Request for Assistance
Experimental Television Center Ltd.
Program: Artist in Residence, Walter Wright
Contact: Walter Wright, Ralph Hocking

The Artist in Residence Program will consist of two subprograms, the Workshop Series and Language Development.

Workshop Series: This program is an extension of the Workshop-Performance Program conducted by Walter Wright of the Experimental Television Center with support from the NYSCA in 1974-75. We are proposing for 1975-76 a series of twelve workshops at various centers in New York State demonstrating the process of video synthesis with the ETC hybrid synthesizer. The Series will include six one day workshops with a basic introduction to the system and limited hands-on experience, four two day workshops with more exyensive hands-on experience and two five day workshops with tape showings, one evening performance and more comprehensive discussion of the system.

The workshops presented in 1974-75 generated strong interest in the processes of image synthesis and colorization. Several groups, among them Guilderland High School, Woodstock Community Video, Columbia Greene College, Auburn Community College and Portable Channel, expressed interest in buying or building similar equipment. All groups were pleased to include the workshops as part of their program because it provided an added dimension to video and television programs already established by these groups. The workshops acted as a focus for interest in video synthesis for those groups without immediate access to a synthesizer. They encouraged several groups to consider new ways of using existing equipment such as keyers or special effects generators to construct abstract imagery. After introduction to the synthesizer several individuals from these groups have contacted the Center to schedule time in the studio. Communication and discussion has developed and is intensifying, particularly in the areas of equipment design and construction.

Initially the workshops were rather informal in nature to allow maximum flexibility in presentation. In assessing this format of presentation several more formal structures have evolved. For the one or two day workshops conducted at the high schools and community colleges a brief explanation of the synthesizer and hands-on experience as a group seems most effective. At Woodstock Community Video and Portable Channel people already familiar with basic video techniques used the equipment in small groups of two or three, often with specific ideas in mind. This approach is most effective when three to five days are available for the workshop. During this past year the Paik/Abe Video Synthesizer has been reorganized as a performance instrument and on several occasions used in presenting original compositions. The performance works well in concluding the longer more intensive workshop and in places like the Kitchen or Anthology Film Archives

The interest in image synthesis generated by the workshop program has prompted the Center to consider developing inexpensive modules such as keyers, gen-lock and colorizers and to make available circuit diagrams and manuals to interested groups. Continuing the program next year will serve to further expose other groups and individuals to the synthesizer and reinforce the interaction between those people who already share this interest. The workshop series is very effective in introducing a large number of people to the synthesizer; 280 people in the twelve workshops presented to date have had hands-on experience and 1500 people have seen the process of color image synthesis demonstrated. The additional special showings have allowed another 5,000 people to experience the system.

For a total workshop budget in 1974-75 of $3,000 over 1500 people have been reached to date at a cost of less than $2 per person. Four additional workshops have been scheduled for April. Unforseen expenses were incurred this year relating to equipment maintenance and repair: the wear and tear caused by transporting the machine and accidental damage caused by experimentation. These expenses were absorbed by the operating budget of the Center. For this reason an additional item is included in this next year's budget. The stipend covers time spent administering the program and time spent in returning and repairing the equipment between workshop bookings.

See attachment #1 for a list of workshops
Workshop Series cost: $5,300
See itemized budget

Language Development: As an extension of this year's workshops the Center will replace the Paik/Abe Video Synthesizer with the ETC hybrid synthesizer consisting of the Jones' voltage controlled colorizer and the Intel computer system. The workshops will be expanded to deal with techniques for video synthesis and computer programming - voltage controlled synthesizer modules, interface between synthesizer and computer and computer techniques for composition, using the computer to develop a score for image processing.

An important development at the Center during the 1974-75 period is the hybrid synthesizer system. David Jones has developed voltage controlled circuits for a colorizer module. The colorizer processes four separate black and white video inputs. Each video input has controls for video level, pedestal, key clip, chroma level and red, green and blue color mix. The colorizer can be controlled manually or by the application of a voltage (0-10 volts) at the appropriate control input. Control voltages are generated by an oscillator bank (four low speed oscillators and four high speed oscillators) or by the Intel computer (eight D/A converters). An 8x8 matrix input switcher is also controlled by the computer.

The conputer will be used to preprogram a series of images and transformations which would be impossible to achieve with manual controls. The programs can be edited and combined to build completed scores for the synthesizer. Programs will be stored on audio cassettes.

The ability to program will require the development of a special language for the computer and a visual notation system for composition. The langiage will be based on new programming techniques, control programs for special hardware components such as the 8x8 switcher and the manual controls. Graphic programs will be of a generalized nature and may be easily translated for implementation on similar somputer controlled video systems.

Documentation of circuits, construction techniques, programs and the preparation of manuals for the computer and video modules will be part of this project. This material will be distributed at cost through the Center.

See attachment #2 for notes on programs to be developed
Language Development cost: $10,000
See itemized budget

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Attachment #1
List of Workshops

1. Hofstra University Hempstead, Long Island	20	students from Communications Department used PAVS
	1,200	viewed system
2. Kitchen New York City	25	people attended tape showing and performance
3. ETC Binghamton	25	hign school teachers
4. ETC Binghamton	40	attended tape showing and discussion
5. Everson Museum Syracuse	200	gallery goers during day
	30	people for evening workshop
6. Anthology Film Archives New York City	100	attended tape showing and performance
7. West Syracuse High School Syracuse	25	students used PAVS
8. Guilderland High School Guilderland	20	students used PAVS
9. Woodstock Community Video Woodstock	25	people used PAVS
10. Columbia Greene Community College	25	students
11. Auburn Community College	40	students in workshops
12. Portable Channel Rochester	12	people in workshops
	16	people at performance
13. Media Studies Buffalo		scheduled for April
14. SUNY-Binghamton		scheduled for April
15. Memorial Art Gallery Rochester		scheduled for April
16 SUNY-Stony Brook Stony Brook		scheduled for April

Special Showings

1. Musee d"Art Contemporain	400	people at workshops
2. Art Gallery of Ontario	800	people
3. OECA Channel 19 Toronto		on-air broadcast
4. Ontario College of Art	15	students used PAVS
5. York University	30	people at workshop
6. Exprmntl 5	2,000	
7. Video and Dancing in Binghamton ETC Binghamton	200	people attended
8. Martha Jackson West New York City	2,500	people

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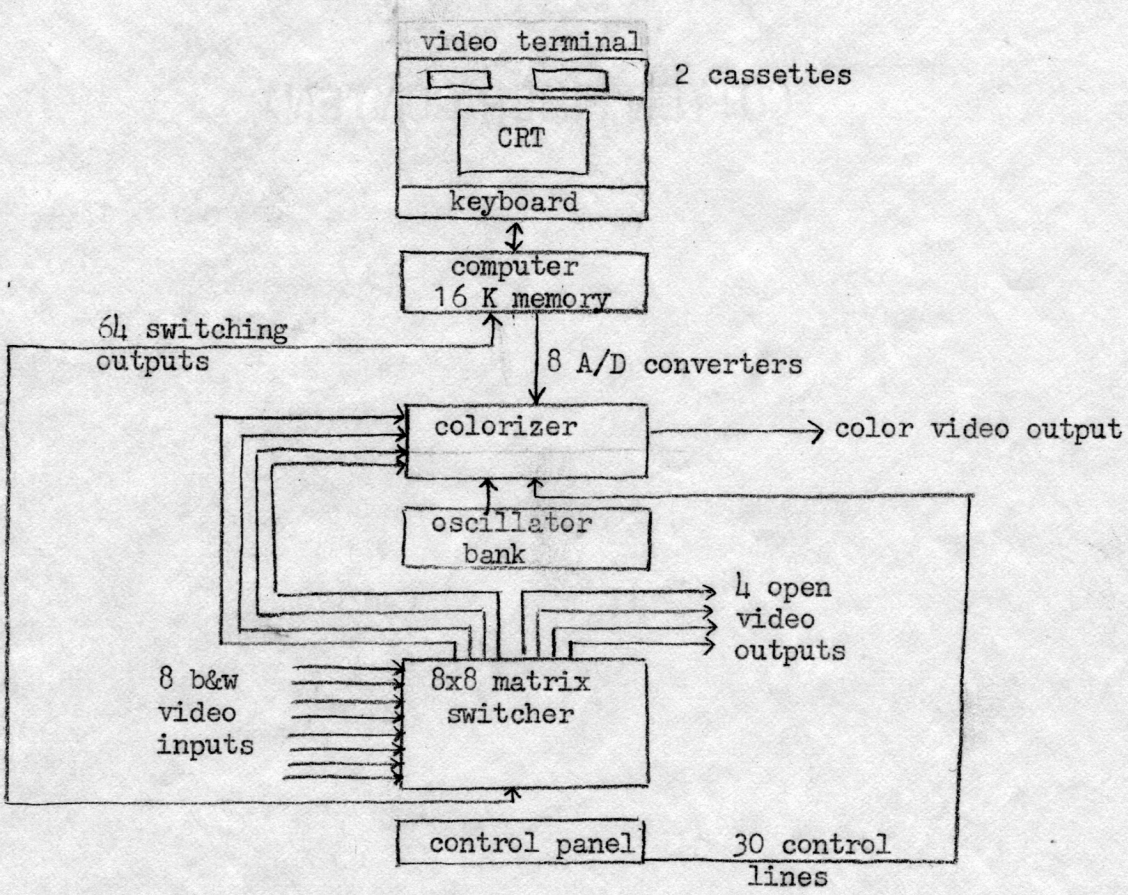
Attachment #2
Notes on Programs to be Developed

Block diagram for hybrid synthesizer:

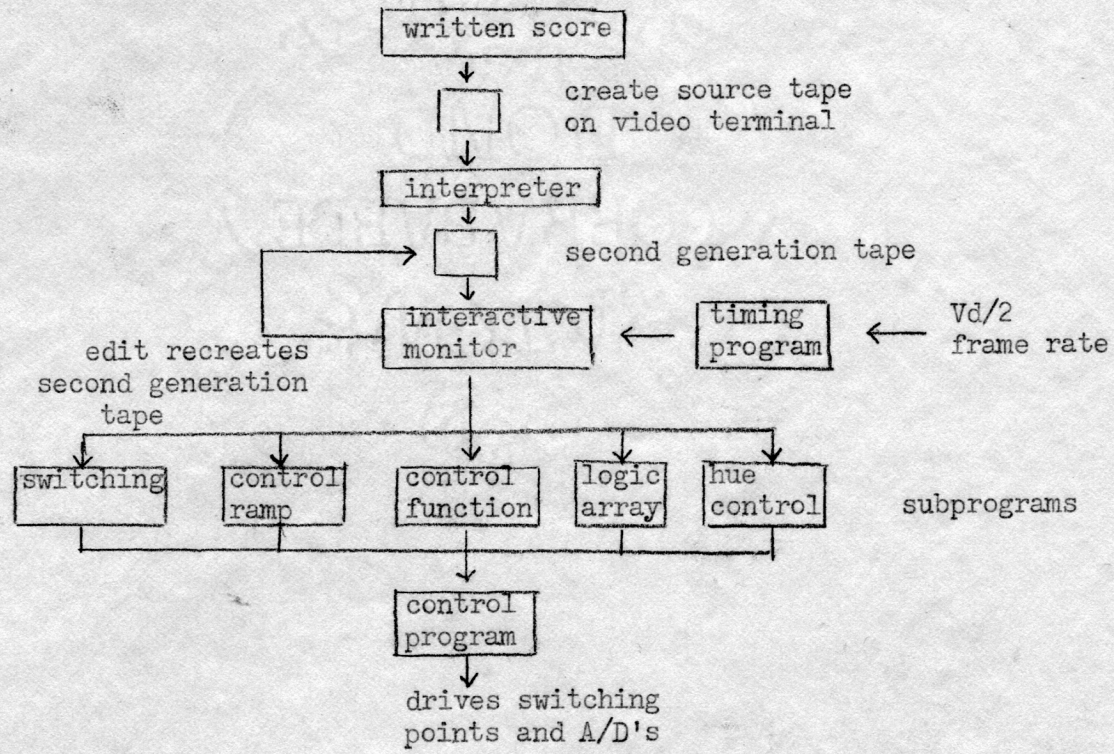


Interpreter is a program designed to translate a source tape of commands and produce a second generation tape in machine language which becomes the score to be used by the Interactive monitor. Commands will specify control sequences such as switching sequences, control ramp generation, control function generation, loading of programmable logic arrays and hue control. This source tape also includes timing information and control level values.

Interactive monitor is a group of programs to play back a prepared score and to edit this score. Switching, ramp generation, function generation, array loading and hue subprograms will translate the commands which make up the score and frame by frame create the address and data words required by the Control program to realize the score.

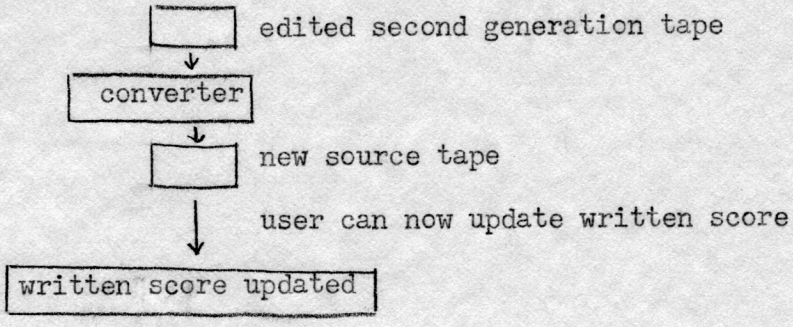
Timing program maintains a frame count. Vd/2 is used to interrupt the Monitor and allow the program to increment a preassigned word in word in memory containing the frame count. Control then passes back to the monitor.

Block diagram of programs



Control program drives the analog to digital converters and switching points. The program outputs an address which specifies a particular A/D or bank of eight switches and a data word indicating voltage level or on/off settings.

Converter is a program which creates a new source tape from a fully edited second generation tape. This is necessary because the second generation is in machine language and must be reformatted as commands for the user to understand.



Composition programs will be developed for use on larger computer systems: programs to randomize a score, automatically generate control sequences, generate transformations between sequences or images and data structuring techniques to organize sequences or images.