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Dear Editor and Reviewers:

Please find attached our revised manuscript entitled “A smart street lighting system based on IPv6-enabled wireless sensor network” and the corresponding replies to the questions raised by the reviewers.

Look forward to your favorable consideration.

Most sincerely,

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**Reviewer #1:**

The manuscript presents a new routing protocol to be used for communications between urban street lights. The routing algorithm, GeoRank, mainly uses geographic routing but also exploits elements from RPL. The authors show simulations results outperforming RPL and geographic routing, depending on the radio range. The idea is sound and well explained. However it is not clear why a street lighting system would need every random light to communicate with another random light in the city, for example. The authors should present a clear application to motivate this scenario, and simulate this application to evaluate the routing protocol.

R:

Note that the title is misleading. This work only proposes a routing protocol, that could be used for lighting system (this has to be proven) or probably for other contexts as well. The title implies that the work is about a whole smart lighting system, whereas it is only about a routing protocol for wireless sensor network.

R:

There are some typos and English mistakes to fix in the paper, for example:

- "On the other hand" instead of "By the other hand"

- "RPL provides" instead of "RPL provide"

- "in order for an actuator to make" instead of "in order to an actuator make"

- etc.

R: Thanks. They have been corrected in the revised paper.

**Reviewer #2:**

-- Is it not clear what is the meaning of acronym CRI. Second paragraph

R: Thanks. The meaning of CRI (Color rendering index) has been included in the revised paper.

Figure 2 is not clear at a glance. I guess the label mean cost,parent but this is not clear. Maybe if the LBR was located on the top part it would be more clear. And I think the letter in the labels are redundant. You could also explain in plain text in the previous paragraph, after referring the figure.

R:

Section 4 should be much more "verbose", with plain text that explain both the algorithm and the diagram (figure 4). Algorithm 1 should be converted into pseudo-code. It is not clear what are the input and output variables of your algorithm. Step 3, for instance, is confusing, it should be split into more sentences or lines of pseudocode.

R:

Diagram of Figure 4. It is not clear the different between face and greedy GOAFR. It is not even clearly defined in the text. Please, clarify this point somewhere.

R:

It is not clear which type of simulation was performed. If you developed your own simulator you could specify more details specially related to wireless link quality and ETX values for RPL protocol.

R:

-- Finally, graph for Figure 6 does not show any higher order statistics, only the average values. You should include standard deviation or confidence interval if different seeds were used in your simulations.

R: Thanks. Confidence intervals have been added to the graphs in the revised paper.

You should also consider implementation of a real test case (small, no need for large testbeds) using real hardware and OS such as ContikiOS or TinyOS. This could contribute give more effective contributions to our community and confirm your results out of the controlled environment of simulators.

R:

**Reviewer #3:**

The abstract identifies three novel contributions:

1) GeoRank finds shorter routes than RPL with high link densities, and GOAFR in low link densities.

2) GeoRank avoids bandwidth-consuming control messages required in RPL

3) GeoRank is more scalable in terms of memory usage than storing-mode RPL

However, it is hard to find results that substantiate these claims. (2) is not substantiated and quantified in the results; hence there is little evidence of this. I also cannot see any results providing evidence of (3).

R: Thanks for the contribution. In the revised paper, we have included simulation results that provide evidence of (3). Also, we have changed the item (2) to “GeoRank avoids DAO control messages required in RPL”, which is correct by design, because DAO control messages are disabled in the implementation.