Integrated Voice and Visual Systems Research Topics

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ABSTRACT

A series of studies were performed to investigate factors of helicopter speech and visual system design and measure the effects of these factors on human performance, both for pilots and non-pilots. The findings and conclusions of these studies were applied by the U.S. Army to the design of the Army's next generation threat warning system for helicopters and to the linguistic functional requirements for a joint Army/NASA flightworthy, experimental speech generation and recognition system.
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During the period of performance for Contract NAS2-11341, Psycho-Linguistic Research Associates (PLRA) performed a series of studies in support of the contract tasks to investigate factors of helicopter speech and visual system design and measure the effects of these factors on human performance, both for pilots and non-pilots. The findings and conclusions of these studies were applied by the U.S. Army to the design of the Army's next generation threat warning system for helicopters and to the linguistic functional requirements for a joint Army/NASA flightworthy, experimental speech generation and recognition system.

These studies have all been reported at appropriate human factors and aerospace technical conferences and published in the proceedings of these conferences in an effort to share the results of the NASA funded research with the academic and industry research community as soon as possible. A list of titles with full references is given.

LIST OF PUBLISHED REPORTS


Simpson, Carol A. and Marchionda-Frost, Kristine, Synthesized speech rate and pitch effects on intelligibility of warning messages for

Simpson, Carol A., Speech variability effects on recognition accuracy associated with concurrent task performance by pilots. Proceedings of the Third Symposium on Aviation Psychology (pp. 87-102). Department of Aviation, Ohio State University, Columbus, OH, 1985.


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