PROJECT TITLE:

RESOURCES FOR ACOUSTIC INSTRUMENT RESEARCH AND DEVELOPMENT

FIRST DRAFT

Pauline Oliveros

Director, Center for Music Experiment and Related Research

Ron George Associate Fellow, Center for Music Experiment and Related Research

SUMMARY STATEMENT

The primary purpose of the Resources for Acoustic Instrument Research and Development Project is to promote communication among individuals and groups concerned with divergent aspects of acoustic instrument research and development. Such communication among instrument builders, performers, composers, manufacturers and modern recreators of old instruments will prove to be a highly valuable exchange of information previously unavailable. As an outgrowth of this exchange, a network of resource centers, nationally and internationally, will be established with the Center for Music Experiment and Related Research acting as the central agent. These centers will act to (1) further research and development of new acoustic and electroacoustic instruments; (2) coordinate research efforts; (3) seek out new information on technology, materials, music, instruments, etc.; (4) serve as centers for documentation; (5) disseminate materials and information to interested parties; (6) seek out information on funding sources for various projects.

Funding is being sought to support the planning and implementation of two conferences and the continued gathering of information by the Research Committee for the Resources for Acoustic Instrument Research and Development Project. The first conference will emphasize the music and instruments of North and South America, while the second will emphasize similar activities in Europe and Asia. Areas of investigation to be included are new instrumental resources, early instruments and their application to contemporary music, sound sculpture and the acoustic environment as instrument, ethnic musics, and focus upon the related work of individual composers such as Harry Partch and Lou Harrison. Conference activities will include concerts open to the public and a continuing exhibition of instruments. The conferences will promote a free exchange of ideas concerning the instruments and music, technical information, performance, and the integration of new instrumental resources into the musical culture.

PROJECT OUTLINE

History Throughout the 20th century there has been an enourmous expansion of the resources of sound production available to composers and performers of western music. This expansion has its origins in the general cultural exchange and upheaval brought about by the new developments in transportation and communication media. The influence of non-western traditions upon western music has necessitated a revaluation of traditional instrumental resources and structural principles related to tuning systems, while simultaneously, technological advances have brought about the acquisition of electronic technology for sound production.

This general expansion reflects a concern for music to relate fundamentally to changes within the social and humanistic context of mankind. The early 20th century witnessed the attempts of the Italian Futurists to expand the available resources of music to include noise, thus enabling the artist to participate in and express the sonic content of the contemporary urban environment. The blending of definitions of music and noise, plus a growing interest in the exotic timbral resources of non-western instruments, brought about 1930's and 1940's. This activity involved such significant composers as Edgard Varése and John Cage, whose work often involved the juxtaposition of large ensembles of non-definite pitched instruments with traditional ones. Cage's extensive use of the prepared piano throughout the 1940's established a precedent for traditional

instrument adaptations to produce non-fixed pitch structures. Concurrently, composer Harry Partch was constructing new instruments directly influenced by oriental and ancient traditions. These instruments were tuned to a complex alternative system of intonation capable of specific microtonal harmonic relationships. During the 1950's this trend increased and many composers throughout the world were actively involved in constructing new instruments in order to produce microtonal music otherwise unavailable. Composers such as Julian Carillo of Mexico developed many new and adapted traditional instruments to play his music in tempered microtonal divisions of the octave. During the same period, the Baschet brothers in France were actively developing new instrumental resources.

By 1960 the influence of non-western culture and the myriad possibilities offered from the developing electronic technology brought about the general acceptance of the concept that all sounds are potential resources for music. Through the 1960's and into the present decade, new instrumental resources, both electronic and acoustic, have grown to enormous proportions. Because of its institutional association, research in the area of electronic sound production is widely known to those engaged in the field, while experimentation into new acoustic instruments has remained relatively unknown.

The University of California at San Diego is one of the few established institutions devoted to the development of new instrumental resources, both acoustic and electronic. This interest is evident from Harry Partch's(1) association with UCSD from 1967 to 1969. Mr. Partch was on the faculty and taught courses on tuning systems

and worked with students toward the playing and building of his musical instruments.

This interest has been maintained at UCSD primarily through the work of Robert Erickson (2) who is Professor of Music at UCSD. In 1968, Mr. Erickson, with the help of UCSD students, designed and built an ensemble of new instruments for his opera "Cardenitas." These instruments included tube drums made from plastic pipe, travertine chimes made from marble, lujons made with tin can resonators, stroked rods made from brass rods, and marble chimes (3).

An outgrowth of this interest and the influence of "Cardenitas" at UCSD can be seen in the development of Plecktron Industries and the general music classes. Plecktron Industries, headed by Edward J. Hujsak, began as a direct result of Mr. Erickson seeking advice on the development of the instruments for "Cardenitas." Plecktron Industries for many years was actively involved in the development of new instrumental resources. The Kaluba Drum (Plecktron's name for the tube drum), which was manufactured by Plecktron Industries, is now being manufactured by two companies in the United States and one in Japan. The general music class at UCSD offers to non-music students and first year music students a direct musical experience utilizing new acoustic instrument resources.

UCSD's support of this type of research has been particularly noticeable in the work of many graduate students, notably Ron George (4), whose experiments in the area of new instrumental resources for percussion resulted in Robert Erickson's composition "Loops." This work utilizes a complex array of percussion instruments (39 individual percussion instruments) which are mounted in special

racks and formed into keyboards. This instrument, the Percussion Console, and the composition "Loops" were developed directly as the result of a colloboration between Ron George and Robert Erickson.

In 1972 the music department at UCSD initiated a major music research center funded in a large part by the Rockefeller Foundation. This research unit, the Center for Music Experiment and Related Research, and its director Pauline Oliveros are devoted to the development of new musical resources both in the field of electronic and acoustic instruments as well as extended performance. In the spring of 1977 Ron George, Associate Fellow at CME, began research into the possibility of organizing an acoustic instrument conference which would involve people doing research into new instrumental resources. The purpose of the project was to promote communication among individuals and groups concerned with divergent aspects of acoustic instrument research and development and to develop an archive of information that has previously been unavailable. To begin this project, letters were mailed to composers, performers, manufacturers and instrument builders whose work was The response to this letter was much larger than expected known. (over 150 answers were received) and most enthusiastic. Letters were received from all over the United States, Canada, South America, and Europe. As a result of this response a committee was formed to conduct further research and formulate ideas for an acoustic instrument conference. This research committee, with the help of Robert Erickson and Pauline Oliveros, has developed a two-year project which will include two international acoustic instrument conferences and further development of the Resources for Acoustic

Instrument Research and Development Project.

The research committee, as well as making further contact with individuals involved in the area of acoustic instrument research and development, is in the process of making contact with other major centers of activities such as The Aesthetic Research Centre of Canada, IRCAM in Paris, and the Smithsonian Institute in the Unived States, so that a network of information centers can be established throughout the world. The committee is also organizing a lecture/demonstration series at the Center for Music Experiment to further its direct contact with persons involved in instrumental research and for the further development of the archives.

BIBLIOGRAPHY

- 1. Harry Partch: Genesis of a Music. De Capo Press. 1974.
- Robert Erickson: Sound Structure in Music. University of California Press. 1975.
- Robert Erickson: Instruments for Cardenitas. Source, Music of the Avant Garde. Issue Number 5.
- Ron George: Research into New Areas of Multiple Percussion Composition and Performance. The Percussionists. Spring 1975.

Purpose

The primary purpose of the Resources for Acoustic Instrument Research and Development Project is to promote communication among instrument designers and builders, performers, composers, teachers, manufacturers and modern recreators of old instruments (i.e., renaissance and medieval instruments) and to establish contact with other centers of activity which are concerned with acoustic instrument research and development. The result will be the formation of a network of information centers throughout the world. The Center for Music Experiment and Related Research will act as the central coordinating agent and will: (1) further research and development of electro-acoustic and acoustic instruments; (2) coordinate research efforts; (3) seek out information on technology, materials, music, instruments, etc.; (4) serve as a center for documentation; (5) disseminate materials and information to interested parties; (6) publish materials in the form of articles and books; (7) seek out information on funding sources for various projects; (8) plan and implement international acoustic instrument conferences; (9) seek out patent information.

The international acoustic instrument conferences will function as the foundation for the development of the Resources for Acoustic Instrument Research and Development by bringing people together in a meaningful environment to share ideas concerning their work, thus giving an enormous resource of information to further develop the above areas.

Significance

Throughout the world there is an enormous amount of experimentaion and research being conducted in the field of new acoustic instrument resources. However, due to the originality of this experimentation, little is known of the people devoted to this exploration or its general significance. That no established network of communication exists between individuals and/or centers of activity has resulted in virtual anonymity of this research with information not being available in a larger social context. The contribution of this research has been an expansion of the most essential material of musical artforms, the production of sound. The tradition of acoustic instrument experimentation is, of course, as old as the phenomena of music itself, but the issue of how this tradition relates to the social and environmental context of mankind has been made more acute by the recent trends of experimentation. This experimentation has involved such diverse fields of activities as physics, anthropology, animal communication, physiology, and linguistics. Information generated by musicians through their search for new means of sound production has resulted in a focus upon such issues as the meaning of language, the meaning of ritual in contemporary society, the impact of technology upon traditional cultures, and the relationship of sound to internal human physiology. Recent trends of experimentation include research into states of meditation, biofeedback systems, interspecies communication, new tuning systems, nonverbal communication, resonance properties of acoustic spaces, and the juxtaposition of sound resources from divergent ethnic origins.

With each scientific and humanistic advance in the understanding of the properties of natural phenomena, a refinement in the mechanisms of manipulating these phenomena occurs. Unfortunately, a sense of responsibility about the potential of such mechanisms does not always accompany their use by the general society. Recent acquisition of advanced technological resources by all the arts has provided insight into the relationship of technology and the environment which will hopefully contribute to an increase of this sense of responsibility. The design and construction of acoustic and electro-acoustic instruments and sound production systems provides a very direct means to experience the relationship of physical materials and properties to the individual, which is unique to that individual's cultural and environmental context.

The Center for Music Experiment and Related Research through the Resources for Acoustic Instrument Research and Development Project will provide a necessary information source and coordination of research efforts through its archive and dissemination of previously unavailable materials. The conference will bring together for the first time individuals and information from divergent areas of investigation associated with acoustic instrument research.

Dissemination

All material gathered as a result of conference and the efforts of the Resources for Acoustic Instrument Research and Development Project will be disseminated through a newsletter which will be published three times a year. This newsletter will include information collected by the Resources for Acoustic Instrument Research and Development Project and information about the conferences. Articles submitted by qualified contributors will be considered for CME publications.

All activities sponsored by the Center for Music Experiment and the Resources for Acoustic Instrument Research and Development Project will be documented on video and audio recording, photography, and written documents. All information will be housed in the archives at the Center for Music Experiment and will be available upon request. Interest in publishing materials gathered by the Resources for Acoustic Instrument Research and Development Project has been expressed by CME Publications, UNESCO, and the Aesthetic Research Centre of Canada.

Plan of Work

Funding is requested for the gathering of information and the planning of and implementation of two international acoustic instrument conferences. The Resources for Acoustic Instrument Research and Development Project will extend over a two-year period and will be carried out under the auspices of the Center for Music Experiment, director and principal investigator Pauline Oliveros, and CME staff. A specific outline of activity over the two-year support period is as follows:

I. First Year

- A. <u>September 1978 February 1979</u>. During this period the organization of the first conference will occur. Confirmation and final notification of all participants will coincide with the conference preparations. The conference will be held from February 21 through February 26, 1979. (These dates have been selected so that the conference will coincide with the American Society of University Composers National Conference which is also being held at UCSD).
- B. February 1979 Specific outline of first conference. The Acoustic Instrument Conference will function as the foundation for the development of the Resources for Acoustic Instrument Research and Development Project and will promote a free exchange of ideas concerning: (1) music and instruments, music and performance, new instruments and performance concepts, etc.; (2) new instrumental resources and their manufacture; (3) technical information; (4) sculptural and theatrical aspects of design; (5) instruments from found objects; (6) notation: (7) the

integration of new instruments, music, and performance into the musical culture; (8) patent information. The conference will be held over a six-day period (February 21 through 26, 1979) and is outlined as follows (This represents only a tentative schedule; the process of contacting persons is continuing):

1. Day I: Sound Sculpture and the Acoustic Environment as Instrument/opening ceremony

Exhibitions of sound sculpture will begin on this day and run continuous throughout the conference. These exhibitions will be held both indoors at local museums and outdoors at various locations on the UCSD campus. This will allow people attending the conference to arrive, register, and experience the various exhibitions. There will be no workshops or scheduled performances except for the evening activities.

a. Indoor Exhibitions

1) Stephan von Huene - Sound Sculpture

2) Charles Mattox - Sound Sculpture

3) John Driscoll - Electro/Acoustic Instrumentsb. Outdoor Exhibitions

1) Leif Brush - Environmental Sculpture

2) David Dunn - Documentary Performance

3) Paul Earls - Environmental Sculpture

c. Evening - Opening Ceremony

1) Pauline Oliveros - Opening Address

2) John Grayson - Historical Perspectives

- 3) Herbert Shore UNESCO and Funding Sources for Acoustic Instrument Projects .
- Protecting Your Research Projects Patent Information - person to be determined
- 5) Music Mariachi Band from San Diego or Mexico; Steel Band from Los Angeles
- 2. Day II: The Music, Theory, and Instruments of Harry Partch and Lou Harrison/Bill Colvig
 - a. Workshops
 - Danlee Mitchell Harry Partch, His Music, Instruments, Performance, and Notation
 - 2) Ben Johnston Partch Theory
 - 3) Lou Harrison/Bill Colvig
 - a) Music Lou Harrison
 - b) The Western Gamelan Bill Colvig
 - 4) Paul William Simons Presentation/Performance: The Influence of Harry Partch and His Music
 - b. Open Discussion Period. Audience interaction and question period.
 - c. Evening Concert: Harry Partch and Lou Harrison/
 Bill Colvig

The instruments of Harry Partch and Bill Colvig will be on display from Day II through V in a local museum. Special workshops will be conducted to enable composers, performers, and instrument builders to directly experience these instruments.

- 3. Day III: Traditional Instruments Early Music and Instruments (medieval and Renaissance) - Performance as Related to Recent Music
 - a. Workshops Early Instruments and Contemporary Adaptations
 - 1) Wind Instruments
 - a) Friedrich von Huene Recorders and flutes
 b) Robert Marvin Renaissance recorders and tuning experiments
 - 2) Lutes
 - a) Robert Lundberg Selecting wood and the construction of lutes
 - b) Donald Warnock Early stringed instruments
 - 3) Keyboard Instruments Contemporary Adaptations
 - a) Scott Hackleman The 19-tone clavichord
 - b. Lecture Acoustics
 - Dr. Arthur Benade Musical acoustics and its relation to early and present-day instruments
 - c. Open Discussion Period
 - d. Evening Concert of Medieval and Renaissance Music
 - 1) Medieval Music Alphonso X Memorial String Band
 - 2) Renaissance Music Guidonian Hand

The instruments from this day's activities will be on display from Days III through V in local museums. Special workshops will be conducted for performers, composers, and instrument builders to directly experience the instruments.

- 4. Days IV and V Sound Sculpture and the Acoustic Environment as Instrument/New Musical Resources.
 - à. Workshop/Performances
 - 1) Extensions of Traditional Instruments
 - a) Stringed Instruments New Resources
 - (1) Bert Turetzky and Will Boulet The New Contrabass
 - (2) Tom Stone New Intonation systems for guitar and the manufacture of new instrumental resources
 - b) New Instruments of Percussion
 - (1) Ron George The development of new instruments of percussion
 - (2) Michael Udow The development of new instruments of percussion
 - (3) Kevin Harlin The percussion manufacture and new instrumental resources. Performance of Robert Erickson's "Cradle II" on Harlin tube drums.
 - 2) Light-producing Instruments
 - a) John Forkner The tympanum luminorum and its development
 - 3) Newly Designed Instruments
 - a) Prent Rodgers New resources
 - b) Chris Forester New instruments and the Harry Partch tradition
 - c) Gunnar Schoenbeck New instrumental resources and the composer/performer

- 1) Robert Erickson New timbre resources
- 2) Animal Communication person to be selected
- 3) David Jacobs Sound sculpture
- 4) Murray Schaffer Vancouver Soundscope Project
- 5) Erv Wilson Recent theories
- 6) Stephan von Huene New resources and education
- Lolita Carillo The music and instruments of Julian Carillo
- c. Open Discussion Periods
- d. Performances
 - 1) Ritual Performances Pauline Oliveros
 - 2) Gravity Adjusters Expansion Band Richard Waters
 - The Music of Light and Sound Ron George, Joan George, John Forkner
 - 4) Performance Alvin Lucier
 - Group improvisation involving participants in the festival.
- 5. Day VI: Ethnic Music of North and South America.

Research into this area is still in progress. The highlight of the day's activities will be an American Indian Ceremony which will include workshops on the construction and meaning of American Indian musical instruments.

- C. March August 1979. Conference follow-up.
 - Activities and functions of the Resources for Acoustic Instrument Research and Development Project during support period.

- a. Newsletters. The Resources for Acoustic Instrument Research and Development Project will issue two newsletters the first year, occuring in April and August, and three the following year.
- Б. Archives. The expansion of the archives will occur through materials gathered from the first conference, through a correspondence network established before and during the conference with individuals as well as other centers of activities, and through professional associations of the research committees' personnel (i.e., Ron George is currently chairman of the Avant Garde Committee of the Percussive Arts Society (The Avant Garde Committee is a research branch of PAS). This organization has an international membership of over 3,000, and through its publications and conferences direct contact can be made with percussionists throughout the world who are involved in instrumental research).
- c. Development of Funding Information. Active investigation of funding sources and information for various projects will be a function of the Project during the support period. Funding will be sought for both individuals actively engaged in acoustic instrument research and for future funding of the Project after the support period ends.

d. Lecture/Performance Series. Presentation of a lecture/performance series related to acoustic

instrument research and development will occur following the initial conference. This series will serve as a means to establish a connection between the two conferences and to present individuals that might not be able to participate in the conferences themselves. Lectures and performances will be presented at the Center for Music Experiment, UCSD.

e. Publications. Publication of materials gathered by the Project and at the conferences will be actively pursued. Interest in publishing these materials has been expressed by CME publications, UNESCO, and the Aesthetic Research Centre of Canada.

II. Second Year

- A. <u>September 1979 February 1980</u>. Organization and final planning of the second conference will occur during this period.
- B. <u>February 1980.- Second Conference</u>. The second conference will emphasize the acoustic instrument experimentation of Europe and Asia, including folk and ethnic music related to these geographic areas. The basic areas of activity will be the same as the first conference but involving different individuals. (Gunnar Schoenbeck at Bennington College, Bennington, Vermont, has expressed an interest in hosting the second conference).
- C. March September 1980.
 - Conference guidelines will be established for the setting up of future conferences not under the direct sponsorship

of the Center for Music Experiment. It is probable that these conferences would emphasize a different area of investigation each year and would be held in different locations. (The Aesthetic Research Centre of Canada has expressed an interest in hosting the third conference).

- Following the second conference a continuation of the activities established by the Project will occur. This will include all the functions previously outlined.
- 3. Continuation of the Project after the initial funding period. To insure the continuation of the Project beyond the period of initial funding, it is planned that an association devoted to acoustic instrument research and development be organized. This organization would consist of an interested membership with yearly membership fees. These fees would aid in maintaining the resource archive and information dissemination function and make funds available for future conferences.

BUDGET

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RESOURCES FOR ACOUSTIC INSTRUMENT RESEARCH AND DEVELOPMENT BUDGET

General Outline For 12 Month Period: 11-1-78 to 10-31-79

Salaries and Wages

Research Committee for Resources for Acoustic Instrument Research and Development

a.	Chairperson - Ron George (CME Fellow - 10 mo. basis - 9,600)		
	11-1-78 to 12-31-78 (2 mo. 25%)		
	1-1-79 to 3-21-79 (3 mo. 52%)1,500.		
	4-1-79 to 10-31-79 (7 mo. 25%)1,680.		\$3,660.
Ъ.	Co-chairman		3,660.
c.	Co-chairman		3,660.
d.	Clerk Typist, Sr. (A) - \$727/mo. (to be named)		
	11-1-78 to 12-15-78 (1.5 mo. 30%)		
	12-15-78 to 2-28-77 (2.5 mo. 50%)909.		
	3-1-79 to 6-30-79 (4 mo. 30%)	. *	
	760/mo. SRA		
	7-1-79 to 10-31-79 (4 mo. 30%)912.		3,020.
	evision Technician - \$1,161/mo - 6.67/hr be named)		5,020.
	2-19-79 to 2-27-79 (40 hrs. 100%)267.		267.
	ording Technician - 1,161/mo - 6.67/hr be named)		
	2-19-79 to -2-27-79 (40 hrs. 100%)267.		267.

Lighting Technician - Albert Rossi (CME Fellow - currently 960/mo.)
2-19-79 to 2-27-79 (100%)
The following persons will be supplied by CME for non-conference functions:
Photographer -\$5.98/hr
2-19-79 to 2-27-79 (20 hrs. 50%)120.
Student Assistant II (3 persons @\$3.67/hr ea.)
2-19-79 to 2-27-79 (40 hrs. 100%) 147.ea. 441.
TOTAL SALARIES AND WAGES\$15,317.
Fringe Benefits (Composite Rate Table)
Base Amount
A @ 2.77% (Casual) 4,115. 114. B @ 1.00% (Fellow) 11,202. 112.
TOTAL BENEFITS
Consultants (to be named)
Grant Consultant
Honoraria (Conference) (See attached)3,175. TOTAL CONSULTANTS\$3,675.
Supplies & Expenses
Chair Rental 150.
Car and Van Rental
Conference: Van - \$7/day X 5 days 35. \$0.20/mi X 24 mi X 10 trips 48.
Car - \$6/day X 5 days \$0.18/mi X 24 mi X 10 days 156.

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Car and Van Rental, Continued	
Yearly Activities: Van - \$7/day X 7 days \$0.20/mi X 200 mi	49. 40.
Car - \$6/cay X 7 days \$0.18/mi X 200 mi	42. 36. 167.
Printing	
Conference: (Based on previous conference)	1,000.
Yearly Activities: Posters @ \$40 X 5 Programs @ \$15 X 5	200. 75.
Total Printing	\$1,275.
Xeroxing	
Conference: Yearly Activities: Total Xeroxing	$ \begin{array}{r} 300. \\ 200. \\ $500. \end{array} $
Audio Tape	
Conference: Reel-to-Reel \$4.50/hr X 25 hrs. Cassette \$3.00/hr. X 20 hrs.	113. 60.
Yearly Events: Reel-to-Reel \$4.50/hr X 12 hrs. Cassette \$3.00/hr. X 18 hrs.	54. <u>54</u> .
Total Audio Tape	\$281.
Video Tape	
Conference: \$26/hr. X 45 hrs.	1,170.
Yearly Activities: \$26/hr. X 20 hrs.	<u>520</u> . \$1,690.

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Video Camera Rental	
Conference: \$14/hr. X 45 hrs.	630.
Yearly Activities: \$14/hr. X 20	<u>280</u> . \$910.
Telephone	
Conference: Toll Calls	250.
Yearly Activities: Toll Calls	125.
	\$375.
Mailing	
Conference:	200.
Yearly Activities:	275.
	\$475.
Office Supplies	
Conference:	. 300.
Yearly Activities:	<u>750</u> . \$1,050
Photography	ψ1,050
Conference: 15 rolls @ \$5/roll	75.
Yearly Activities: 15 rolls @ \$5/roll	<u>75</u> . \$150.
TOTAL SUPPLIES AND EXPENSE	\$7,179.00
Other (See Attachment for deta	ils)
Conference: Travel Production Cost (Harry Part Cartage Room (For Participants)	6,608. 750. 2,633. <u>1,824</u> . \$11,815.

Other, Continued

Performance/Lecture Series: Resources Project anticipated Room, Travel, Cartage, Honoraria \$5,000.	
TOTAL OTHER	.\$16,815.
TOTAL DIRECT COSTS - FIRST YEAR	\$43,212.
INDIRECT COSTS @ 31% Modified Total Direct Costs	13,395.
TOTAL DIRECT AND INDIRECT COSTS - FIRST YEAR	\$56,607



UCSD Contribution to the Project

Principal Investigator:

Pauline Oliveros, Professor I Currently: \$1,883.33 (\$22,600/yr.)

11-1-78 to 10-31-79 @ 10% 7-1-79 to 10-31-79 @ 10%	$ \begin{array}{r} 1,627 \\ 853. \\ \overline{2,480.} \end{array} $	•
Total Salaries		2,480.
Benefits @ 23%	570	570.

Total Salaries and Benefits \$3,050.

Registration Fees

Paid by conference participants \$20/person X 200 participants	4,000.
Total Direct Contribution	\$7,050.
Indirect Costs at 31%	2,186.
TOTAL CONTRIBUTION	\$9,236.





SECOND YEAR BUDGET

First Year Total Budget	\$56,607.
Increment for Second Year*	5,000.
	\$61,607.

*Additional travel and cartage for participants traveling from Europe and Asia.

UCSD Contribution (Approximate)

\$10,000.

DAY		
L)	Stephan van Huene	
	Room (6 days) @ \$19/day	114.
	Honoraria Cartage & Travel (SD/Valencia, CA - RT 325 miles)	75.
	**Truck Rental - 3 days	186.
)	Charles Mattox	
	Room (6 days) @ \$19/day	114.
	Honoraria Travel (Alburqueque, NM/SD)	75. 156.
*	*Cartage (Air Freight) - 2001bs.	102.
3)	John Driscoll	
	Room (6 days) @ \$19/day	114.
	Honoraria Travel (NYC/SD)	75. 424.
	Cartage (Air Freight) - 200 lbs.	102.
4)	Leif Brush	
	Room (6 days) @ \$19/day	114.
	Honoraria Travel (Deluth, Minn./SD)	75. 318.
	Cartage (Air Freight) - 100 lbs.	64.
5)	Paul Earls	•
	Room (6 days) @ \$19/day	114.
	Honoraria Travel (Boston, Mass./SD)	75. 446.
	Cartage (Air Freight) - 100 1bs.	106.

- * All truck rental rates are based on PHD Truck Rental rates as of 2/23/78. Rates: \$30/day, \$5 insurance, \$0.25/mile
- ** Air freight rates were obtained from Delta, United and Western Airlines as of 2/23/78. Based on poundage.

6) John Grayson

Room (2 days) @ \$19/day	38.
Honoraria	75.
Travel (Vancouver/SD)	226.

7) Marichi Band (Local)

Honoraria

200.

8) Steel Band

Honoran	ria	·				250.
Travel	and	Cartage	(1	day)	(LA/SD)	85.

DAY II

1)	Harry Partch Wo	orkshops &	Performance	
	Travel (Local)			
	Total Productio	on Costs		750.

2) Lou Harrison/Bill Colvig

Room (2 persons - 6 days) @ \$19/day/per 228. Honoraria 150. Travel & Cartage (San Francisco/SD) Truck Rental 487.

3) Ben Johnston

Room (2 days) @	\$19/day	. 38.
Honoraria		75.
Travel (Urbana,	Illinois/SD)	320.

DAY III

1)	Fredrich von Huene		
	Room (4 days) @ \$19/day Honoraria Travel (Boston/SD)	76. 75. 446.	

DAY III, Continued

2) Robert Marvin

Room (4 days) @	\$19/day	76
Honoraria		75
Travel (Woburn,	Canada, Quebec/SD)	450

3) Robert Lundbergs

Room (4 days) @ \$19/day	76.
Honoraria	75.
Travel (Portland, Ore./SD)	202.
Cartage (Air freight) 50 lbs.	34.

4) Donald Warnock

 Room (4 days) @ \$19/day
 76.

 Honoraria
 75.

 Travel (Princeton, Mass./SD)
 446.

 Cartage (Air freight) 200 lbs.
 68.

5) Scott Hackleman

Room (4 days) @ \$19/day Honoraria	•	76.
Travel & Cartage (LA/SD) 250 miles Truck Rental - 3 days		168.

6) Dr. Arthur Benade

Room (2 days) @ \$19/day38.Honoraria.75.Travel (Adelberg, Ohio/SD)350.

7) Alphonso X Memorial - String Band

Travel - Local Honoraria

200.

8) Guidonion Hand

Travel - Local Honoraria

200.

DAYS IV & V

1)	Will Boulet	
	Room (2 days) @ \$19/day Honoraria Travel (San Francisco/SD)	38. 75. 70.
2)	Tom Stone	
	Room (2 days) @ \$19/day Honoraria Travel (Fairfield, Iowa/SD)	38. 75. 292.
3)	Gunnar Schoenbeck	
	Room (2 days) @ \$19/day Honoraria Travel (Bennington, Vt./SD) Cartage (Air freight) 200 lbs.	38. 75. 426. 103.
4)	Michael Udow	
	Room (2 days) @ \$19/day Honoraria Travel (Urbana, Illinois/SD) Cartage (Air freight) 150 lbs.	38. 75. 320. 82.
5)	Kevin Harlin	
	Room (2 days) @ \$19/day Honoraria Travel (Fort Wayne, Ind./SD) Cartage (Air freight) 150 lbs.	38. 75. 360. 72.
6)	John Forkner	
	Travel - Local Honoraria	75.
7)	Prent Rodgers	
	Travel - Local Honoraria	75.

DAYS IV & V, Continued

8)	Chris Forrester	
	Room (2 days) @ \$19/day Honoraria	38. 75.
	Travel & Cartage (San Francisco/SD) Truck Rental	487.
9)	Kenneth Noland	•
	Travel - Local Honoraria	75.
10)	David Jacobs	
	Room (2 days) @ \$19/day Honoraria Travel (NYC/SD)	38. 75. 424.
11)	Murray Schaffer	
	Room (2 days) @ \$19/day Honoraria Travel (Vancouver/SD)	38. 75. 226.
12)	Erv Wilson	
-	Room (2 days) @ \$19/day Honoraria Travel (LA/SD)- Car	38 75. 40.
13)	Lolita Carillo	
	Room (2 days) @ \$19/day Honoraria Travel (Mexico City/SD)	38. 75. 232.
14)	Gravity Adjustors Expansion Band	
	Room (2 days - 3 persons) @ \$19/day Honoraria Travel & Cartage (San Francisco/SD)	114. 150.
	Truck Rental	487.

DAYS IV & V, Continued

- 14) Alv
 - 4) Alvin Lucier

Room (2 days) @ \$19/day	38.
Honoraria	75.
Travel (Middletown, Ct./SD)	434.

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Total Room	1,824.
Total Honoraria	3,175.
Total Travel	6,608.
Total Cartage	2,633.
Total Partch Production	750.

TOTAL

\$14,990.

Project Title; Responses for Acoustic

Instrumont Research + Developinon

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Ron bengs Associate Fellow CME

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Summary Statement Sor Acoustic instrument Resources for Acoustic instrument Brajed Research r Development Brajed

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Projec

The primary purpose of the Acoustic Instrument Conferences will be to promote communication among various individuals and groups concerned with divergent aspests of acoustic instrument research and development. Such communication among instnument builders, performers, composers, manufacturers and modern recreators of old instruments would prove to be a highly valuable exchange of information previously unavailable. As an outgrowth of this exchange, 3. a network of resouse cenetrs, nationally and internationally would be will be established with the Center for Music Experiment and Related Research acting as the central coordinating agent. These centers would act to 1. Further research and development of new acoustic and electroacoustic instruments. 2. Coordinate research efforts. 3. Seek out new information on technology, materials, music, instruments etc. 4. Serve as centers for documentation. 5. Disseminate materials and information to interested parties, 6. Seek out information on funding sources for various projects. The devices for devic

Funding is being sought to support two conferences and initial establishment Instrume Research of the central resouce center. The first conference will emphasize the music and instruments of North and South America while the second will emphasize similar activities in Europe and Asia. Areas of investigation to be included are new instrumental resources, early instruments and their application to contemporary music, sound sculpture and the acoustic invironment as instrument, ethnic musics, and focus upon the related work of individual composers such as Harry Partch and Lou Harrison. Conference activities will include concerts open to the public and continuing exhibition of instruments. The conferences will promote a free exchange of ideas concerning the instruments and music, technical information, performance, and the integration of new instrumental resources into the musical culture.

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Piraject Outline

Project: Resources for Acoustic Instrument Rescorch + Development

ACOUSTIC INSTRUMENT RESEARCH PROJECT AND FURTHER DEVELOPMENT OF THE RESOURCE CENTER FOR ACOUSTIC INSTRUMENT RESEARCH AND DEVELOPMENT.

Resources for Acoustic instrument Research Pevelopment

History

Instrument Research Project began in the Spring of 1977 at the suggestion of Pauline Oliveros, Director LCSD. of the Center for Music Experiment and Related Research, Ms. Oliveros suggested to Ron George, Associate Fellow at CME, the possibility of organizing an acoustic instrument conference which would involve people doing research into new instrumental The project was been by contacting people who were resources. involved in such work to see what interest there was in such a instrument conservence. The response to the first inquiry was very strong project. response Because of this Aa committee was formed, the function enthusiastic. being to make further inquiries and to begin formulating ideas for the first conference. The committee consisted of Ron George, composer/performer/instrument designer; Paul William Simons, composer/performer and expert on the music of Harry Partch; Prent Rodgers, performer/instrument designer and John Driscoll, composer/ performer/instrument designer. A preliminary inquiry was sent out by the committee to individuals whose work is familiar. This an area letter requested information about anyone working in any and relating to acoustic instrument research and development.

Approximately 150 persons responded to this letter which Much was considerably larger than expected. Responses were received from all over the U.S., Canada, South America, Europe and Asia. Lepressed by these letters Because of the tremendous interest in this project Herbert Shore of UNESCO was contacted concerning the possibility of this program

UNESCO

becoming connected with the ATACT program. Mr. Shore expressed a strong interest in the project and subsequently through Mr. Shore we were put in contact with the National Endowment for the Humanities.

In the fall of 1977, Robert Erickson, Composer and of San Diego N. professor of Music professor of composition at the Univivo.ty was asked to serve as Principal Investigator for the project because of his noted work in the area of acoustic instrument research. Concurrently David Dunn, composer and former assistant to Harry Partch replaced Prent Rodgers on the planning committee. The present committee, with the help of Robert Erickson, has outlined a two year project which will include two major conferences and the furthe development of the Resources Center for Acoustic Instrument Research and Development. A second letter has been mailed to individuals and organizations which will hopefully yield further relevant information, 1150 and efforts are being made to open up direct communication between major centers of activities such as the Acoustic Research Center in Vancouver, Canada, IRCAM, in Paris and Simotheon? in the U.S in the U.S. tion So that a This marks the beginning of a network of information centers attender. ovmed throughout the world. Contact with composer Lou Harrison and the estate of Harry Partch has opened the possibility of a major exibition and performance of this instrument⁵ and music at the First International Acoustic Conference.

Purpose

The primary purpose of the productic Instrument Research Project is to promote communication among instrument designers and Modern builders, performers, composers, teachers, manufacturers and moder. recreators of old instruments (i.e., renaissance and medieval instruments) which and to establish contact with other centers of activity who are concerned with acoustic instrument research and development. The result will be the formation of a network of information centers which will give direct contact with people and their work throughout the world. The Resource Center for Acoustic Instrument Research and development will act as the control coordinating agent and will:

Resouvers Ser Acoustic

Instrument Research + Development project

- Further research and development of electro-acoustic and acoustic instrument
- 2. Coordinate research efforts
- Seek out information on technology, materials, music, instruments, etc.

4. Serve as a Center for documentation.

- 5. Disseminate materials and information to interested parties.
- 6. Publish materials in the form of articles and books
- 7. Seek out information on funding sources for various projects.
- 8. Plan and implement international acoustic instrument conferences.
- 9. Patent information. Seek out Patent information.

The international acoustic instrument conferences will function as the foundation for the development of the resource center by bringing people together in a meaningful ænvironment to share ideas concerning their work, thus giving an enormous resource of information to further develop the above areas.

Significance

Throughout the world there is an enormous amount of experimentation and research being conducted in the field of new acoustic instrument resources. However, due to the originality of thes experimentation, little is known of the people devoted to this exploration or its general significance. That no established network of communication exists between individuals and/or centers of activity has resulted in virtual anonymity of this research with information not being available in a larger social context.

The contribution of this research has been an expansion of the most essential material of musical artforms, the production of sound. The tradition of acoustic instrument experimentation is of course as old as the phenomena of music iteself but the issue of how this tradition related to the social and environmental context of manking has been made more acute by the recent trends of experimentation .

With each scientific and umanistic advance in the understanding of the properties of natural phenomena a refinement in the mechanisms of manipulating these phenomena occurs. Unfortunately a sense of responsibility about the potential of such mechanisms does not always accompany their use. Recent acquisition of advanced technological resources by all the arts has provided insight into the relationship of technology and the environment which will hopefully contribute to an increase of this sense of responsibility.

The design and construction of acoustic and electro-acoustic instruments and sound production systems provides a very direct means to experience the relationship of physical materials and properties to the individual, which is unique to that individual's cultural and environmental context.

The Resources Conter for Acoustic Instrument Research and the Center For Music Experiment + Related research Through the Resources for Acoustic

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Instrument Research + Development, project 5 Development will provide a necessary information source and coordination of research efforts through its archive and dissemination of previously UM available materials. The conference will bring together for the first time individuals and information from divergent areas of investigation associated with acoustic instrument research.

Dissemination 11 materials gathered as a result of conferences and Resource

Resources Sor Acoustic instrum Research Edevelopment project

Dissemination-

All material gathered as a result of conferences and the efforts of the Resource Conter will be disseminated through a newsletter which will be published three times a year. This newsletter will include information collected by the resource center, information about the conferences, and articles submitted by qualified contributors. *Center Ser Mausic Experiment* + *Ma Resources for Accustic instrumy* All activities sponsored by the Resource Center will be documented on video and audio recording, *pholography*, and written documents. All information will be housed in the archives at the Center for Music Experiment and will be available upon request. Interest in publishing conference materials and information gathered by the Resource Center has been expressed by both UNESCO and the Acoustic Research Center in Vancouver. Plan of Work-

Funding is requested to support and develp the ResourceSContes rojicet for Acoustic Instrument Research and Development over a twotime year period, during which two international acoustic instrument research conferences will be presented, at the University of California at San Diego. These conferences will be spaced a year apart with each emphasizing a different geographic area. This Resour-e Center is under the supervision of the Center, for Music Experiment at UCSD, Pauline Oliveros director. Resources Ser Acoustic instrument Resource L Personnel for the Resource Center will include Ron George, project David Dunn, and Paul William Simons. Robert Erickson will serve as Principal Investigator for the organization of the conferences.

A specific outline of activity over the two-year support period is as follows:

I. FIRST YEAR

A. September]978-February]979

During this period the organization of the first conference will occur. Confirmation and final notification of all participants will coincide with the conference preparations. The conference will be held from February 21 through February 26,]979.

This conference will be held in conjunction with e American Society of University Composers' National Conference which will be held from Feb through March 3, 1979 at the same location.

B. February 1979 - Specific outline of first conference. The Acoustic Instrument Conference will function as the foundation for the development of the Resource Center and will promote a free exchange of ideas concerning:

- Music and instruments, music and performance, new instruments and performance concepts, etc.
- 2. New instrumental resources and their manufacture.
- 3. Technical information
- 4. Sculptural and theatrical aspects of design.
- 5. Instruments from found-objects.
- 6. Notation.

7. The integration of new instruments, music, 8. Patent and performance into the musical culture. information The conference will be held over a six-day period (February 21 through 26, 1979) and is otlined as follows:

> Day I (This schedule represents a tentative schedule. We are still in the process of contacting persons concerning their participation in the conference.): <u>and</u> <u>Sound Sculpture adm the Acoustic Environment as In-</u> strument/opening ceremony

Exhibitions of sound sculpture will begin on this day and run continuous throughout the conference. These exhibitions will be held both indoors at local museums and outdoors at various locations on the UCSD capmus. This will allow people attending the conference to arrive, register, and experience the various exhibitions. There will be no workshops or scheduled performances except for the evening activities. g

I. Indoor Exhbitions

Stephan von Huene - Sound Sculpture Charles Matter - Sound Sculpture John Driscoll - Electro/Acoustic Instruments II. Outdoor Exhibitions

> Leis Brush - Environmental Sculpture David Dunn - Documentary Performance Paul Earls - Environmental Sculpture

III. Evening - Opening Cereemony

Pauline Oliveros - Opening Address John Grayson - Historical Perspectives Herbert Shore - UNESCO and Founding Sources for Acoustic Instrument Projects

Protecting Your Research Projects - Patent Information - Person to be determined Music: Mariachi Band -

Steel Band -

Day II: The Music, Theory, and instruments of Harvey Parten Harvey Paitch and Lou Harrison/Bill Colvig I. Workshops M:tchell Harry Partch 1. Dan<u>lee Michaels: Harry Partch</u>, His Music, Instruments, Performance, and Notation. 2. Ben Johnston - Paitch Theory 3. Lou Harrison/Bill Colvig Music: Lou Harrison The Western Gamelan: Bill Colvig

> 4. Paul William Simons - Presentation/Performance The Influence of Harvey Partch and His Music

II. Open disussion period: Audience interaction and question feriod.

III. Evening Concert: Harvey Paitch and Lou Harrison/ Bill Colvig.

The instruments of Harvey Partch and Bill Colvig will be on display from day 2 through 5 in a local museum. Special workshops will be conducted to enable composers, performers, and instrument builders to directly experience these instruments.

Day III: Traditional Instruments - Early music and instruments (medieval and Renaissance) - performance as it related to recent music.

I. Workshops: Early Instruments.

A. Wind Instruments.

1. Friedrech von Huene: Recorders and Flutes

2. Robert Marvin: Renalssance Recorders

and tuning experiemnts.

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- B. Lutes
 - Robert Lundberg: Selecting wood and the construction of lutes.
 - Donald Warnock: Early string instruments

II. Workhops - Contemporary adaptations

Scott Hackleman - The 19-tone clavichord. lecture III. Workshop - Accustics

Dr. Arthur Benade - Musical Acoustics and its TO Pen relation to early and present-day instruments. discussion Period T. Evening concert of Medieval and Renaissance Music

- 1. Medieval Alphonso X Memorial String Band
- 2. Renaissance Guidonion Head

The instruments from this day's activities will be on display from day 3 through 5 in local museums. Special workshops will be conducted for performers, composers, and instrument builders to directly experience the instruments.

Days IV and V - Sound Sculpture and the Acoustic Environment as Instrument/New Musical Resources.

- I. Extension of Traditional Instruments.
 - A. Workshop/performances
 - String Instruments New Resources
 a. Bert Turet and Will Boulet -The New Contra Bass
 - b. Tom Stone New Intonation Systems for Guitar and the manufacture of new instrumental resources.

Scherbeck

Brandt - The New String Family

2. New Instruments of Percussion

> a. Ron George - The Development

> > of New Instruments of Percussion

Light-Producing Instruments II.

> John Forkner - The Tympanum Luminorum and Its Developemnt.

III. Newly Designed Instruments.

IV.

A. Prent Rodgers

- B. Chris Forgester C. Gunnar Schoenbeck
 - Α. Robert Erickson - New timbre resources Acolarizina coments.
 - Animal Communication Kenneth Noland Β.
 - C. David Jacobs - Sound Sculpture
 - D. Murray Schaffer - Vancouver Soundscope Project
 - Ε. Erv Wilson - Recent Theories
 - Stehhan von Huene New Resources and Education F.
 - G. Loiet a Carillo The music and instruments

Open discussion periods. Performances

- Pauline Oliveros Ritual performances Α.
- Β. Gravity adjusters Expansion Band

Hard - Richard Waters

- The Music of Light and Sound Ron Gorge, Joan George, John Forkner Alvin Lucier Performance с.
- D.
- Group improvisation involving participants E. in the festival.

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b. Michael Udow- The

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II. Itait-Trouble Instruments

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+ new instrumental resources,

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Personnance of Robert Evic Koon's "Cradle II"

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Datid Jacobs - Sound Sculpture

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C. the Mail of Might South - ..

9. Alvin Laster - Parlormance

S. . Group improvisation involving participants

in the fastival.

Day VI: Ethnic Music of North and South America. Research into this area is still in progress. The highlight of the day's activities will be an American Indian Ceremony which will include workshops on the construction in and include meaning of American Indian musical instruments.

- C. March-August 1979 conference follow-up
 - 1. Activities and functions of the resource

center during support period. Son Acoust a. Newsletters - The resources center + Divido Weje will issue two newsletter the first year, offuring in April and August

and three the following year.

b. Archives - The expansion of the resource centers archives will occur through materials gathered from the first conference, through a correspondence network established before and during the conference with individuals as well as other centers of activities and through professional associations of the resource center's personnel (i.e. Ron George is chairman of the Avante Garde Commitee of the Percussive Arts Society. This organization has a membership of over 3,000 and through its publication and conferences

we can make direct contact with percussionists throughout the world who are doing instrumental research.

- Development of Funding Information -Active investigation of funding for
- Active investigation of funding for various projects will be a function of the resource center during this period. Funding will be sought for both individuals actively engaged in acoustic instrument research and for future funding of the resource center after the support period ends.

c.

- d. Lecture/performance series Presentation of a lecture/performance series related to acoustic instrument research and development will occur following the initial conference. This series will serve as a means to establish a connection between the two conferences and to present individuals that might not be able to participate in the conferences themselves. Lectures and performances will be presented at the Center for Music Experiment, UCSD.
- e. Publications Publication of materials gathered by the resource center and at the conferences will be actively pursued. Interest in publishing these materials has been expressed by both UNESCO and the Acoustic Research Center in Vancouver.

- Personnel The specific roles of all individuals associated with this project are as follows:
 - a. Robert Erickson, composer and professor of music at the University of California at San Diego, will serve as Principal Investigator for the planning of the conferences.

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- b. Ron George, percussionist, composer, and associate fellow at the Center for Music Experiment, will serve as director of the resource center. He will specifically be in charge of information related to new instrumental resources and will oversee the entire project.
- c. David Dunn, composer and director of the Electronic Music Studio at San Diego State University, will serve as a co-director of the resource center. We will be coordinator of information related to electro-acoustic and acoustic sound sculpture and environmental sound systems.
- d. Paul William Simons, composer, poet, and performance artist, will serve will as a co-director of the resource center, coordinating information related to

general acoustic instrument construction and experimentation.

II. Second Year

A. September 1979-February 1980

Organization and final planning of the second conference will occur during this period.

B. February 1980 - Second Conference

- 1. The second conference will emphasize the acoustic instrument experimentation of Europe and Asia, including folk and ethnic music related to these geographic areas. The basic areas of activity will be the same as the first conference but involving different individuals out of the second out of the second second second second second out of the second se
- C. March-September 1980
 - Conference guidelines will be established for the setting up of future conferences not under the direct sponsorship of the Resource Center for Acoustic Instrument Research and Development. It is probable that these conferences would emphasize a different area of investigation each year and would be held in different locations. (OUSY)
 Following the second conference a con-

tinuation of the activities established

O Clunnar Schoenbeck at Bennington College, Bennington Vermont, has respressed an interest in hosting the second conference D (The Acoustic Research Center i'm?) Vancouver lavada has expressed an interest in hosting the 3 Consevence) a sougetic instantest experies.nation of Europa a find a duding isla th aroas. The basic scales of activity at involving infinited individual for ing Rowins - and the fact that the strategy and different area of investigation e.ma year and wante he hold in different

Pollovia: che scare d'ofference a contimuation of the sotivities accoultable by the resource center will occur. This will include all the functions previously outlined.

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3. Continuation of the resource center after The initial funding period.

To insure the continuation of the period of initial source center beyond the period of initial funding it is planned that an association devoted to acoustic instrument research and development be organized. This organization would consist of an interested membership with yearly membership fees. These fees would aid in maintaining the resource centers archive and information dissemination function and make funds available for future conferences.