Date: 11 November 2021

1. *In the proofs of Proposition 5 & 6 (the* NP*-hardness and* PSPACE*-hardness, only appear in the appendix of the arXiv version)*: Not an error, but I noticed that the construction to "single out" one specific part of the union

$$\bigcup_{i=1}^{n} U_1^{(i)} \sqcup \ldots \sqcup U_k^{(i)}$$

can be simplified (in fact, I think the way I do it in the paper is too complicated). More specifically, as the vectors in N (see the proof for the notation and assumptions) are incomparable, if we want to use

$$U_1^{(i_0)} \sqcup \ldots \sqcup U_k^{(i_0)}$$

in the reduction, with the corresponding vector $(n_1^{(i_0)}, \ldots, n_k^{(i_0)}) \in N$, it is sufficient to add, for each $a_j \in \Sigma$ ($j \in \{1, 2, \ldots, k\}$), a path labeled by $a_j^{n_i^{(i_0)}}$ if $n_i^{(i_0)} \neq \infty$ and labeled by $a_j^{K_j}$ with $K_j = \max\{n_j^{(i)} \mid i \in \{1, \ldots, n\}, n_j^{(i)} \neq \infty\} + 1$ (with $\max \varnothing = 0$) that ends at the state t (instead of the paths labelled with the $a_{\lambda(i)}^{m(i)}$ as in the paper).
Then, for a word $w \in \Sigma^*$ with $|w|_{a_j} \geqslant K_j$ if $n_j^{(i_0)} = \infty$ and $|w|_{a_j} = n_j^{(i_0)}$ otherwise, we have

$$w \in L \Leftrightarrow w \in U_1^{(i_0)} \sqcup \ldots \sqcup U_k^{(i_0)}.$$

Then, the set of paths P can be constructed as outlined above, without the need to define the mappings λ and m as in the paper.