**WHAT IS CLAIMED IS:**

1. An apparatus for detecting a source location of a target sound in a noisy environment, comprising:

a housing;

an array of microphones disposed with the housing, the array of microphones including:

a horizontal set of microphones that are linearly-aligned; and

a vertical set of microphones that are linearly-aligned;

one or more processors communicatively coupled with the array of microphones; and

memory communicatively coupled with the one or more processors, the memory including instructions, which when executed, cause the one or more processors to perform acts including:

receiving an audio signal including the target sound from the horizontal set of microphones and the vertical set of microphones; and

determining a source location of the target sound in the audio signal with respect to the apparatus, the determining including:

analyzing the audio signal, the analyzing including:

determining, with respect to the horizontal set of microphones, a horizontal direction to the source location of the target sound; and

determining, with respect to the vertical set of microphones, a vertical direction to the source location of the target sound; and

calculating a distance between the source location of the target sound and the apparatus.

2. The apparatus according to claim 1, wherein the audio signal further includes at least one distinct sound that is different than the target sound and is received from a distinct source location; and

wherein the acts further include:

determining the distinct source location of the distinct sound in the audio signal with respect to the apparatus; and

distinguishing the distinct sound from the target sound.

3. The apparatus according to claim 2, wherein the distinguishing the distinct sound from the target sound includes:

obtaining an image of the distinct source location of the distinct sound;

determining whether the image corresponds to a frontal view of a human face; and

disregarding the distinct sound as an interference sound, in response to a determination that the image does not correspond to a frontal view of a human face.

4. The apparatus according to claim 1, wherein the determining the horizontal direction to the source location of the target sound includes determining a horizontal candidate location that maximizes a power output calculated from the audio signal, the horizontal candidate location being an expression of an angular measurement of an orientation of the source location of the target sound with respect to a position of the apparatus.

5. The apparatus according to claim 1, wherein the determining the vertical direction to the source location of the target sound includes determining a vertical candidate location that maximizes a power output calculated from the audio signal, the vertical candidate location being an expression of an angular measurement of an orientation of the source location of the target sound with respect to a position of the apparatus.

6. The apparatus according to claim 1, wherein the analyzing the audio signal further includes applying a weighting factor in which a highest weight is accorded for a highest Signal-to-Noise Ratio (SNR) characteristic of the audio signal.

7. The apparatus according to claim 1, wherein the analyzing the audio signal further includes applying a weighting factor in which a highest weight is accorded for a lowest frequency characteristic of the audio signal.

8. The apparatus according to claim 1, wherein the analyzing the audio signal further includes estimating background noise using space domain data,

wherein an adaptation rate depends on a height of a peak of the audio signal.

9. A system for detecting respective source locations of sounds in an audio signal, comprising:

one or more processors configured to receive the audio signal from a horizontal set of microphones that are linearly-aligned and a vertical set of microphones that are linearly-aligned; and

memory communicatively coupled with the one or more processors, the memory including instructions, which when executed, cause the one or more processors to perform acts including:

receiving the audio signal from the horizontal set of microphones and from the vertical set of microphones; and

determining the respective source locations of the sounds in the audio signal, the determining including:

analyzing the audio signal, the analyzing including:

determining, with respect to the horizontal set of microphones, a respective horizontal direction to the respective source locations of the sounds; and

determining, with respect to the vertical set of microphones, a respective vertical direction to the respective source locations of the sounds; and

calculating a distance between the respective source locations of the sounds and the horizontal set of microphones and the vertical set of microphones.

10. The system according to claim 9, wherein the sounds in the audio signal include an interference sound and a target sound; and

wherein the acts further include:

determining the respective source locations of the interference sound and the target sound with respect to the horizontal set of microphones and the vertical set of microphones; and

distinguishing the interference sound from the target sound via image analysis.

11. The system according to claim 10, wherein the acts further include executing a noise-reduction algorithm using the respective source locations of the sounds to optimize comprehension of the target sound and minimize interference from the interference sound.

12. The system according to claim 9, wherein the determining the respective horizontal direction, to the respective source location of the sounds includes determining horizontal candidate locations, respectively, that maximize a power output calculated from the audio signal, the horizontal candidate locations being calculated as angular measurements of an orientation of the source locations of the sounds with respect to the horizontal set of microphones.

13. The system according to claim 9, wherein the determining the respective vertical direction, to the respective source location of the sounds includes determining vertical candidate locations, respectively, that maximize a power output calculated from the audio signal, the vertical candidate locations being calculated as angular measurements of an orientation of the source locations of the sounds with respect to the vertical set of microphones.

14. The system according to claim 9, wherein the analyzing the audio signal further includes applying a weighting factor in which a highest weight is accorded for a highest Signal-to-Noise Ratio (SNR) characteristic of the audio signal.

15. The system according to claim 9, wherein the analyzing the audio signal further includes applying a weighting factor in which a highest weight is accorded for a lowest frequency characteristic of the audio signal.

16. A method of detecting respective source locations of sounds in an audio signal, the method comprising:

receiving the audio signal via a horizontal set of microphones and a vertical set of microphones, the horizontal set of microphones being linearly-aligned, and the vertical set of microphones being linearly-aligned; and

determining the respective source locations of the sounds in the audio signal, the determining including:

analyzing the audio signal, the analyzing including:

determining, with respect to the horizontal set of microphones, a respective horizontal direction to the respective source locations of the sounds; and

determining, with respect to the vertical set of microphones, a respective vertical direction to the respective source locations of the sounds; and

calculating a distance between the respective source locations of the sounds and the horizontal set of microphones and the vertical set of microphones.

17. The method according to claim 16, further comprising orienting an imaging device to view the source locations, respectively, of the sounds in the audio signal.

18. The method according to claim 16, further comprising:

determining whether a sound in the sounds in the audio signal is an interference sound or a target sound; and

disregarding any interference sounds.

19. The method according to claim 18, further comprising sending the target sound to a processor to perform voice recognition and decipher a meaning of the target sound.

20. The method according to claim 18, wherein the determining whether a sound is an interference sound or a target sound is distinguishable in as little as 20 milliseconds.