Cambridge, 16 December 80

Dear Steina,

Thanks for returning the tape, and for your letter accompanying it. I'm very pleased and excited to have you add it to your collection, and please show it in your lectures or whatever! Included with this letter is a brief blurb about the VIDSIZER system, written a while ago as I began to seek funding. It explains a bit about the system. All but two of the visual effects are my original software, and these other two were modified by me for the system. I also wrote the entire system structure, menuing, and tablet interaction software, and also the synthesiser controlling software for it's microprocessor controller. This whole project was my Master's thesis in computer graphics from the Architecture Machine Group under Professor Negroponte.

Work on new visuals will begin again in January, so new tapes are probably forth-coming. I'd be happy to talk to your student if he(she) is planning a visit, or have the student write to the Architecture Department, MIT, 77 Mass Ave, Cambridge, MA 02139, attn. Linda LaPlante about program/enrolement questions. (MIT central exchange is 617-253-1000, classes resume next Feb.)

PLEASE LET ME KNOW IF YOU'LL BE IN THE AREA AGAIN, AND IF YOU HEAR OF INTERESTING THINGS HAPPENING WITH EXPERIMENTAL DIGITAL VIDEO.

SINCERELY,

DAN FRANZBLAU

WHAT IT IS

Vidsizer is a visual and musical instrument. It can synthesize sounds and moving video patterns of shapes and colors as it is played. It has an organ keyboard, and various additional controls for sound and image generation. It is built from a hybrid digital and analog audio synthesizer, and a digital video frame-store linked to each other and to the input devices through a central group of microprocessors and controllers.

Vidsizer is a performance instrument, and so offers ease of use as well as versatility. Sounds and visual effects are patchable, presenting the entire resources of the machine to the artist rather than limiting him to a few switchable preset hardwired sounds or images. Patching is done through the manipulation of a video image, speeding ans simplifying the patching process. Patches can be preset, recorded, and recalled for quick voice changes in concert. Audio and visual sequences can be similarly recorded and played back.

PROGRESS

So far, preliminary experiments in digital control, digital video imagery, and patching with a video display have been performed on big computers, microcomputers, and some custom hardware at MIT. These have been encorporated into a working demonstration, which continues to be used to try out new ideas. From these experiments came many ideas for improvements both in the hardware and the supporting software.

APPLICATIONS

To date, Vidsizer has been a testbed for visual, hardware, and

software ideas. Its most direct application, from past work, will be as a performance instrument, capable of generating music and large-scale projectable imagery. Another use of the system is to generate video to accompany other music. Sound analysis circuits provide the inputs to the system in this case (instead of the keyboard), and would be patched into the video generating software. In the performing arts, Vidsizer could be used to create a setting for modern dance or in plays.

FUTURE DIRECTIONS

I am looking for a performing group that is willing to work with me to develop vidsizer for their visual and musical performance needs.

Vidsizer will have a standard organ keyboard, as well as a digitizing surface and other devices to control sound and image generation. A memory for pre-deturmined "patchings" will allow storage and recall of specific sound and graphic modes. There will also be the ability to record keyboard strokes and motions on the digitozong surface, thus allowing the re-playing of a session at the instrument.

Vidsizer will have the hardware organization as shown in this diagram. The three main parts are the control, audio, and video sections. The control section listens to the input devices, sending commands for action to the other two parts through a common interface. The audio and video sections run their own programs, operating the audio synthesiser and the video frame buffer, respectively. The actual hardware implementation will rely heavily on 8 bit micrprocessors, running in parallel. This gives the system more power than a single 16 bit machine could give.