Erratum

In the papers [Kup11, Kup14], there is an error in the proof translating aperiodic stabilisation monoids to cost LTL.

Indeed, when decomposing words according to a letter b, we have to pay a constant attention to the fact that the monoid is ordered. When writing b in a cost LTL formula, we actually capture all elements above b. We do take care of the fact that $\neg b$ captures the wanted elements, but the formula b will capture elements that do not coincide with b, and in particular elements that are also captured by $\neg b$. Because of this phenomenon, we cannot directly describe the wanted decomposition using LTL formulas, as it is done in the classical case.

References

[Col] Thomas Colcombet. Personal communication.

[Kup11] Denis Kuperberg. Linear temporal logic for regular cost functions. In *28th International Symposium on Theoretical Aspects of Computer Science, STACS 2011, March 10-12, 2011, Dortmund, Germany*, pages 627–636, 2011.

[Kup14] Denis Kuperberg. Linear temporal logic for regular cost functions. *Logical Methods in Computer Science*, 10(1), 2014.