



# Human Systems integration division



## Spatial Auditory Displays for Speech Communications

### Objective

To enhance the intelligibility of multiple communication channels normally heard with one-ear headsets and reduce operator fatigue.

### Approach

Develop inexpensive audio technology using spatial auditory display techniques and two-channel headsets. Each communication channel is processed to sound at a different location, enabling our everyday binaural intelligibility advantage. The technology is designed to be easily retrofitted into existing systems and can be customized for individual listeners via EPROM cards.



### Impact

Allows up to a 6 dB improvement in speech intelligibility compared to one-ear headsets. Listener fatigue is reduced, thereby enhancing safety. Operation of individual volume control is minimized for hands-free operation. U.S. patent has been granted, allowing for technology transfer.

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