



Title:	Investigation and Evaluation of Voice Stress Analysis Technology, Final Report	
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Annotation:	This report presents the methodology and results of the testing and evaluation of two voice stress	
	analysis (VSA) systems that their vendors claim can detect stress, possibly indicating deception, in voice communications.	
Abstract:	The VSA systems are advertised as being less expensive, easier to use, less invasive in use, and less constrained in their operation than polygraph technology. In response to inquiries by law enforcement officials about this technology, this	
Main Term:	Police equipment	
	testing and evaluation was conducted by the Air Force Laboratory. The evaluation was conducted in three phases. In the first phase, Dr. John H.L. Hansen Research	
	Investigation of the Feasibility of Detecting Stress, Investigative Techniques, Stress assessment;	

Index Term:	methods, analysis, and classification of voice stress in an appendix of this report. The second and third phases of this study investigated the reliability of two commercial VSA units (the Vericator and the Diogenes Lantern) from a theoretical
Instrument validation;	perspective and an application (i.e., law enforcement) perspective. The evaluation concludes that the two VSA units do recognize stress through voice analysis; however, although these systems state they detect deception, this was not proven.
	<p data-bbox="365 283 1536 325">NIJ final report</p> <p data-bbox="365 325 1536 483">This study does show, from a number of speech-under-stress studies, that linear and nonlinear features are useful for stress classification. Due to the lack of deceptive stress data available, classification of deceptive stress versus emotional stress or physical stress could not be tested. It still needs to be proven whether or not these VSA systems differentiate between the different types of stress. Suggestions are offered for future research. 4 figures and 14 references.</p>