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Real-world effectiveness of directional microphone hearing aids

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Single, dual, triple and array microphone designs that are static, automatic and/or adaptive are now available in marketed hearing aids. The cost of designing and producing these more sophisticated systems is significant; yet, studies of user benefit are often equivocal, particular those involving self-report or field-obtained measures. In a series of studies we have attempted to characterize (model) the function of a number of these designs in simple and complex environments in an effort to explain the results obtain in both laboratory and field studies. Rather than directivity limitations, factors such as internal noise, loudness preference and visual cues have all been implicated in the limited user benefit, and will be discussed in this presentation.