

(ii) Deterministic : $\forall r_1, r_2 \in T \models (F_{pre}(r_1) \wedge F_{pre}(r_2))$

Table 1: not deterministic, because

$\not\models \neg (\neg C_1 \wedge C_3) \wedge C_2$ - not a tautology

Table 2:

R_1 and R_2 : $\models \neg (\overset{\circ}{C_2} \wedge \neg C_2 \wedge C_3)$ - Tautology

R_1 and R_3 : $\models \neg (C_2 \wedge \neg C_1 \wedge \neg C_2 \wedge \neg C_3)$ - tautology

R_1 and R_4 : $\models \neg (C_2 \wedge \neg C_2 \wedge \neg C_3 \wedge C_1)$ - tautology

R_2 and R_3 : $\models \neg (\neg C_2 \wedge C_3 \wedge \neg C_1 \wedge \neg C_2 \wedge \neg C_3)$ - tautology

R_2 and R_4 : $\models \neg (\neg C_2 \wedge C_3 \wedge C_1 \wedge \neg C_2 \wedge \neg C_3)$ - tautology

R_3 and R_4 : $\models \neg (\neg C_1 \wedge \neg C_2 \wedge \neg C_3 \wedge C_1 \wedge \neg C_2 \wedge \neg C_3)$ - tautology

\Rightarrow Table 2 is deterministic

(iii) T₁: Strictly speaking there are no useless rules in Table 3, because according to the Def. a rule is useless if its premiss is implied by another rule and if its effect is the same as another rule's effect, and in Table 3 all the effects are different. But we assume that Rule 1 never occurs and for that reason Rule 1 is basically useless.

T₂: No useless rules: no rules, that are implied by another and also no same actions.

(iv) Table 3 is consistent with respect to conflicting actions, because there are no rules, that are inconsistent with $\frac{1}{2}$.
(no conflicting actions in its effect.)