

APPENDIX III

COVER SHEET FOR PROPOSALS TO THE NATIONAL SCIENCE FOUNDATION

FOR CONSIDERATION BY NSF ORGANIZATIONAL UNIT <small>(Indicate the most specific unit known, i.e. program, division, etc.)</small>		PROGRAM ANNOUNCEMENT/SOLICITATION NO./CLOSING DATE	
Memory and Cognitive Processes			
SUBMITTING INSTITUTION CODE <small>(If known)</small>	FOR RENEWAL <input type="checkbox"/> CONTINUING AWARD <input type="checkbox"/> ACCOMPLISHMENT BASED RENEWAL <input type="checkbox"/> REQUEST, LIST PREVIOUS AWARD NO.:	IS THIS PROPOSAL BEING SUBMITTED TO ANOTHER FEDERAL AGENCY? Yes ___ No ^X ___; IF YES, LIST ACRONYM(S)	
NAME OF SUBMITTING ORGANIZATION TO WHICH AWARD SHOULD BE MADE (INCLUDE BRANCH/CAMPUS/OTHER COMPONENTS) Sponsored Projects Office, Encina Hall, Room 40			
ADDRESS OF ORGANIZATION (INCLUDE ZIP CODE) Stanford University, Stanford, CA 94305-6060			
IS SUBMITTING ORGANIZATION: <input type="checkbox"/> For-Profit Organization; <input type="checkbox"/> Small Business; <input type="checkbox"/> Minority Business; <input type="checkbox"/> Woman-Owned Business			
TITLE OF PROPOSED PROJECT High Level Factors and the Musical Saliency of Auditory Phenomena			
REQUESTED AMOUNT \$119,141	PROPOSED DURATION 2 years	DESIRED STARTING DATE April 1, 1988	
CHECK APPROPRIATE BOX(ES) IF THIS PROPOSAL INCLUDES ANY OF THE ITEMS LISTED BELOW:			
<input type="checkbox"/> Animal Welfare	<input type="checkbox"/> National Environmental Policy Act	<input type="checkbox"/> International Cooperative Activity	
<input type="checkbox"/> Endangered Species	<input type="checkbox"/> Research Involving Recombinant DNA Molecules	<input type="checkbox"/> Research Opportunity Award	
<input checked="" type="checkbox"/> Human Subjects	<input type="checkbox"/> Historical Sites	<input type="checkbox"/> Facilitation Award for Handicapped	
<input type="checkbox"/> Marine Mammal Protection	<input type="checkbox"/> Interdisciplinary	<input type="checkbox"/> Proprietary and Privileged Information	
<input type="checkbox"/> Pollution Control			
PI/PD DEPARTMENT MUSIC	PI/PD ORGANIZATION CCRMA	PI/PD PHONE NO. & ELECTRONIC MAIL JRP @ SAIL. ARPA	
PI/PD NAME/TITLE John R. Pierce	SOCIAL SECURITY NO.*	HIGHEST DEGREE & YEAR PhD 1936	SIGNATURE <i>John R. Pierce</i>
ADDITIONAL: Earl Schubert, <i>Assoc. Investigator</i>		PhD 1948	<i>Earl Schubert</i>
ADDITIONAL PI/PD (TYPED)			
ADDITIONAL PI/PD (TYPED)			
ADDITIONAL PI/PD (TYPED)			
For NSF Use:			
AUTHORIZED ORGANIZATIONAL REP.	SIGNATURE	DATE	TELEPHONE NO.
NAME/TITLE (TYPED)			
OTHER ENDORSEMENT (optional)			
NAME/TITLE (TYPED)			

*Submission of social security numbers is voluntary and will not affect the organization's eligibility for an award. However, they are an integral part of the NSF information system and assist in processing the proposal. SSN solicited under NSF Act of 1950, as amended.

1 PROJECT SUMMARY

Center for Computer Research in Music and Acoustics
Department of Music

Stanford University
Stanford, California 94305

Dr. John R. Pierce, Dr. Earl D. Schubert

HIGH LEVEL FACTORS AND THE MUSICAL SALIENCY OF AUDITORY PHENOMENA

For some auditory phenomena, including residue pitch, what is heard in a musical context when played over speakers in a reverberant room seems not to agree with the published outcome of experiments in which subjects wearing headphones made various matches or adjustments. Further, some auditory stimuli are consistently judged differently by different listeners. Here we propose to investigate the musical saliency or applicability of various auditory phenomena by playing recordings of musically acceptable sounds in a musically acceptable context to musically trained people. The material we record and play will in general evoke clear and definite responses, though not always the same responses from different subjects. We propose four initial experiments, and others to follow. The first will investigate the conditions under which residue pitch is clearly musical pitch. The second will investigate and endeavor to remedy the "buzziness" of computer-generated sounds. The third will investigate musical perception of combination tones. The fourth will investigate recognition of a constant spectrum when the fundamental is changed. Among other topics we hope to investigate are salient effects of phase, various aspects of masking, and other phenomena which come to our attention during the course of the work.