

**TALKER LOCALIZATION UTILIZING A  
MICROPHONE ARRAY AND CLOSE MICROPHONES**

By

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## ABSTRACT

Many algorithms have been developed to localize audio signals based on the differences in the sound as it arrives at separate microphones in a larger array of microphones. Most of these algorithms have been developed for real-time processing when the source is unknown, and represent a sub-optimal compromise between accuracy and computational load. In the algorithm developed in this paper, the sources are known before the algorithm begins to work, and uses data from the detection array to localize the signals from these source. This allows application of techniques that require a high processing load. It also allows far more accurate implementation of a significant number of techniques that normally require estimate of the characteristics of the source and noise. It is shown here that when the circumstance allows, this type of processing produces more accurate results, but requires more computational time.