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Anonymous Reviewers
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Dear reviewers, dear editors,

We would like to thank you for your feedback on our submission, as well as for the insightful comments, which allowed us to further improve the quality of our paper.

We have done our best to address all the raised concerns.

Review 1

Q: "I would suggest to reduce a bit the "State of the art" section (which takes about the 70% of the paper length) and, if possible, introduce a section with the description of at least one application among those described in the papers considered for the survey".

A: We disagree on this point, since state of the art is the core of a survey. Regarding the application, since the approaches are application-specific it is very hard to provide a single example that would cover all the problems from all the perspectives.

Q: "In this context, ... to an unpredicted environmental dynamics": the meaning is understood but the sentence should be rephrased to improve clarity.

A: This sentence is rephrased in order to improve the clarity for the reader

Q: "Focusing on the one of the directions ... use them all together": can Architecture and System directions be considered somehow linked? See also my previous comment.

A: As we shown in the paper, architecture level deals with topology dynamics, while system level cope with internal parameter of the node in WSN. These two levels are orthogonal, so we can safely combine them in one effective solution.

Q: "There also could be an intermediate state, when the old behaviour is not applicable in the new situation, but the new behaviour is not chosen yet.": could you please clarify what it is supposed to happen at system level in such particular condition? Are there strategies to avoid this?

A: The system simply misbehaves, and cannot be relied on. This is a critical problem, but to treat it is out of the scope the report.

However, the sentence has been rephrased as follows:

"There also could

be a transitional state, where in the environmental conditions are changed and the old behaviour is no more suitable, but the new behaviour is not calculated or applied yet."

All the typos reported have been fixed, and sentences have suitably rephrased.

Review 2

Q: There must be improvements of English. For instance "the sensors' coverage". The "s" structure is never used with anything inanimate.

A: Fixed by rephrasing the sentence.

Q: In the introduction, there is no description of current technologies (nonselfadaptation ones) that are used in WSN. So it is unclear how this problem is solved today, with what methods.

A: Non-adaptive methods have been not taken account since they are off topic for this report.

Q: There are use-cases for each self-adaptation layer, but there is no example that combines those layers together. However, in the evaluation the authors claim that the directions are independent, so maybe there is no such an example.

A: The ASCENT approach is an example. The report has been corrected to highlight this point.

Review 3

Q: Section III (Evaluation) of the manuscript need to be revised and rephrased. Although, authors tried to provide evaluation of existing work, but still few unclear concepts. Needed a major revision in section III.

Need further elaboration on each evaluation remarks provided in manuscript

A: Section III has been completely reviewed accordingly.

Minor issues reported have been also fixed.

Review 4

Q: Unclear distinction in three research directions

A: Adaptivity on system level focuses on the internal state of the node such as reconfiguration and resource management. Architecture level adaptivity is considered and implemented on architectural level, regardless the platform and application it will be used for. Application level adaptivity does not care about network topology or routing protocol, but performs on top of it. It is discussed in the paper in details. Anyway, we add in the report a statement saying that it is quite common that an approach covers more than one level/perspective.