

SAR Insight & Consulting

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Strong growth for speech enhancement technologies as they become increasingly important for voice enabled devices, says SAR Insight & Consulting

With the increasing use of voice interfaces there is a need to increase accuracy and improve user experience; speech enhancement technologies are an essential part of the solution, helping to improve voice interface functionality. Noise and echo cancelation are already commonly used and are being improved constantly. Beam forming, far-field enhancement and barge-in technologies are increasingly used to improve the overall accuracy and usability of the voice interface. Companies such as Alango, Conexant, DSP Concepts, ForteMedia, iFlytek, MightyWorks and NXP Software are offering a range of speech enhancement software to the market and partnering with platform, IP, IC and device vendors.

“Speech enhancement technologies are used to improve the audio signals before reaching the voice interface, in order to help increase accuracy of the natural language processing system and, therefore, improve the user experience.”. Peter Cooney, Principal Analyst & Director of SAR Insight & Consulting, said “Echo cancelation is very commonly used and is often supplied as a solution coupled with noise suppression. Most speech enhancement technologies require multiple microphones to operate which enables more advanced speech enhancement technologies such as beam forming, far-field enhancement and barge-in”.

According to the latest report from SAR Insight & Consulting (Always On/Always Listening, Sound Enhancement & Voice Interface Technologies) strong growth is expected for all speech enhancement software, driven by its inclusion in increasing numbers of voice enabled devices and by the increased use of digital assistants. Double and even triple digit growth is forecast for barge-in, far-field enhancement and beam forming technologies from 2015 to 2020.

“A great example of where speech enhancement technologies are essential is in the car. The automotive environment is inherently noisy. Even as cars move towards electric powered engines there will continue to be noise from road friction and inevitably from the inhabitants. Speech enhancement technology has long been used for voice activation and control of none essential functions and, as more advanced digital assistants pervade the car, voice signal accuracy will become even more important.” Peter continued, “Echo cancelation is essential to enable functions such as hands-free calling; noise suppression technologies are essential to enable accurate speech recognition and clear voice calls. Barge-in is used to enable speech to be recognized over the audio emanating from speakers and beam forming is increasingly used to improve voice pick up.”

These are some findings from SAR Insight & Consulting’s recently published study on “Always On/Always Listening, Sound Enhancement & Voice Interface Technologies” which is published as part of its [Audio Devices, Technologies & Components Service](#).

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Note to editors: SAR Insight & Consulting provides detailed quantitative and qualitative research on established and emerging technology markets across multiple end applications. www.sarinsight.com