A Correcting Notice on “Synthesis of Bisimilarity Enforcing Supervisors for Nondeterministic Discrete Event Systems”

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In Section 4 of [1], a function $H_B : 2^{C^W_B} \rightarrow 2^{C^W_B}$ is defined. The second condition of $H_B(W)$ is given as follows:

- $\forall \sigma \in E(W), \forall (q, x) \in W^{-1}, \forall q' \in \delta(q, \sigma), \exists x' \in \alpha(x, \sigma), \exists W' \in \tilde{Y}(W, \sigma) : (q', x') \in W'^{-1},$

where

$$\tilde{Y}(W, \sigma) = \{ W' \in Y \mid \forall (x, q) \in W, \forall x' \in \alpha(x, \sigma), \exists q' \in \delta(q, \sigma) : (x', q') \in W' \}.$$

In this condition, $E(W)$ should be replaced with $\hat{E}(W)$, where $E(W) = \{ \sigma \in \Sigma_c \mid \exists (x, q) \in W : \delta(q, \sigma) \neq \emptyset \}$ and $\hat{E}(W) = \{ \sigma \in \Sigma \mid \exists (x, q) \in W : \delta(q, \sigma) \neq \emptyset \}$. That is, the second condition of $H_B(W)$ should be corrected as

- $\forall \sigma \in \hat{E}(W), \forall (q, x) \in W^{-1}, \forall q' \in \delta(q, \sigma), \exists x' \in \alpha(x, \sigma), \exists W' \in \tilde{Y}(W, \sigma) : (q', x') \in W'^{-1}.$

References