

Thanks to the authors for submitting the detailed rebuttal for the paper. We had a detailed discussion on the rebuttal comments and the paper, and the TPC noted that while this paper proposes an interesting and innovative idea for an important problem, the paper, in its current version, needs significant additional works. Accordingly, the TPC decided to suggest a "revise" recommendation for the authors.

The authors have been suggested to look into the following aspects while revising the paper.

While Squigglemilli considers static subjects and moving radars at a close proximity, it detects the shape of the objects and thus been able to figure out whether the metallic object falls under the category "dangerous", whereas mmDefender just detects "ANY" metallic objects. Therefore, the Squigglemilli is certainly a more practical approach, as mmDefender may generate alarms for simple metallic objects like a pen or a jewellery. We would suggest the authors to put this up in the discussion for a qualitative comparison. Also, the author should consider approaches like "SAR Imaging" at their setup (static radar, moving objects) and show that such an approach is extremely difficult to implement on that setup, or provides poorer performance.

While the authors have claimed that their approach considers a static radar and moving subjects, and thus supports longer distance, the practicality of the system is rather limited, which the authors have also acknowledged in their rebuttal: "Since the radar monitors humans in motion within an otherwise static and empty, constrained space, the setup is not highly sensitive to its surroundings (unlike home monitoring)." This is indeed a very constrained setup, so the authors should provide specific use cases where such scenarios are practical. Note that under a "static and empty, constrained space", there can be other modalities which would be able to detect concealed metallic objects. It is important to discuss the advantage of mmWave under such scenarios.

The claims in the paper should be carefully written. While the authors have acknowledged that they should revised the claim about the "first work", we noted that the rebuttal also has claims that are not fully correct, like "mmDefender is inverse SAR-like, suitable for fixed radar and moving subjects at longer distances, and addresses combined RCS scenarios, such as concealed objects on the human body, which Squigglemilli does not." – Squigglemilli can indeed detect concealed objects, which is one of the applications they demonstrated in the paper.

While we appreciate the authors' effort in developing the proposed system, the claims and explanations in the paper should be placed properly and correctly. mmDefender may certainly have advantages under specific scenarios or use cases – and those need to be highlighted with possible evaluation of the system under those scenarios/use-cases while comparing with relevant baselines.

While we recommend and encourage the authors to revise the paper and resubmit in the next EWSN deadline, please note that it will go through a new round of reviews, possibly by a different set of reviewers. However, the above suggestions will certainly improve the quality of the paper and we hope to see this paper accepted eventually.