Multi-Mic Adaptive Beamforming Algorithm

Consilient's multi-microphone adaptive beamforming algorithm is designed to enhance the signal of interest and to compensate for errors in the Direction of Arrival (DoA) estimation of the desired signal. The number of microphones for real-time applications is limited only by the capabilities of the processor. The desired quality of speech enhancement can be achieved by integrating other optional features (such as acoustic echo canceller) with the beamforming scheme, based on the requirements of the application and the acoustic environments. Consilient's beamforming algorithm, optimized for low CPU MHz, helps in voice trigger-based applications such as Amazon Alexa Voice Services (AVS), Microsoft Cortana and Google Assistant.

Features

- Supports 2 or more microphones
- Supports single and multiple source tracking
- Forms very sharp beam to preserve the speech intelligibility even under high noise environment.
- Improves far-field speech recognition accuracy rate significantly
- Robust against small errors in the direction of arrival (DOA) estimation
- Significant performance improvement is observed with third party voice recognition function under noisy environments.