

# Video and the Electronic Arts

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I think it is important not to misinterpret the emergence of the video medium as a lone electronic spinoff into visual aesthetics but rather to see it in the context of man's growing understanding and control of information and energy. Its youthful tinkers have yet to realize the philosophical implications of the organization of electronic waves and particles into sounds and images.

The semi-conductor revolution accelerated the development of self-responsive technological systems that began in the post-war military complex. The trend which enabled the processing of greater amounts of information in less physical space has facilitated systems which in addition to resembling the modes of brainlike processes, proceed and respond in a time sense foreign to human experience. Of course, mammalian neurological systems have their own electro-chemical time structures, but the internal events and spaces of electronic information and hardware have their own dynamic and metamorphic quality. Here in this microcosmic world, simple decisions can be made by energy being modulated or decoded according to a timing no doubt referent to a brain and its sense in a somewhat larger and more complex physical environment. Somehow, the material and logical structures man has devised to examine and direct this energy echo our own mental awareness of internal space and time. It is not only the use of such technology which seems to mirror and parody the philosophies of our perceptions but also the "setting into motion" or programming of a series of events which may or may not resemble a linear causal situation as seen in an observable world.

The Video Image can be understood in terms of the electronic signal which is utilized somewhat ambiguously to simultaneously represent and control both time and energy. Immediately upon detection by the pickup tube, the light information is metamorphosed into electronic information; and it is here that the signal enters a kind of "susceptible" state. The energy and time relationships can be altered, which renders the signal relatively malleable, and, upon interface with computerized modules and audio systems interesting experimentations in control are possible. The Image is now in a state which can be treated by mankind's latest developments in electronic and data processing technology. But it is never held in stasis. The signal is responsible for the deflection of an electron beam tracing 525 lines 15,750 times

a second in two groups 60 times a second each. The same signal contains all picture, color, and timing information and is itself a waveform, occurring periodically.

It should never be forgotten that the cathode-ray tube displays images on a two-dimensional space. The conceptual evolution which probed the mysteries of two or three dimensional compositions as they are made to appear on a two-dimensional plane has uncovered various techniques for representing these perceptual and spatial illusions as well as having created elaborate cultural sign systems. An art continually wrestles with the inherent dichotomies of space and time as indicated in the formalist principles of symmetry and asymmetry, synchronicity and asynchronicity. Video holds within its underbelly an energy-dynamic which eludes the artists' control and manifests itself quite early in the game, visually in the various modes of feedback and as unaccounted for interfering electronic behavior. The artist soon faces enormous problems of instability when he chooses to tamper with the time/frame of the image. In this attempt to compose in time he has as his central tool an analog control through waveform generators. The oscillator which controls the deflection of the electron beam must look to the direction of an incoming timing/waveform. When the system is not designed to accommodate more than a limited amount of asynchronicity the signals can interact in what would seem to be a rather disagreeable way. Yet, an interesting creative occupation can be anticipated in the monitoring of drifting audio and visual information. Perhaps future technological advancement in control and flexibility will make possible a more conscious design influence. It is somehow ironic that the Rutt Etra video synthesizer, the state of the video analog art manipulation tool, is very much in need of digital computer control.

It has been said that the living core of the medium is indicated by such as the organic unpredictability of video feedback and the pseudo-random fluctuations of free-run audio oscillators. Yet feedback flower mandalas have quickly become a trademark, and, inevitably, a cliché. Since I do grant that these modes are, in some senses, unique, I would posit a balance between such analog functions on the one hand, and the awkward permutations of digital computer images on the other. Both illuminate the artists' organizing problem and challenge — how to approach the electronic arts tools at our doorstep.