Sensor fusion of audio processor, radar and MEMS microphones

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Introduction

› Far field voice capturing by audio beamforming combined with radar target presence detection

› Infineon radar localizes and tracks the target precisely enabling the microphone array to set a beam to the audio source

› By shifting the time base of each microphone while suppressing individual mic differences, the microphones are focused on a specific target to optimize sound recognition creating a superior user experience to existing voice enabled systems.
Potential Applications

- Conference microphones
- Digital Voice Assistants
- Secure entry systems
- Smart Home appliances
- Smart TV & set top boxes
End User Benefits

› Provides presence detection confirmation through focused LED array
› Provides focused microphones for optimal sound recognition
› Enables clear understanding of command and flawless execution
› Presence detection prevents false trigger commands overheard by device
Demonstration Content

› Infineon 60GHz radar IC
› Infineon Ultra High SNR Microphones
› XMOS Audio Processor
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