Reviewer Comments:

Reviewer: 1

Recommendation: A - Publish Unaltered

Comments:
The authors had made some required changes concerning to my comments, and the quality of the manuscript was improved. The manuscript is now ready to be published.

Additional Questions:
1. Is the topic appropriate for publication in these transactions?: Yes

2. Is the topic important to colleagues working in the field?: Moderately So

Explain:

1. Is the paper technically sound?: Yes

why not?:

2. Is the coverage of the topic sufficiently comprehensive and balanced?: Yes

3. How would you describe technical depth of paper?: Suitable only for an expert

4. How would you rate the technical novelty of the paper?: Somewhat Novel

1. How would you rate the overall organization of the paper?: Satisfactory

2. Are the title and abstract satisfactory?: Yes

Explain:

3. Is the length of the paper appropriate? If not, recommend how the length of the paper should be amended, including a possible target length for the final manuscript.: Yes

4. Are symbols, terms, and concepts adequately defined?: Yes

5. How do you rate the English usage? : Satisfactory

6. Rate the Bibliography: Satisfactory

null:

1. How would you rate the technical contents of the paper?: Fair

2. How would you rate the novelty of the paper?: Slightly Novel

3. How would you rate the "literary" presentation of the paper?: Totally Accessible

4. How would you rate the appropriateness of this paper for publication in this IEEE Transactions?: Good Match

Reviewer: 2

Recommendation: A - Publish Unaltered

Comments:
(There are no comments. Please check to see if comments were included as a file attachment with this e-mail or as an attachment in your Author Center.)

Additional Questions:
1. Is the topic appropriate for publication in these transactions?: Yes

2. Is the topic important to colleagues working in the field?: Moderately So

Explain:

1. Is the paper technically sound?: Yes

why not?:

2. Is the coverage of the topic sufficiently comprehensive and balanced?: Treatment somewhat unbalanced, but not seriously so.

3. How would you describe technical depth of paper?: Appropriate for the Generally Knowledgeable Individual Working in the Field or a Related Field

4. How would you rate the technical novelty of the paper?: Somewhat Novel

1. How would you rate the overall organization of the paper?: Satisfactory

2. Are the title and abstract satisfactory?: Yes

Explain:

3. Is the length of the paper appropriate? If not, recommend how the length of the paper should be amended, including a possible target length for the final manuscript.: Yes

4. Are symbols, terms, and concepts adequately defined?: Yes

5. How do you rate the English usage? : Satisfactory

6. Rate the Bibliography: Satisfactory

null:

1. How would you rate the technical contents of the paper?: Good

2. How would you rate the novelty of the paper?: Slightly Novel

3. How would you rate the "literary" presentation of the paper?: Totally Accessible

4. How would you rate the appropriateness of this paper for publication in this IEEE Transactions?: Excellent Match

Reviewer: 3

Recommendation: AQ - Publish In Minor, Required Changes

Comments:
Since the authors addressed most of the important comments carefully, the reviewer considers the revised manuscript ready for publication in T-ASL subject to the following minor required changes:

1) Page 8, left column, last Sentence: "From Fig. 4b ... outperforms all other regularized techniques ..." should be changed to "From Fig. 4b ... outperforms all other investigated regularized techniques ...". The original claim would require a mathematical proof to be justified.
Similarly for page 9, left column, line 35-36.

2) Page 10, right column, line 34: Please briefly comment why the error is significantly larger with 450ms compared to the other scenarios.

The following are comments and suggestions for further improvements which are considered optional by the reviewer:
3)Thank you for adding additional comments about how the PESQ score is calculated. Now I understand why the score is increasing with increasing L_d. From the reviewer's point of view, the fact that the PESQ score is monotonically increasing with increasing L_d (even for the unprocessed microphone signal) also reveals the perceptual limitation of the way PESQ is used here (Now I understand why you don't want to increase above 50ms). This means that the increase in PESQ score for regularized P-MINT with increasing L_d has two reasons:
a) with increasing L_d the reference signal becomes more and more similar to the unprocessed microphone signal
b) increased robustness against channel estimation errors (and background noise).
It would be good if you could add a brief discussion so that these two effect are clear to the readers. Alternatively, you could consider keeping L_d fixed (e.g. L_d=50ms) for calculating the PESQ-reference signal while changing L_d for the equalization algorithms. In this way, effect a) could be avoided.
4) From the reviewer's point of view, the benefit of the regularization for both channel estimation errors and background noise would be clearer if background noise was included in equations (35)-(37). Confusion among the readers could be avoided by adding a sentence that explains that the design of the filter is done for ideal conditions (i.e. e=0 and v=0) but it has to be made robust against channel estimation errors and background noise. With the noise included in the equations, referring to (35)-(37) in Section V.D would become clearer for the readers. Therefore, I recommend that the authors consider including the noise term into these equations.
5) The newly introduced discussion about how the channel estimation error is simulated clarifies the choice of the method used. However, the values E_m=-33dB and E_m=-15dB used in the simulations still appear arbitrary. It is still unclear to the reader whether these are values that are typically encountered in realistic applications. Since these values are very important for assessing whether the methods are useful in practice, it would be very beneficial for the readers if the authors could comment on how realistic these values are. This could be done by citing BSI papers where similar values have been achieved.
6) Setting the delay \tau=0 does not seem to be the best choice. It has been shown in [15] that increasing \tau to values larger equal than the delay of the true impulse responses can help to reduce the filter norm. Therefore, (if not already done by the authors) it could be interesting to increase \tau in future simulations.

Additional Questions:
1. Is the topic appropriate for publication in these transactions?: Yes

2. Is the topic important to colleagues working in the field?: Yes

Explain:

1. Is the paper technically sound?: Yes

why not?:

2. Is the coverage of the topic sufficiently comprehensive and balanced?: Yes

3. How would you describe technical depth of paper?: Appropriate for the Generally Knowledgeable Individual Working in the Field or a Related Field

4. How would you rate the technical novelty of the paper?: Novel

1. How would you rate the overall organization of the paper?: Satisfactory

2. Are the title and abstract satisfactory?: Yes

Explain:

3. Is the length of the paper appropriate? If not, recommend how the length of the paper should be amended, including a possible target length for the final manuscript.: Yes

4. Are symbols, terms, and concepts adequately defined?: Yes

5. How do you rate the English usage? : Satisfactory

6. Rate the Bibliography: Satisfactory

null:

1. How would you rate the technical contents of the paper?: Good

2. How would you rate the novelty of the paper?: Sufficiently Novel

3. How would you rate the "literary" presentation of the paper?: Totally Accessible

4. How would you rate the appropriateness of this paper for publication in this IEEE Transactions?: Excellent Match