

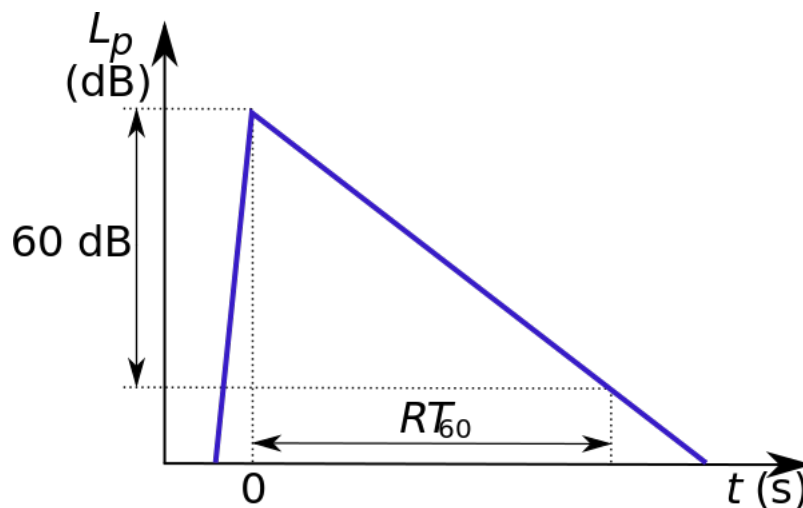
Proposal for a Research Internship

Topic: Reliability Measures for T60 Estimation

Description: Knowledge about the reverberation time (T_{60}) of a room can be exploited by various algorithms for ASR or speech dereverberation. Therefore, numerous algorithms for blind estimation of the T_{60} have been published in recent years.

The task of this research internship is to implement and evaluate modifications of a recently published ML-based T_{60} estimator, which has scored among the best in the ACE challenge. In a first step, methods to determine the reliability of a T_{60} estimate should be investigated. For example, an estimate about the DRR, SNR, CDR or the histogram of T_{60} estimates might be exploited to assess the reliability of a T_{60} estimate. In a second step, the estimated reliability should be used to improve the considered T_{60} estimator, e.g., by a weighted averaging of T_{60} estimates or a more sophisticated learning-based approach. In a final step, related state-of-the-art T_{60} estimators should be implemented and compared against the newly developed approach.

The implementation and evaluation of the algorithms should be done by using MATLAB.



[\[https://en.wikipedia.org/wiki/Reverberation#/media/File:Reverberation_time_diagram.svg\]](https://en.wikipedia.org/wiki/Reverberation#/media/File:Reverberation_time_diagram.svg)

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Available: Immediately