Readme of Multimedia Package

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1 Introduction

This is a multimedia package associated with our submitted paper “A Triple-Microphone Real-Time Speech Enhancement Algorithm Based on Approximate Array Analytical Solutions”. It contains the demo of the proposed method in different noisy environments. The noisy data are recorded in our office room by X-Box Kinect, with various numbers of noises from different directions. The target source is always from end-fire direction 0° (Here, we didn’t rotate the microphone to overcome the spatial overlapping problem as discussed in the paper). The distance from all sources to the array is 1 m.

2 Instruction

• One noise from 30°:
  - Noisy data: “one noise (30)/noisy.wav”
  - After processing: “one noise (30)/enhanced.wav”

• One noise from 150°:
  - Noisy data: “one noise (150)/noisy.wav”
  - After processing: “one noise (150)/enhanced.wav”

• Two noises from 90° and 150°:
  - Noisy data: “two noises (90 & 150)/noisy.wav”
  - After processing: “two noises (90 & 150)/enhanced.wav”

• Three noises from 90°, 120° and 150°:
  - Noisy data: “three noises (90&120&150)/noisy.wav”
  - After processing: ‘three noises (90&120&150)/enhanced.wav”

• Four noises from 90°, 120°, 150° and 180°:
  - Noisy data: “four noises (90&120&150&180)/noisy.wav”
  - After processing: ‘four noises (90&120&150&180)/enhanced.wav”