

NATIONAL SCIENCE FOUNDATION

WASHINGTON, D. C. 20550

MAR 21 1978

Dr. Richard Lyman, President
c/o Office of the Research
Administrator
Stanford University
Stanford, California 94305

Proposal/Grant No.
MC877-23743

Dear Dr. Lyman:

It is a pleasure to inform you that \$80,509 is awarded to Stanford University for twelve months support of the initial level of effort of the project entitled, "An Interactive Graphical Environment for Musical, Acoustical and Psychoacoustical Research," as outlined in the above-numbered proposal. The project has been approved on scientific merit for approximately two years of effort. This project is under the direction of John Chowning and Loren Rush, Department of Music. This grant is effective March 15, 1978 and unless otherwise amended, will expire on August 31, 1979.

An unfunded period of six months is included in the award period to provide flexibility in the performance of the project.

Contingent on the availability of funds and the scientific progress of the project, it is our intention to continue support at approximately the following level:

2nd increment \$85,949

The request for continued support should be submitted in accordance with Section 253 of NSF 77-47.

This grant is subject to the provisions of PL 118, "Grant General Conditions."

The cognizant NSF Program Officer is Eamon Barrett, Intelligent Systems Program, Telephone: Area Code 202-632-5743.

The cognizant NSF Grants Manager is Aileen Buie, MPE/BSB/SE Branch, Telephone: Area Code 202-632-5940.

Sincerely yours,

/s/ William B. Cole, Jr.

Grants Officer

Enclosures

NATIONAL SCIENCE FOUNDATION

PROJECT
SUMMARY

NSF AWARD NO.

MCS77-23743

NAME OF INSTITUTION (NSF DIRECTORY NAME) Stanford University		ADDRESS OF INSTITUTION (INCLUDE BRANCH/CAMPUS & COMPONENT) Department of Music Stanford University Stanford, CA 94305	
PRINCIPAL INVESTIGATOR Chowning, John Rush, Loren		DIVISION (OFFICE) AND DIRECTORATE Division of Mathematical and Computer Science SECTION Computer Science Section	
PROPOSAL NUMBER MCS-7723743	FISCAL YEAR 1978	PROGRAM Intelligent Systems Program	
TITLE OF PROJECT An Interactive Graphical Environment for Musical, Acoustical and Psychoacoustical Research			
SUMMARY OF PROPOSED WORK (LIMIT TO 22 PICA OR 18 ELITE TYPEWRITTEN LINES) During the past twelve years, Professors John Chowning, Loren Rush and their colleagues have developed the Stanford Center for Computer Research in Music and Acoustics (CCRMA), a facility which is uniquely equipped for research in: <ul style="list-style-type: none">• acoustic signal processing,• digital synthesis of speech and music,• psycho-acoustic perception,• alternative modes of man-machine interaction, and• alternative modes for graphic display and perception of multi-dimensional data. In the proposed continuation of this program, Chowning and Rush intend to focus their research on two topics: <ul style="list-style-type: none">• development of, and experimentation with, an interactive console; this device will provide real-time multi-mode input to the digital synthesizer,• high-dimensional display-embedded spaces; novel computer graphic techniques which provide an alternative to pseudo-color for the presentation of vector data with more than three components. The work to be performed under this project is directed toward answering basic questions about the variety of forms in which information can flow between man and computer, and the factors which limit the rate of this information flow. This program continues the research conducted under NSF grant DCR-7500694.			
START AND END DATES 3/15/78 - 8/31/80		AMOUNT GRANTED \$166,458	
PROGRAM APPROVAL		DATE	

A copy of this summary has been sent to the Science Information Exchange at the Smithsonian Institution for reference and public records.