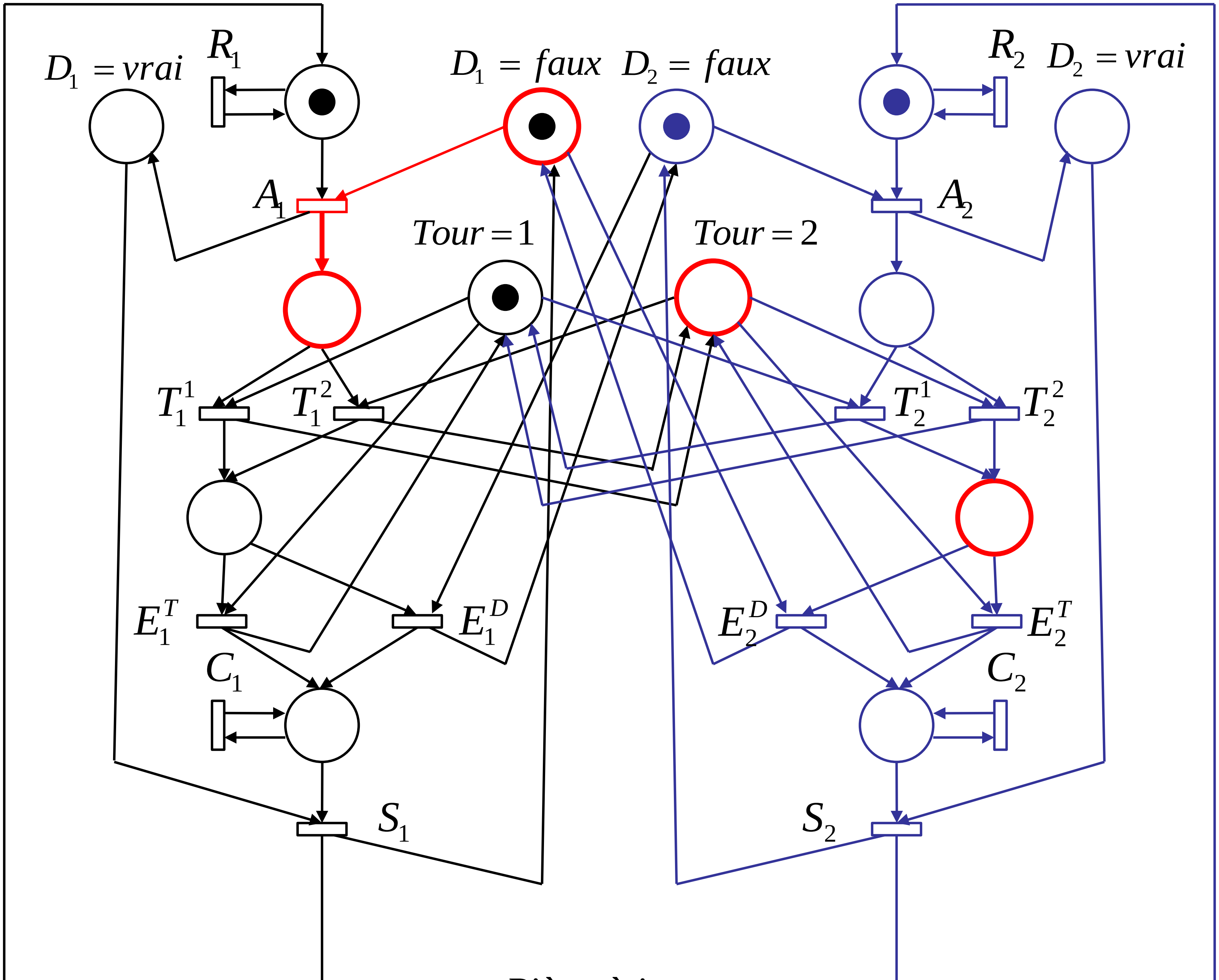
Piège à jetons (*Trap*)

J.-M. Delosme - SED

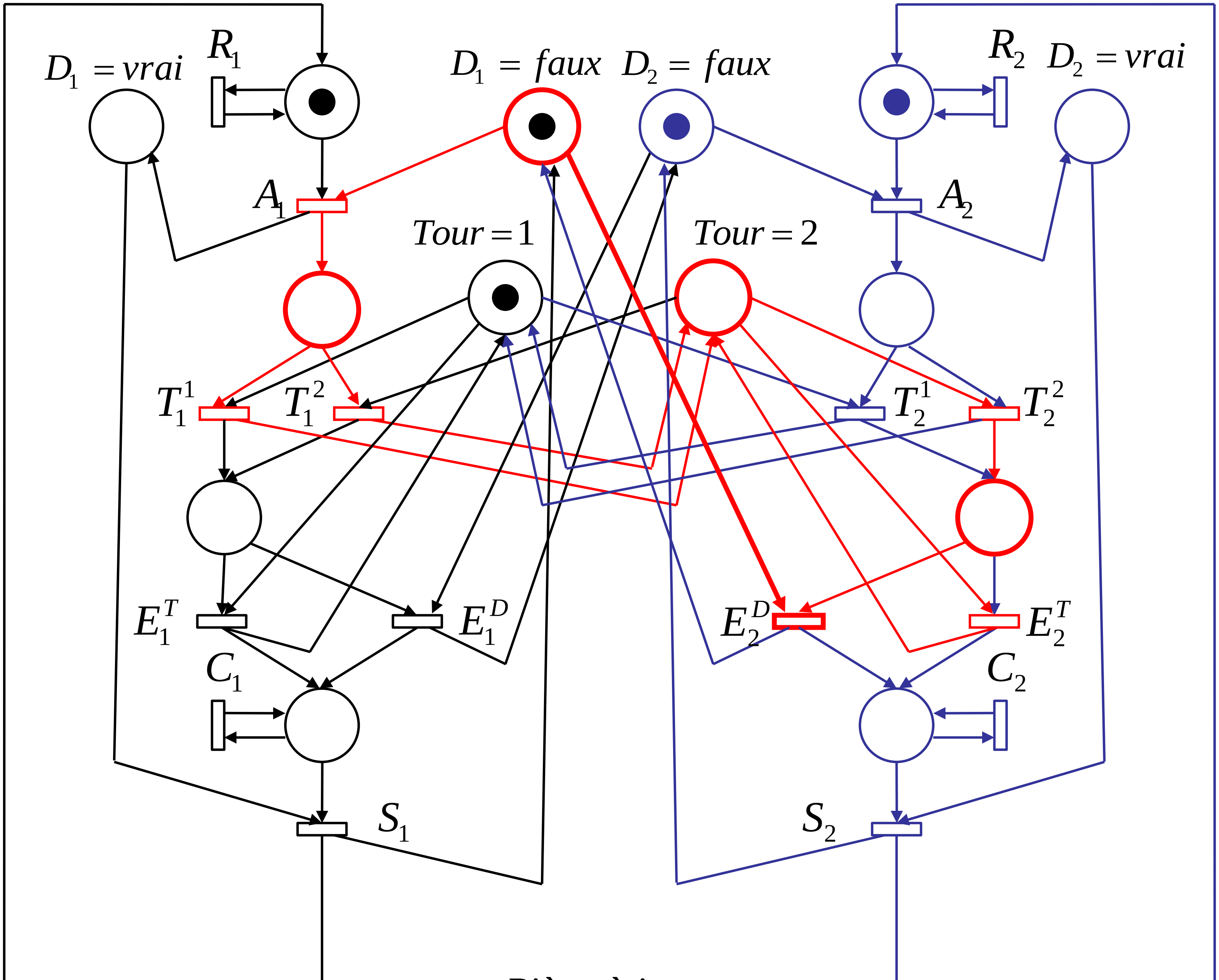


Piège à jetons

J.-M. Delosme - SED

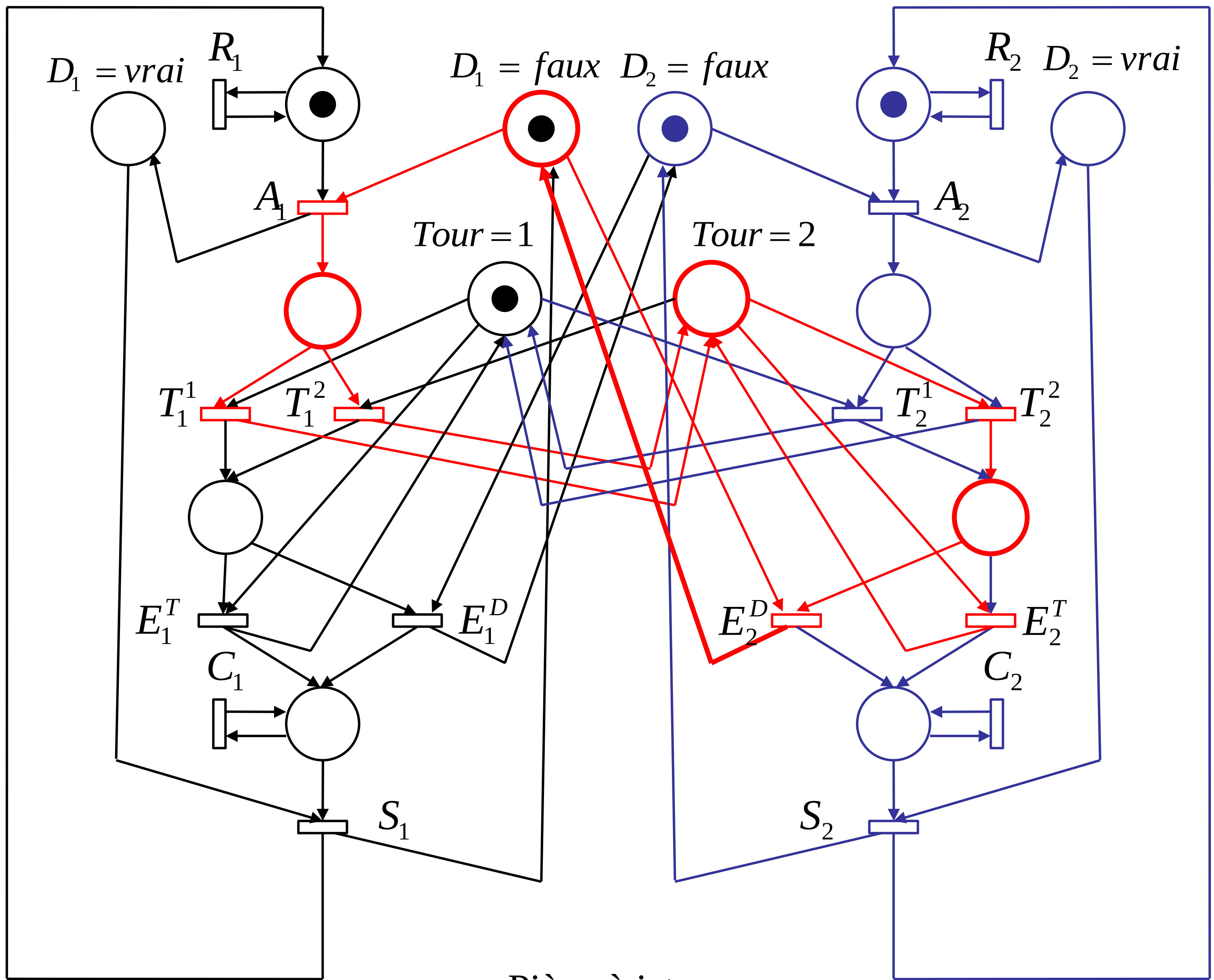


Piège à jetons



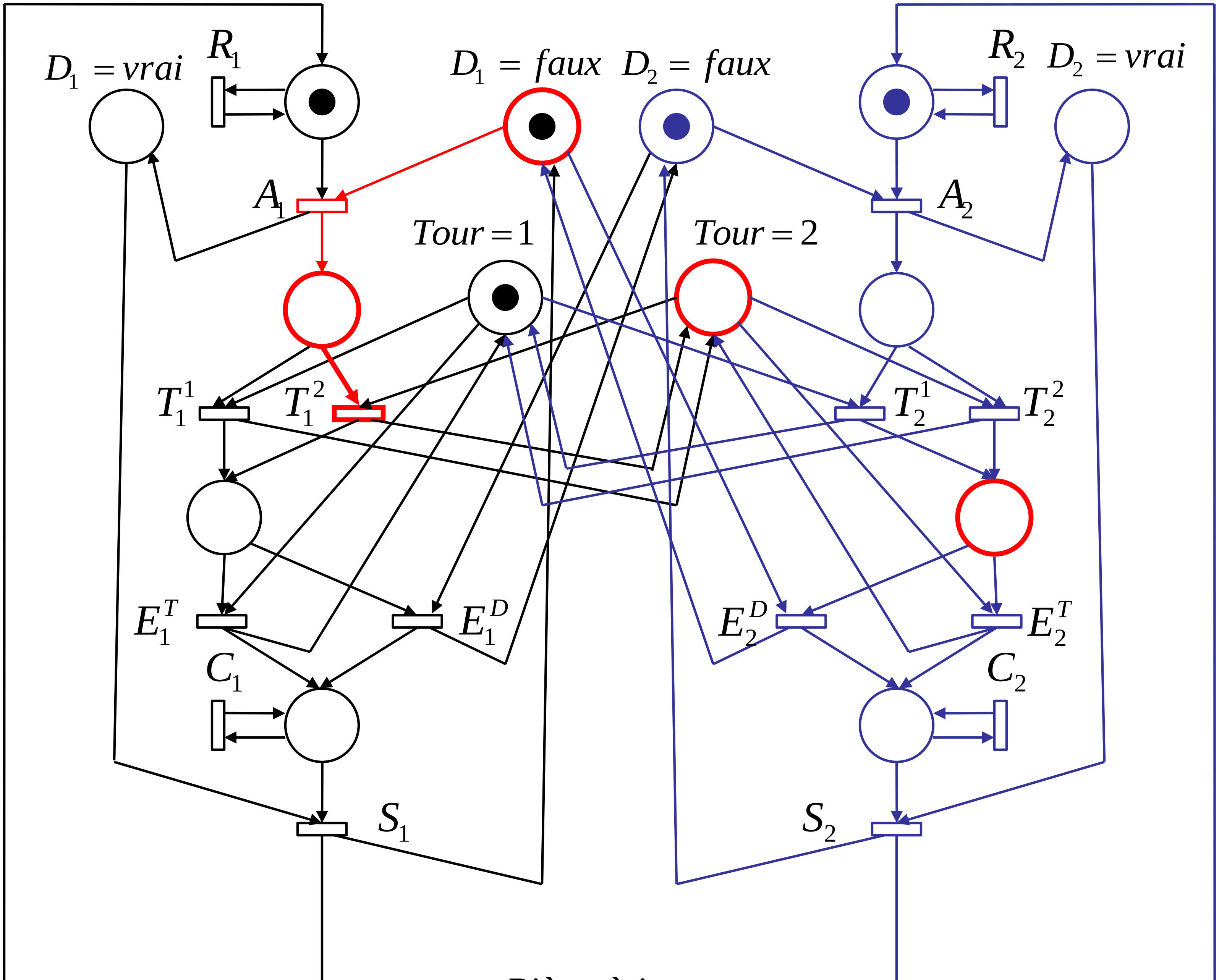
Piège à jetons

J.-M. Delosme - SED



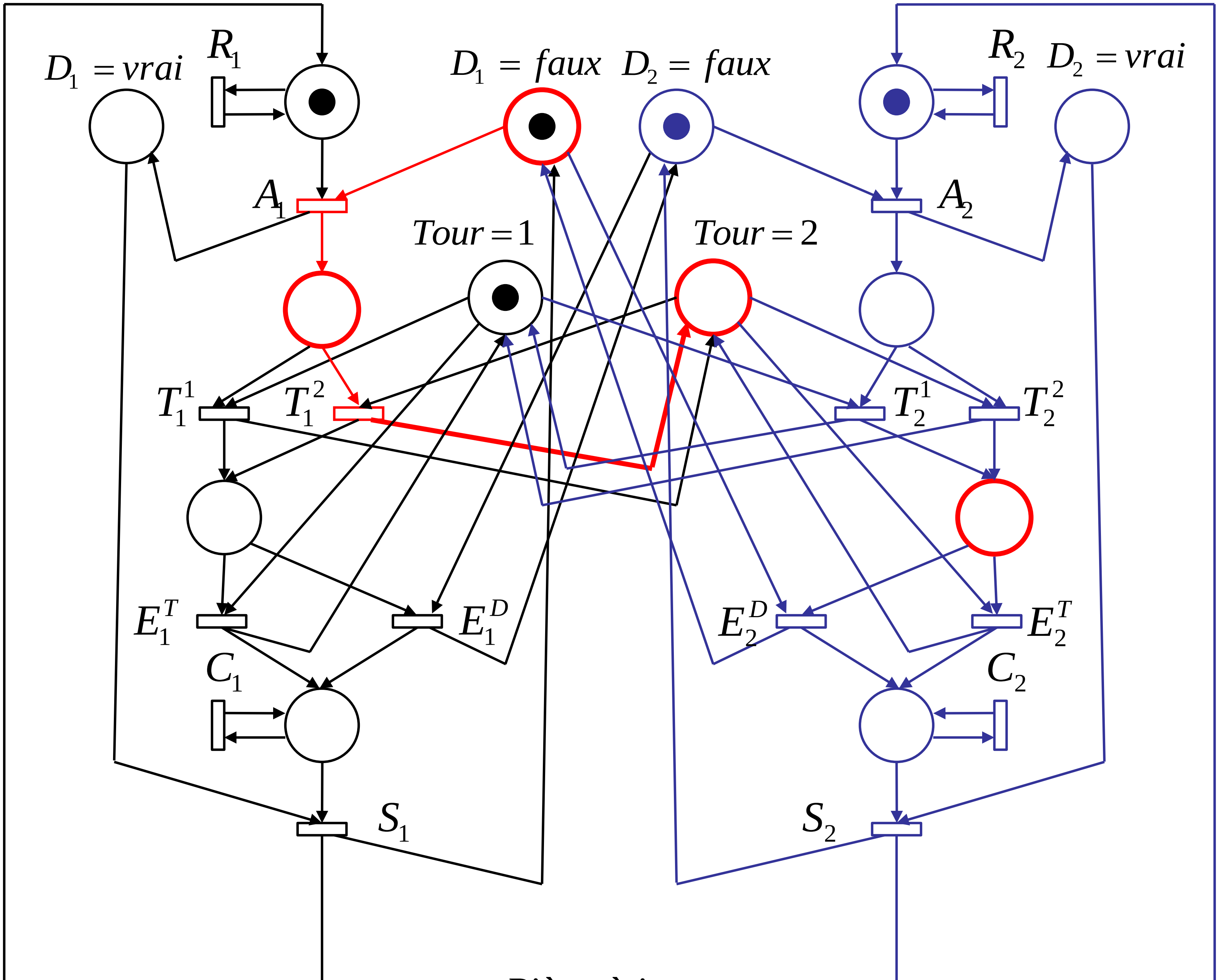
Piège à jetons

J.-M. Delosme - SED



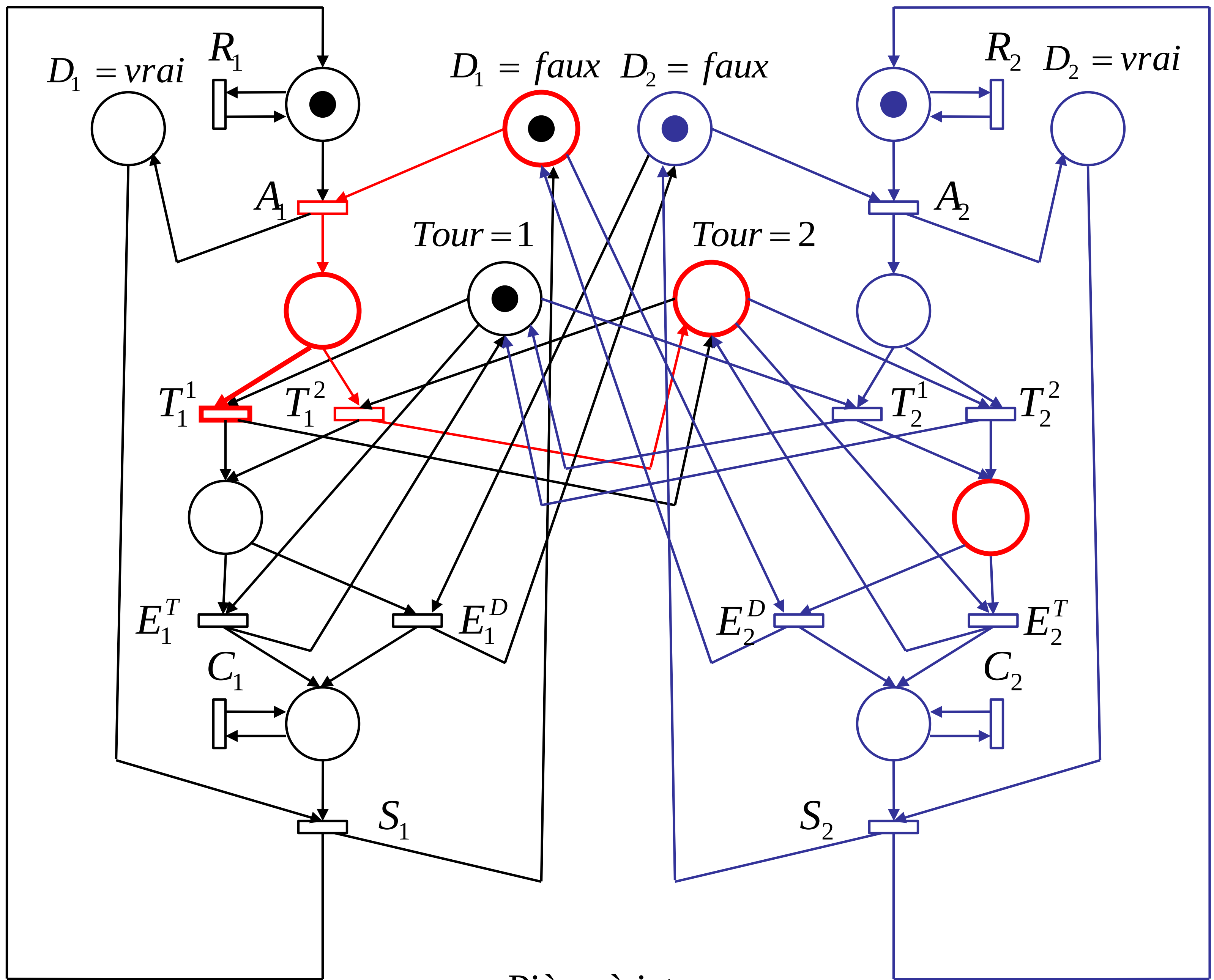
Piège à jetons

J.-M. Delosme - SED

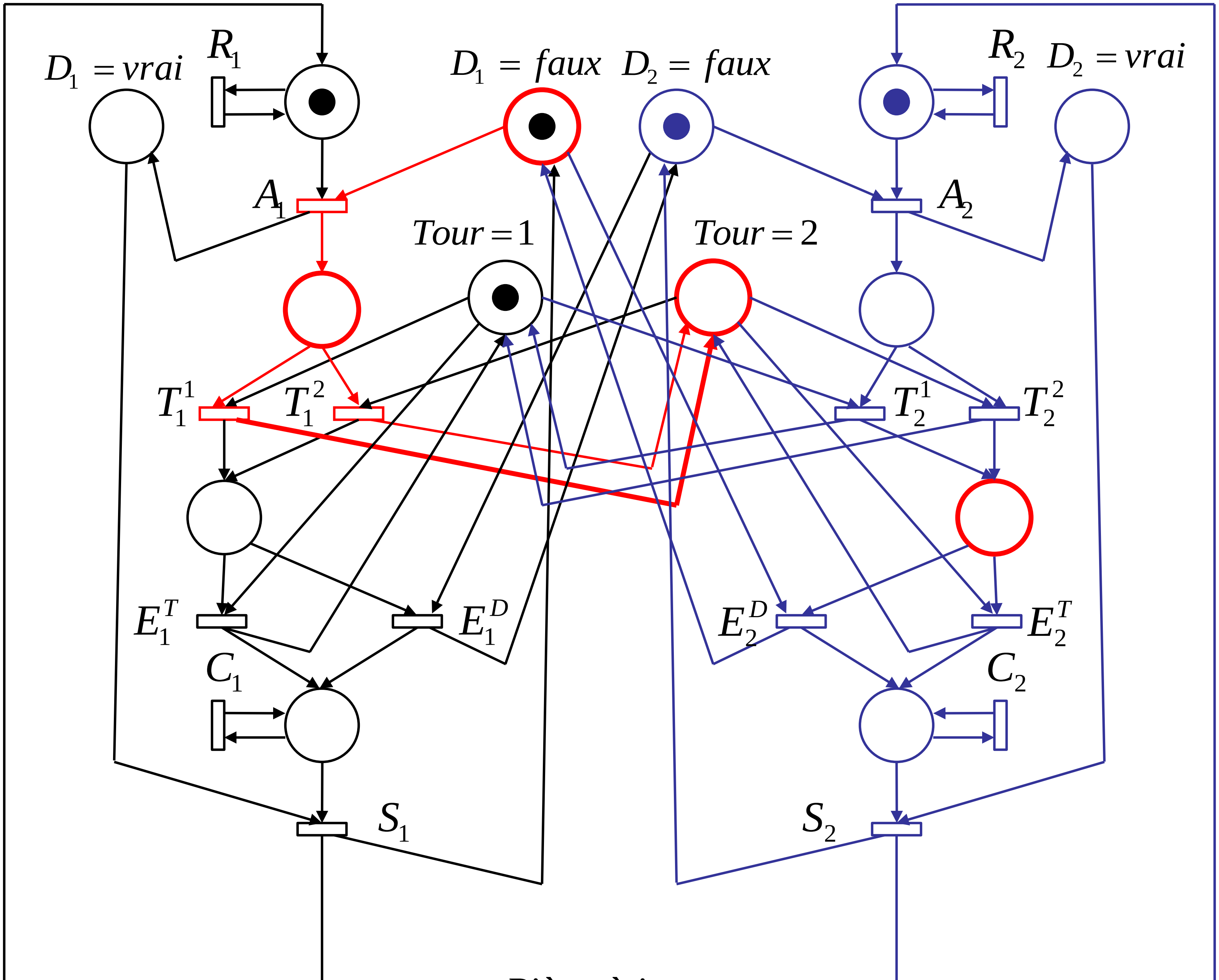


Piège à jetons

J.-M. Delosme - SED

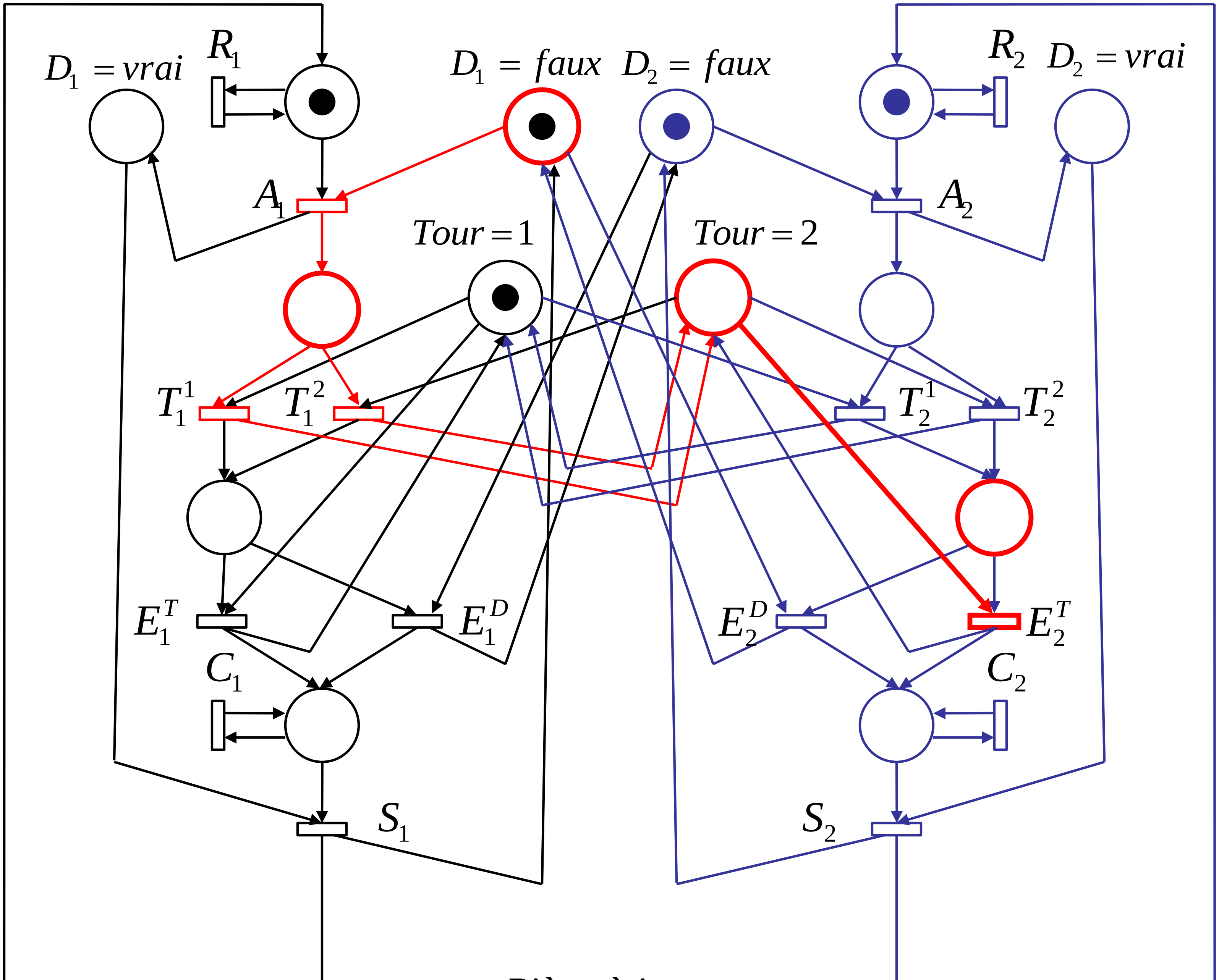


Piège à jetons



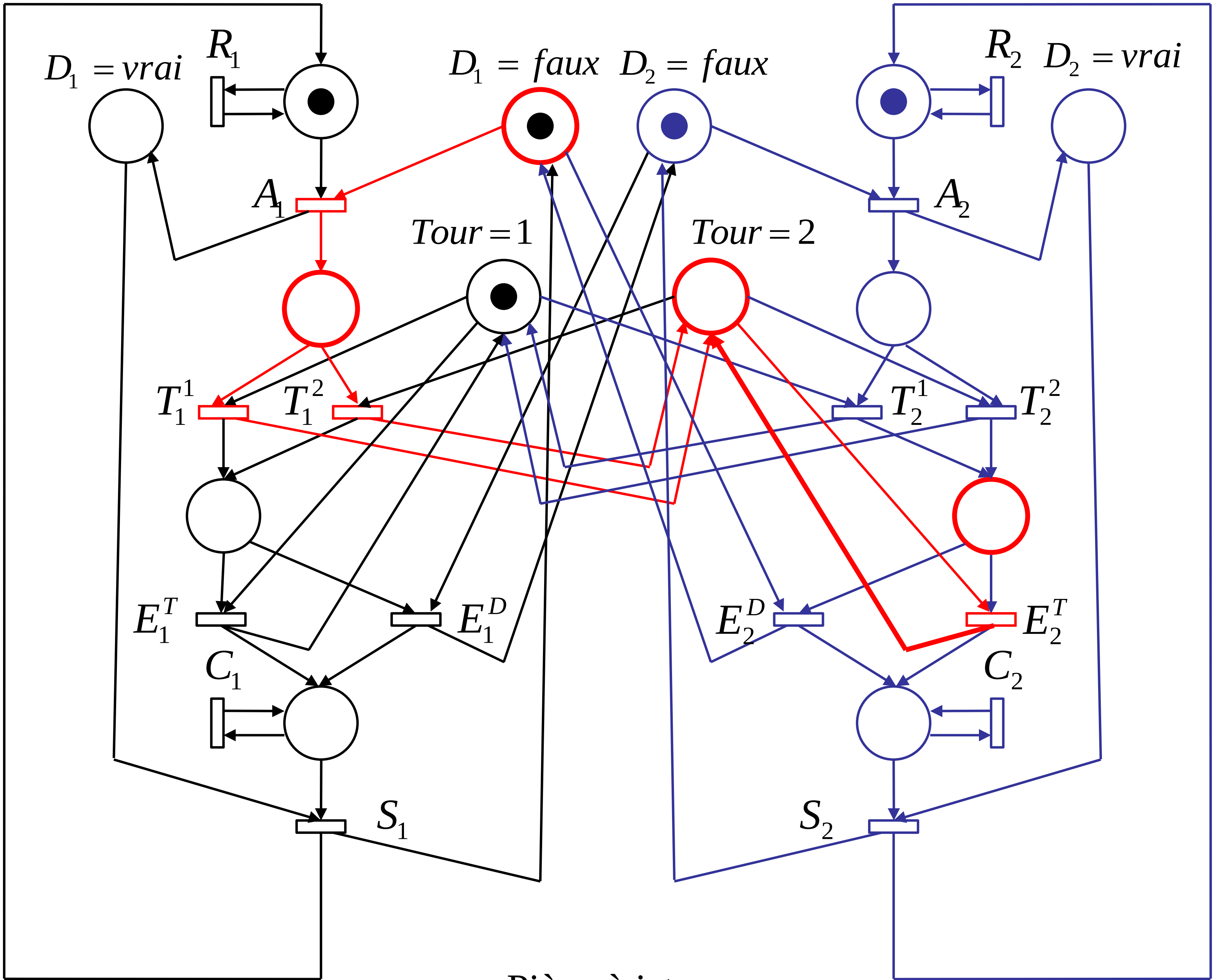
Piège à jetons

J.-M. Delosme - SED



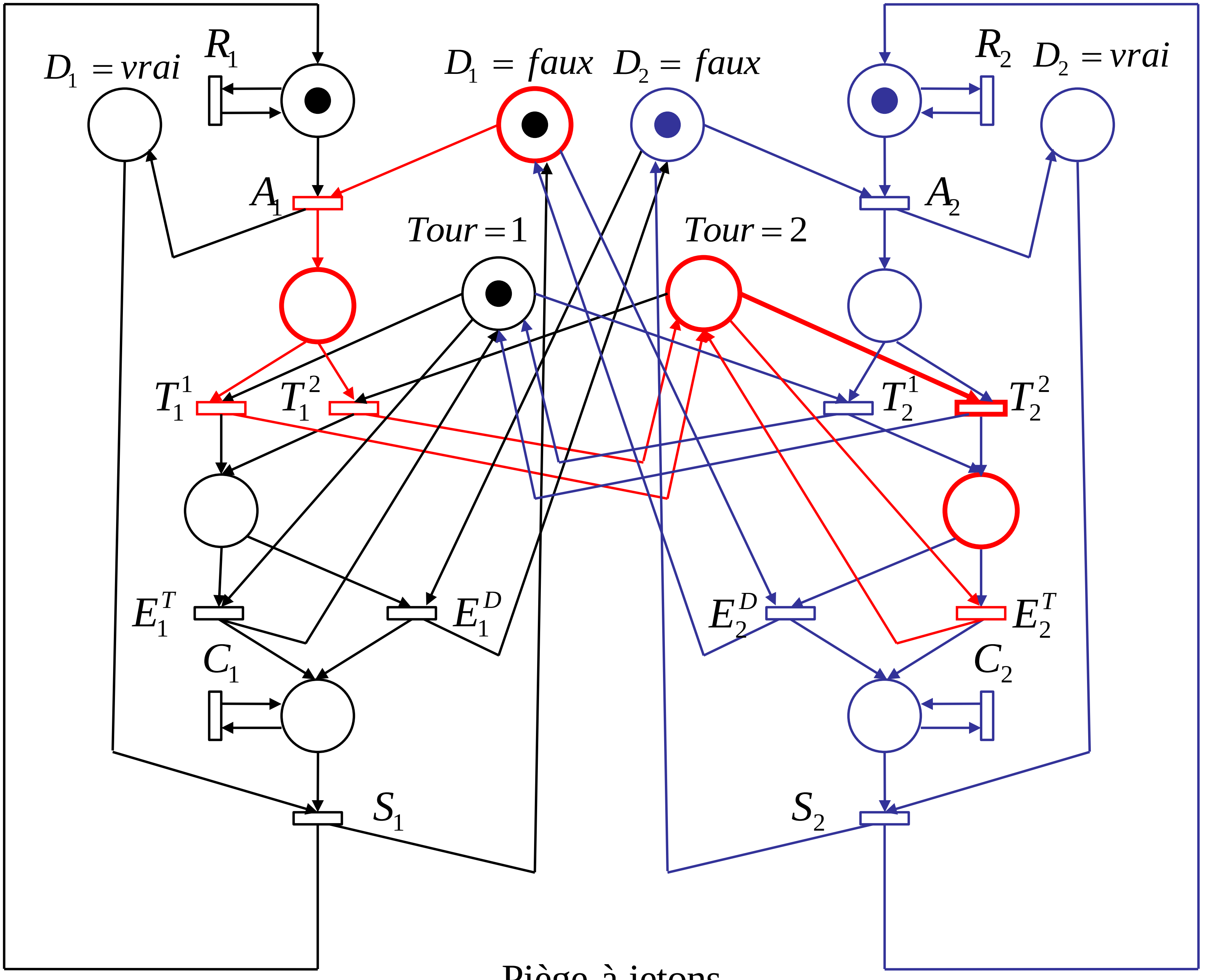
Piège à jetons

J.-M. Delosme - SED



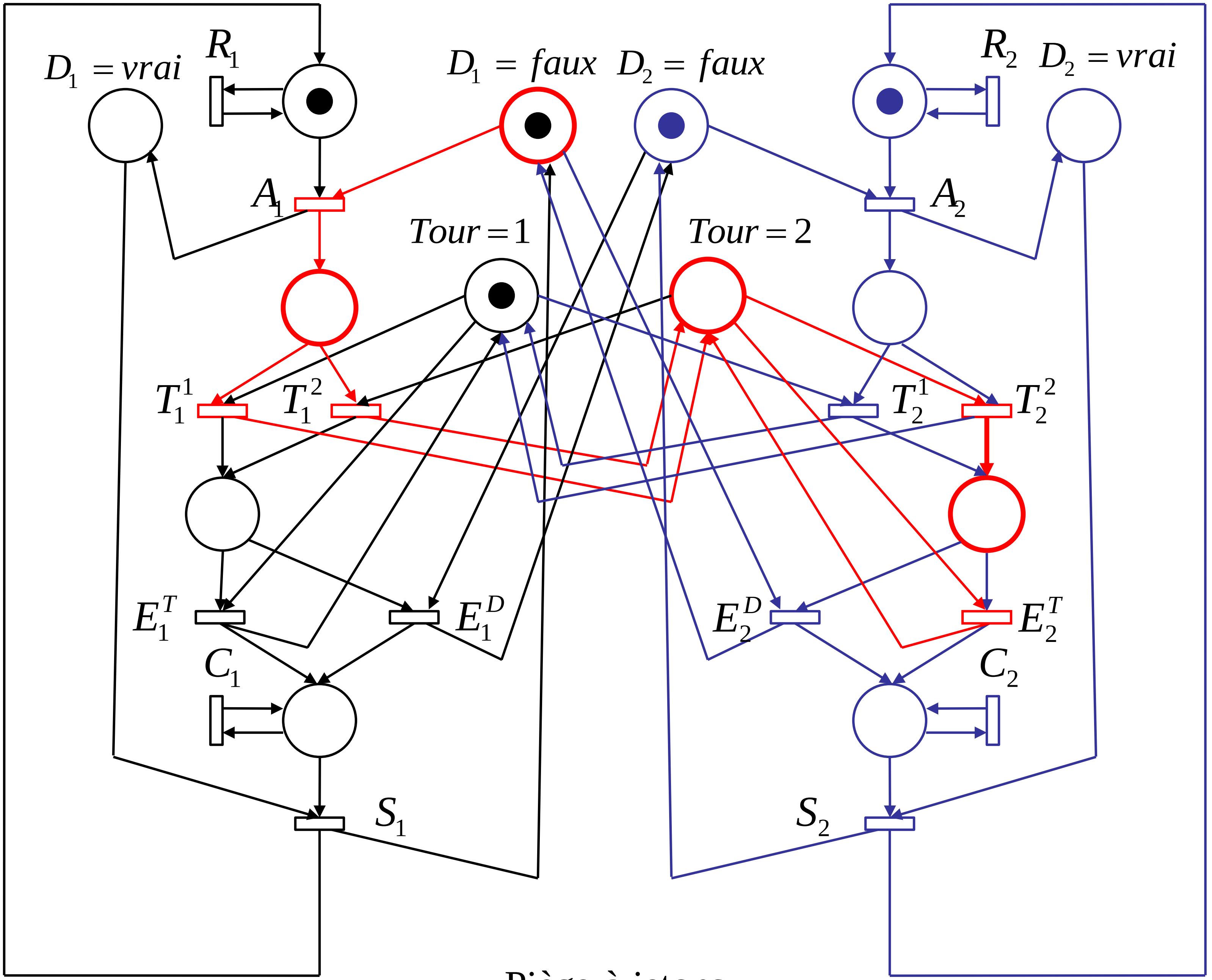
Piège à jetons

J.-M. Delosme - SED



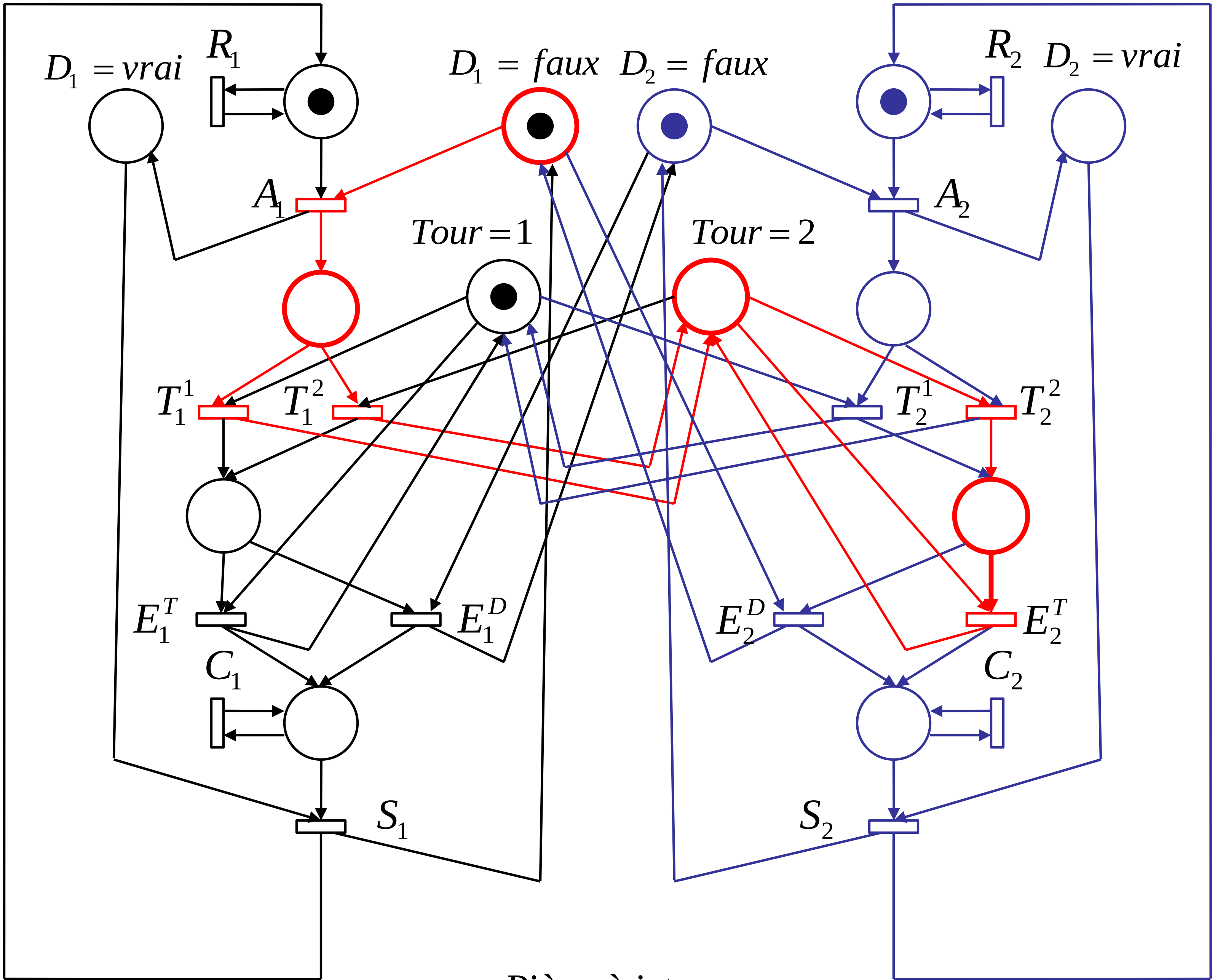
Piège à jetons

J.-M. Delosme - SED



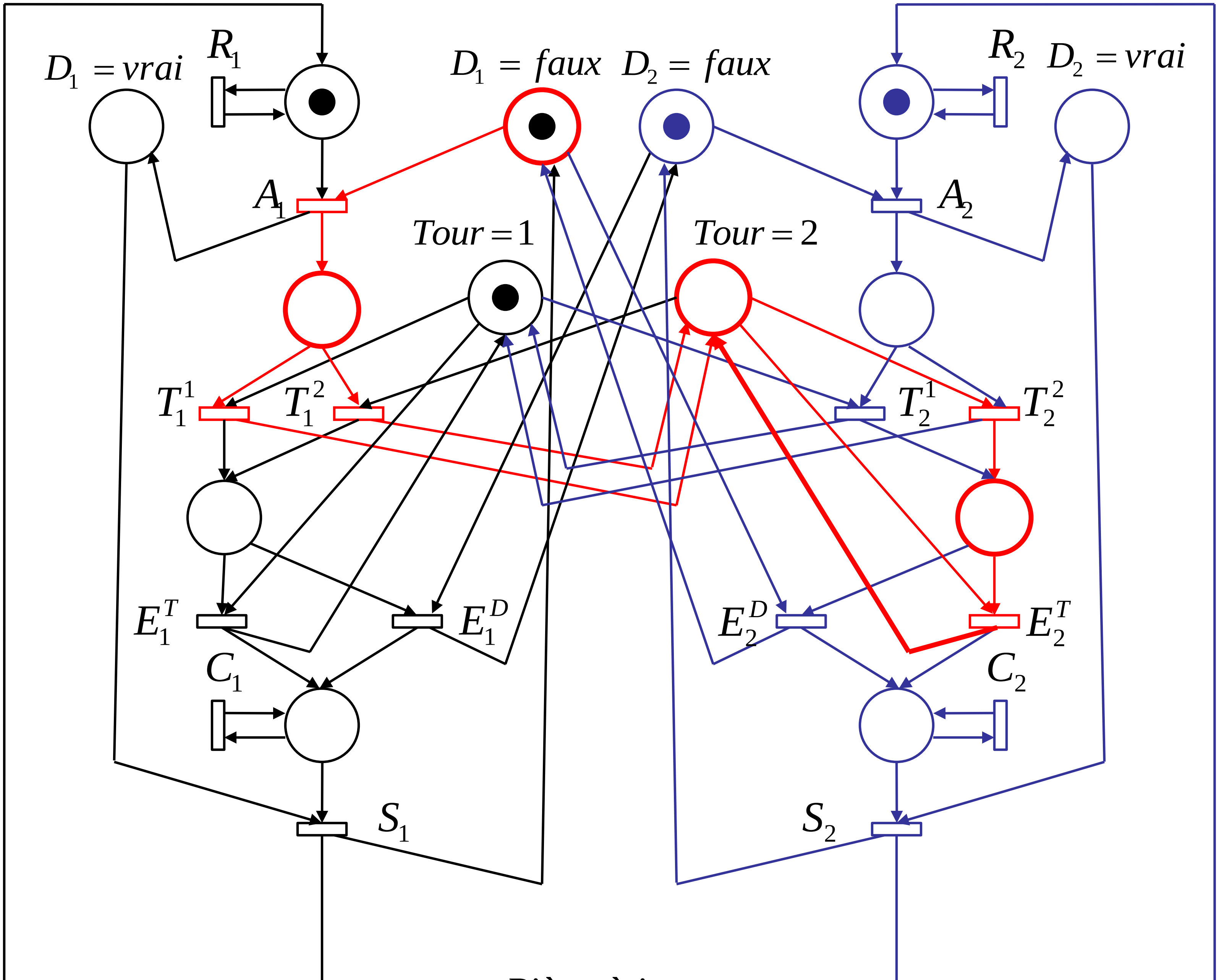
Piège à jetons

J.-M. Delosme - SED



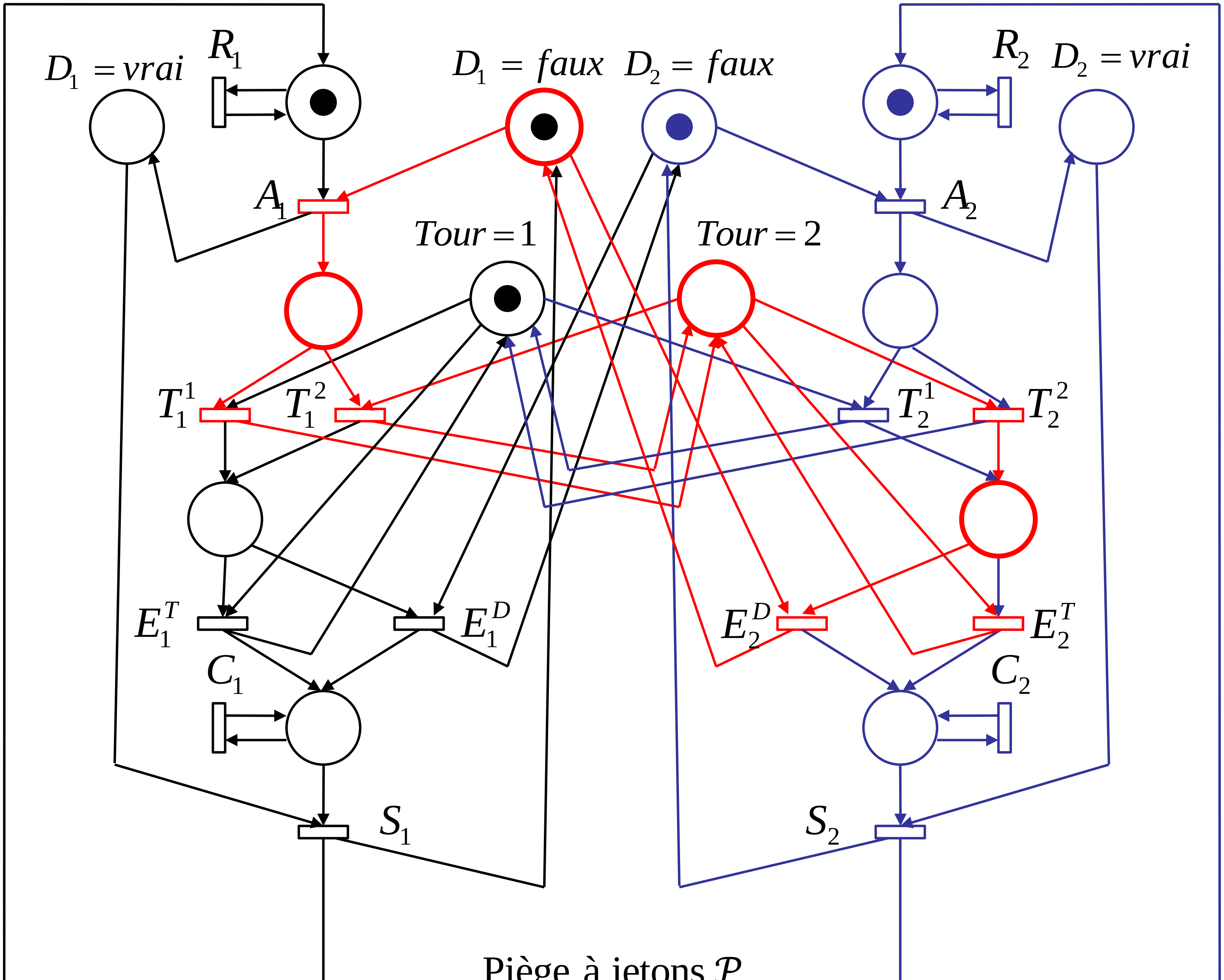
Piège à jetons

J.-M. Delosme - SED



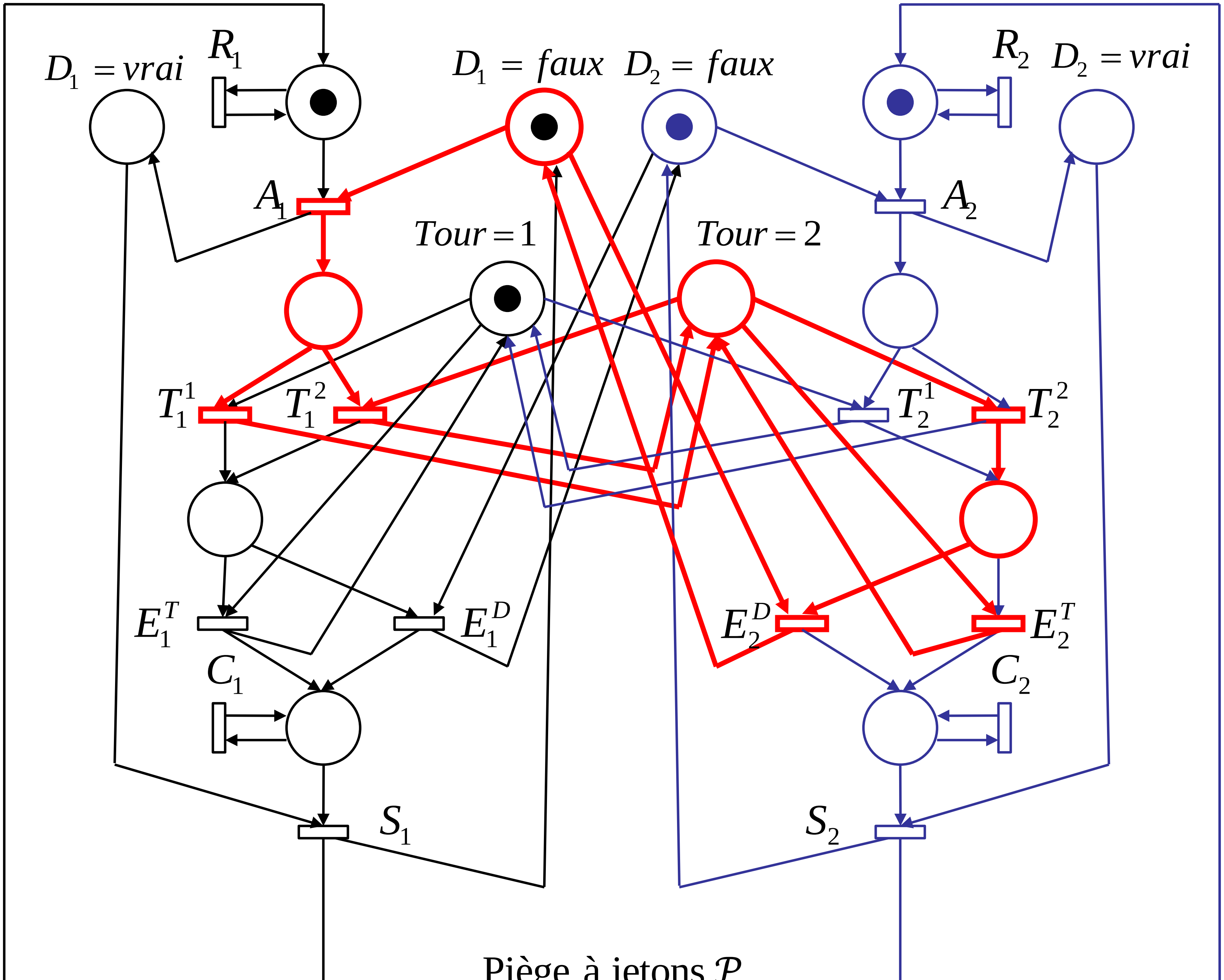
Piège à jetons

J.-M. Delosme - SED



Piège à jetons $\mathcal{P}$

$$\{O(p_i) \mid p_i \in \mathcal{P}\} \subseteq \{I(p_i) \mid p_i \in \mathcal{P}\}$$



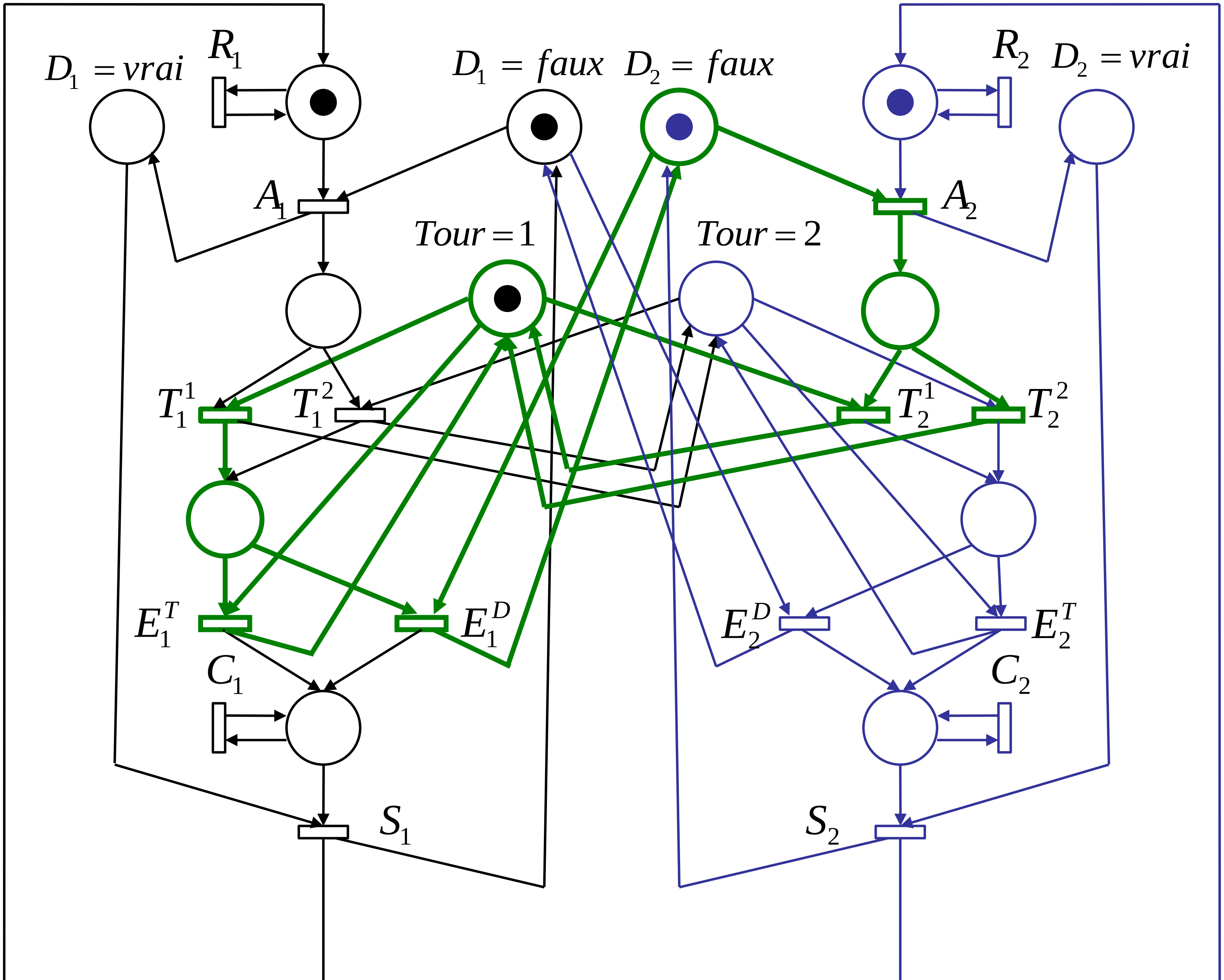
Piège à jetons $\mathcal{P}$

$$\{O(p_i) \mid p_i \in \mathcal{P}\} \subseteq \{I(p_i) \mid p_i \in \mathcal{P}\}$$

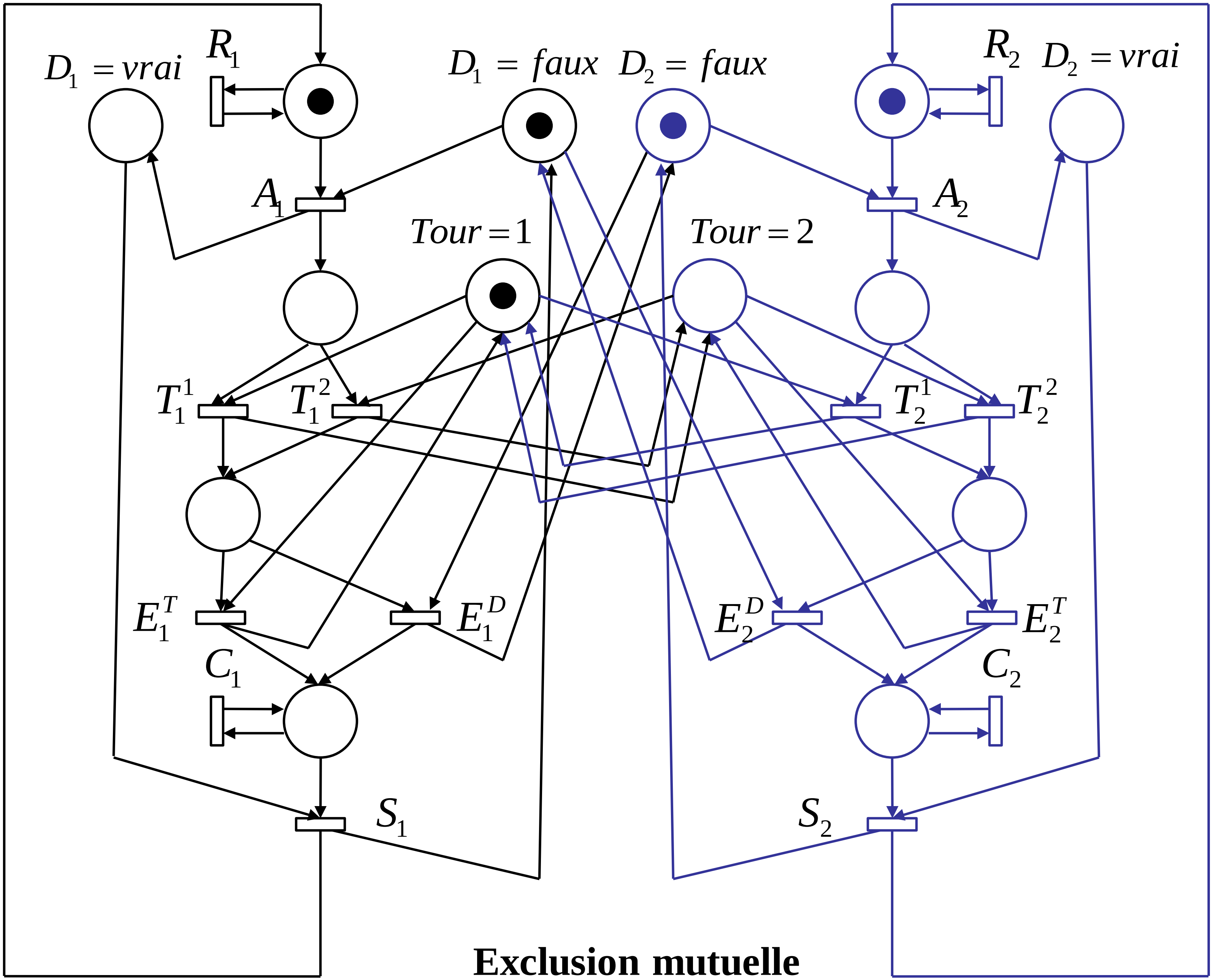
	D_1^F	D_1^V	p_1	p_2	p_3	p_4	T_1	T_2	D_2^F	D_2^V	q_1	q_2	q_3	q_4
A_1	-1	1	-1	1	0	0	0	0	0	0	0	0	0	0
T_1^1	0	0	0	-1	1	0	-1	1	0	0	0	0	0	0
T_1^2	0	0	0	-1	1	0	0	**0**	0	0	0	0	0	0
E_1^T	0	0	0	0	-1	1	**0**	0	0	0	0	0	0	0
E_1^D	0	0	0	0	-1	1	0	0	**0**	0	0	0	0	0
S_1	1	-1	1	0	0	-1	0	0	0	0	0	0	0	0
A_2	0	0	0	0	0	0	0	0	-1	1	-1	1	0	0
T_2^1	0	0	0	0	0	0	**0**	0	0	0	0	-1	1	0
T_2^2	0	0	0	0	0	0	1	-1	0	0	0	-1	1	0
E_2^T	0	0	0	0	0	0	0	**0**	0	0	0	0	-1	1
E_2^D	**0**	0	0	0	0	0	0	0	0	0	0	0	-1	1
S_2	0	0	0	0	0	0	0	0	1	-1	1	0	0	-1

Piège à jetons :

notion un peu plus générale que P-invariant

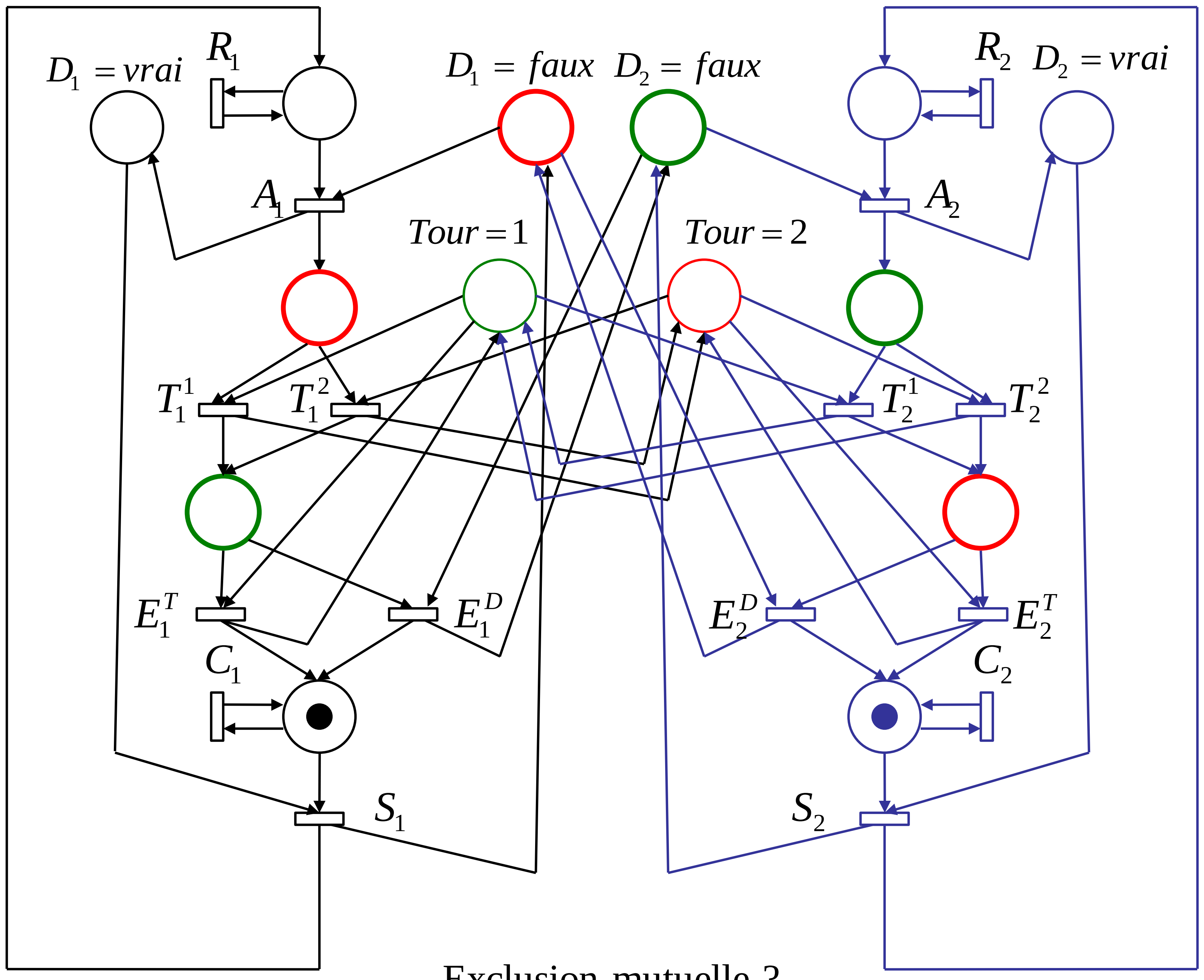


Deuxième piège à jetons

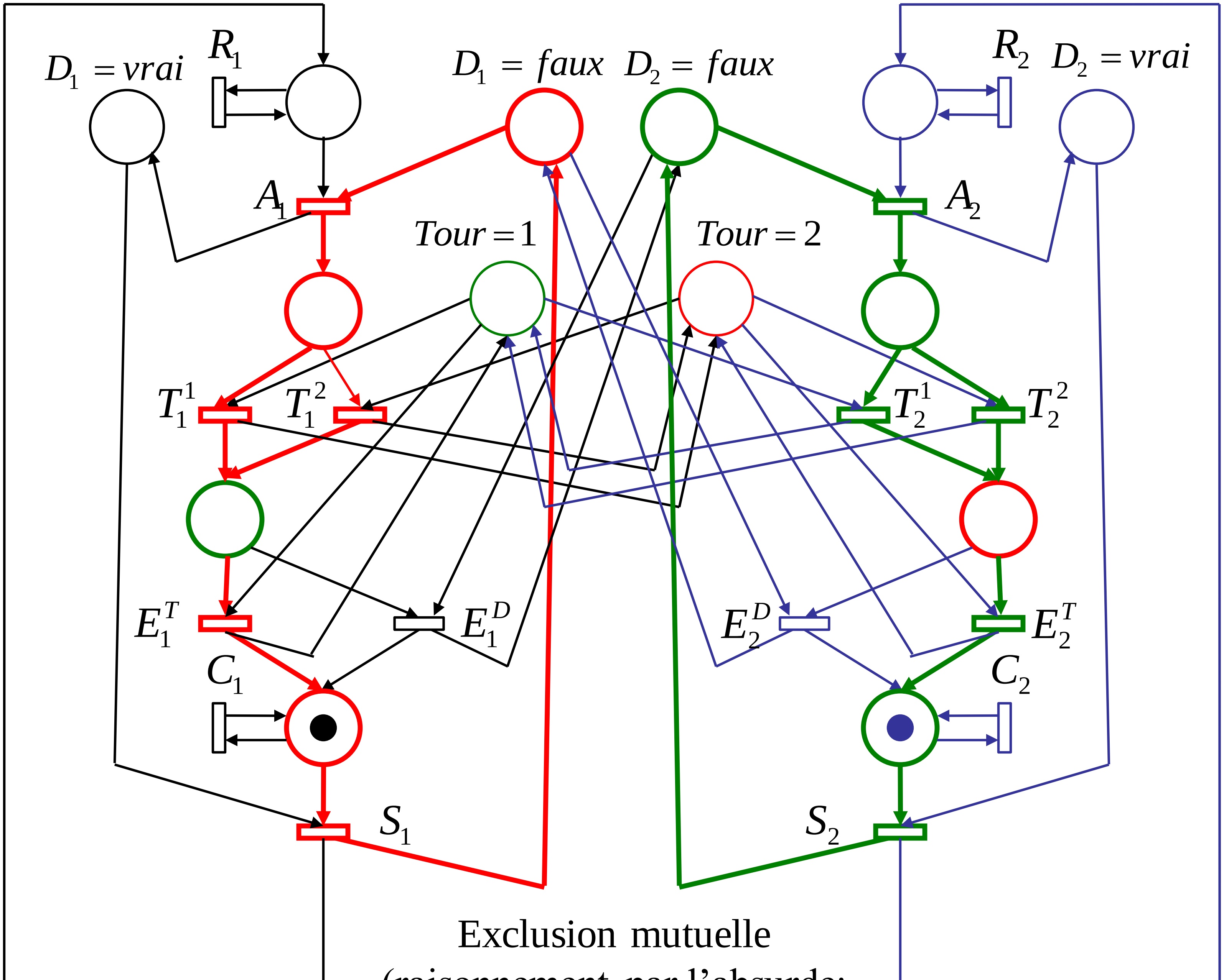


Exclusion mutuelle

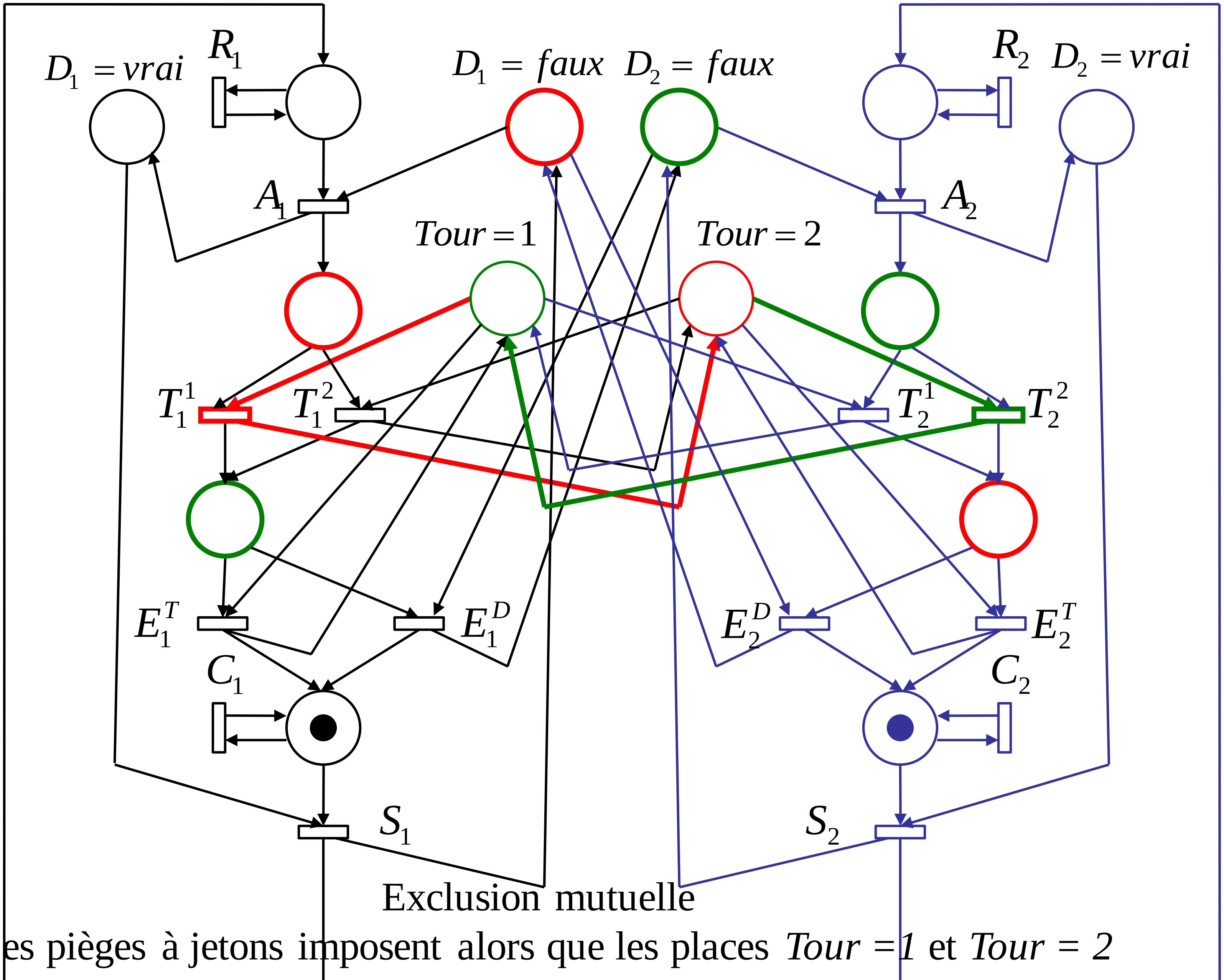
(revisitée avec la notion de piège à jetons)



Exclusion mutuelle ?

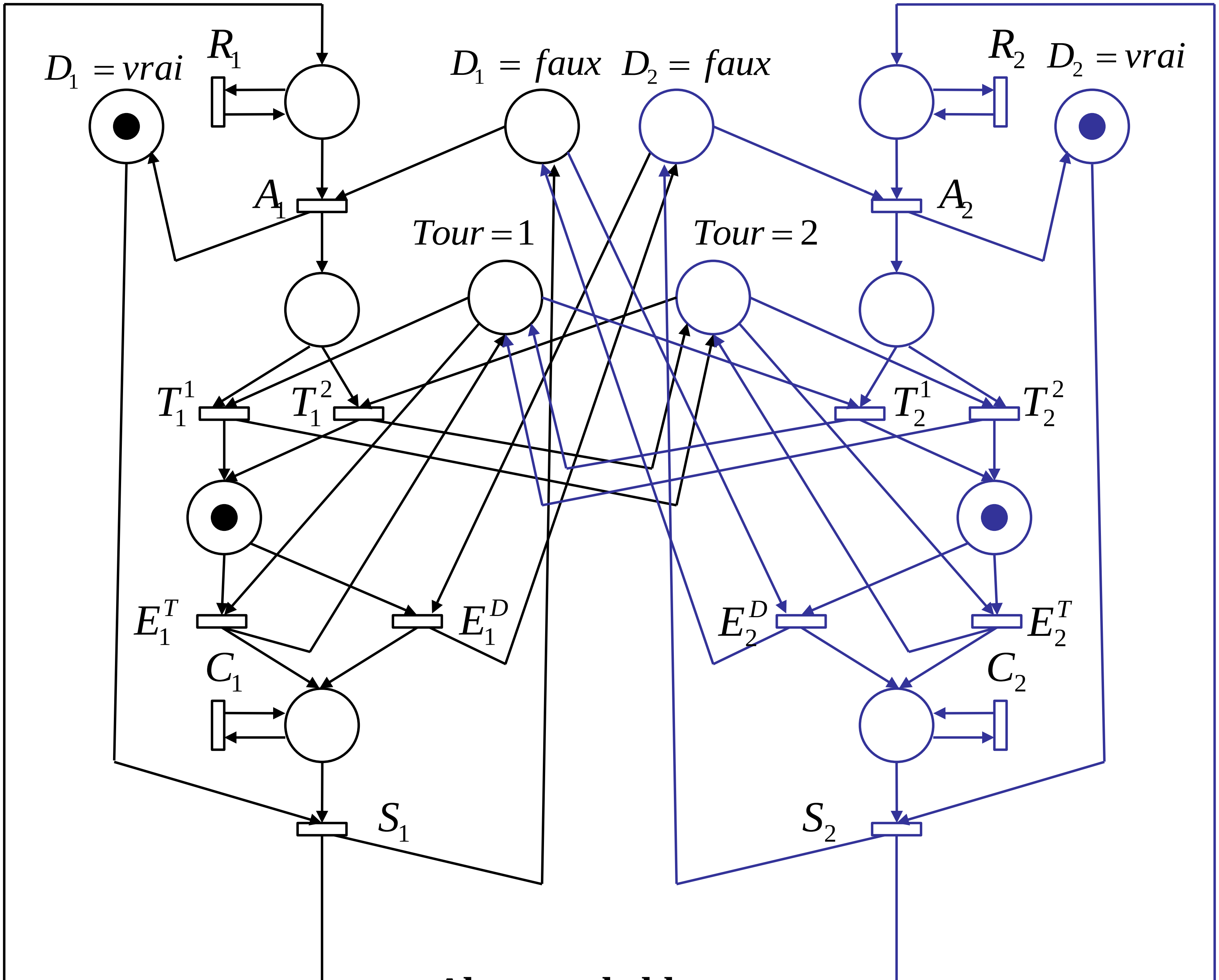


Exclusion mutuelle
(raisonnement par l'absurde:
P-invariants imposent places vides)

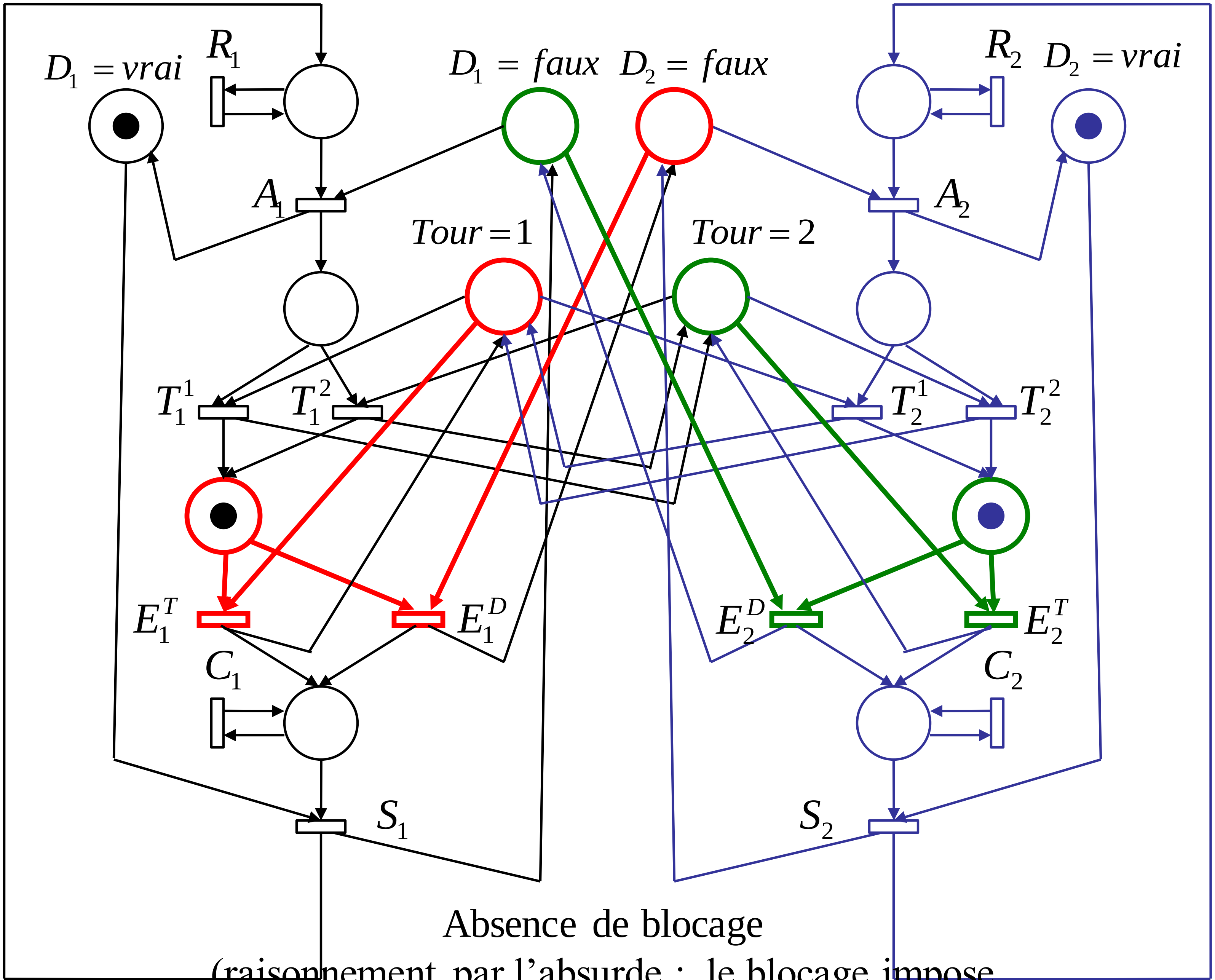


Exclusion mutuelle

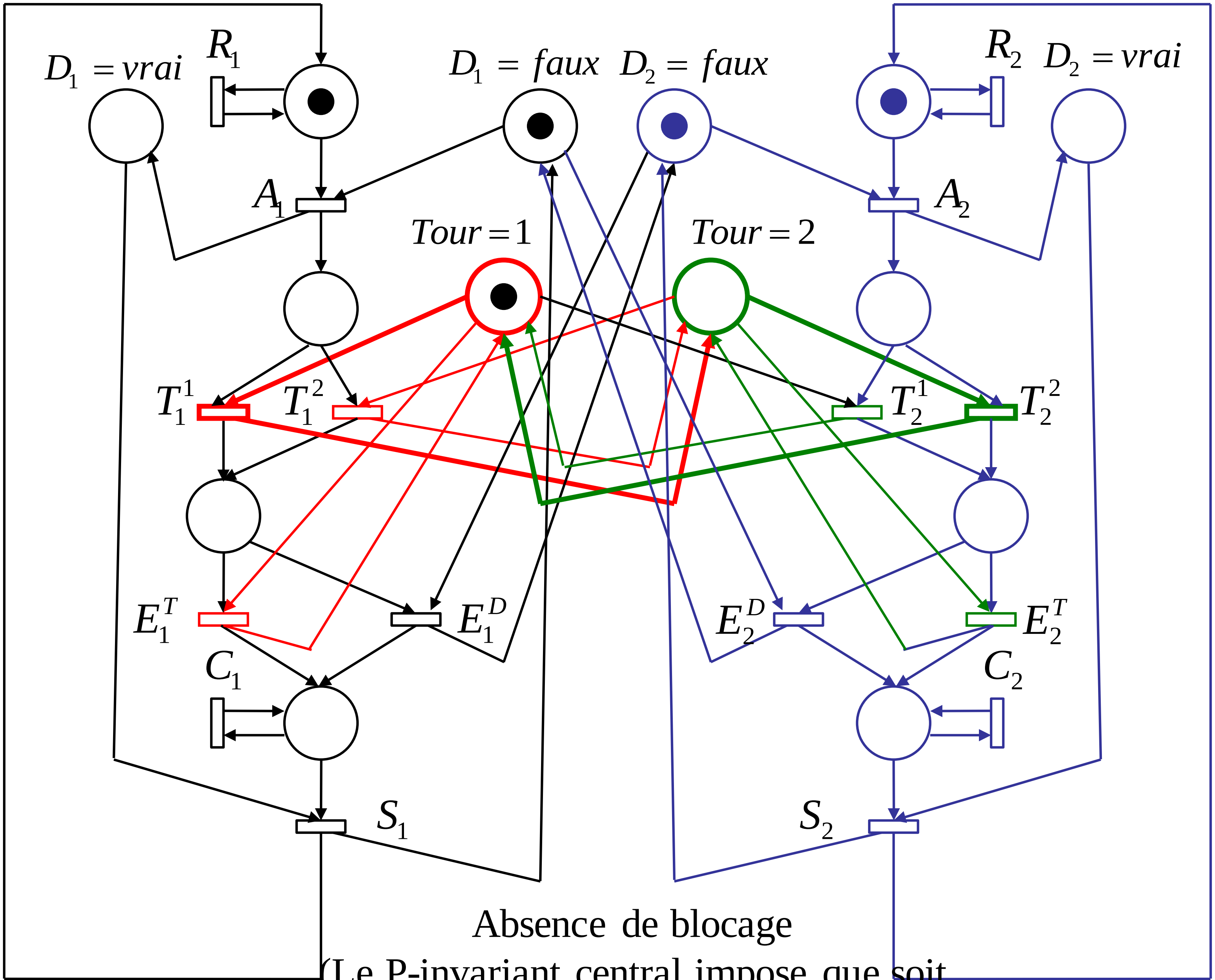
(Les pièges à jetons imposent alors que les places *Tour =1* et *Tour = 2* contiennent chacune au moins un jeton, en contradiction avec le fait que le P-composant central ne contient qu'un jeton)



Absence de blocage

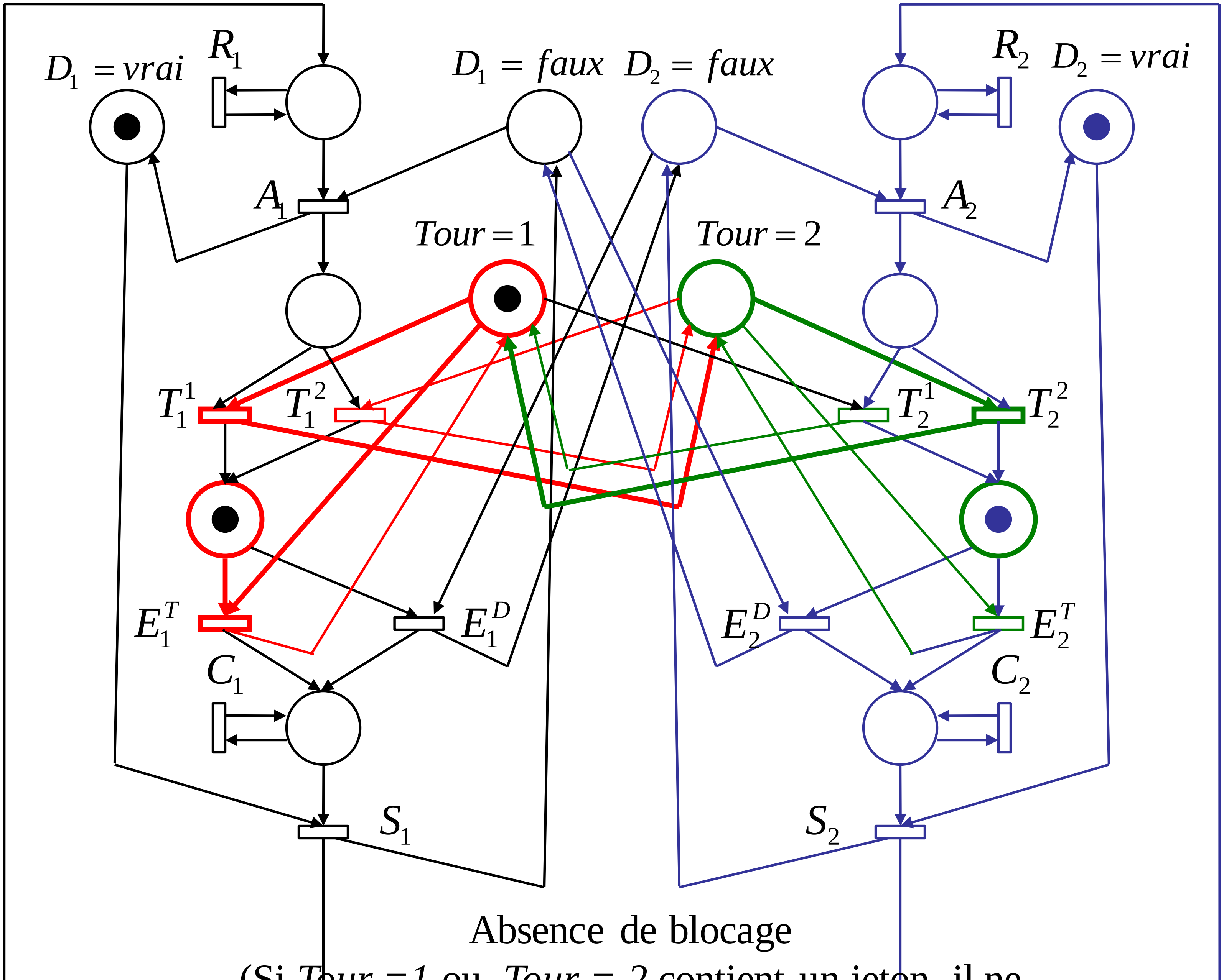


Absence de blocage
(raisonnement par l'absurde : le blocage impose
que les quatre places centrales soient vides)



Absence de blocage

(Le P-invariant central impose que soit *Tour =1* soit *Tour = 2* contienne un jeton)



Absence de blocage

(Si *Tour =1* ou *Tour = 2* contient un jeton, il ne peut pas y avoir de blocage, d'où la contradiction)