

All the results from the simulation shows that the proposed model can effectively identify malicious entities in the simulated environment.

5 CONCLUSION

Reputation is important when determining trust in a social environment. This paper is part of an ongoing research to design a scalable trust model that can be utilized for IoT. The paper proposed a reputation model that utilizes fuzzy-logic for the computation of reputation scores. In order to cater for entities without computational capability, the proposed model is agent-based and is a hybrid of a centralized and distributed model.

The results from the testing of the model show that the model is able to deal with different types of behaviors and it is able identify malicious entities. The results prove that a reputation model can be used to support decision making in the context of collaboration among entities within an IoT environment. During the testing of the model, both malicious and selfish entities were identified as malicious. More work still needs to be done on the model to enable it to differentiate between selfish and malicious entities. As part of the future work, we propose to integrate this model into a trust model. We also propose the addition of policies to the model that can be used to specify how reputation can be used as part of trust computation. The proposed model still needs to be tested in a real IoT environment.

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