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 $\mathcal{H}_B : 2^{\mathcal{C}_{W_B^*}} \to 2^{\mathcal{C}_{W_B^*}}$ is defined. The second condition of $\mathcal{H}_B(W)$ 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 $\mathcal{H}_B(W)$ 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

[1] S. Takai, "Synthesis of bisimilarity enforcing supervisors for nondeterministic discrete event systems," *Proceedings of the 14th International Workshop on Discrete Event Systems* pp. 1–6, 2018.