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**24 East 22 Street**

**If you would like to subscribe for one year (4 issues, postpaid) a check for $5 payable to "Radical Software". Or send a subscription: "Radical Software"**

**Begin subscription with Issue No. 1 (Summer 1970)**

**Begin subscription with Issue No. 2 (Fall 1970)**

**Name**

**Address**

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Address: Radical Software  
24 East 22 Street, 2nd Floor  
New York City 10010  
Tel: 212-982-5566

To date (October 23, 1970) 369 copies of Radical Software have been sold to 85 people who will do a careful job of getting the magazine out and a conscientious job of refilling orders and collecting money. We are attempting to get to the West Coast but have yet to connect with either a distributor or person who will do a careful job of getting the magazine out and a conscientious job of refilling orders and collecting money. A member of Media Access Center, of Portola Institute, has volunteered to distribute 400-500 copies of issue Number Two. We will pursue distribution in Chicago and the Midwest after we gain experience on the West Coast. At this writing the second edition of Radical Software is going to press. If you are reading this you will know we solved the financial problem about to unfold. Raindance has $150 in the bank and will receive $1900 from monies owed about three weeks after the typesetter and printer want their down payment money, about $1200. Receipts from Number One Radical Software should start coming in since they just reached Boston and recently refilled the New York bookstores. Probably $400 will come in by down payment time from that source and perhaps another $250 from subscriptions. We are attempting to get a bank loan against the $1900 owed since it is from a reputable source but preliminary returns indicate it will not be easy.

For issue Number Two typesetting and printing costs have gone up. We would like to print 10,000 copies based on our first experience and likely West Coast distribution. 10,000 copies @ 28 pages will cost $4240, $760 for typesetting, $3480 for printing, materials and layout; or 43¢ per copy. 5000 copies @ 28 pages will cost $2908 or 58¢ per copy. The amount of cash we can obtain and terms we can work out with the printer will determine how many copies are printed. After the results of Number Two come in we will have some solid information on our circulation and subscriber potential and distributor interest.

**HOW DO YOU THINK VIDEOTAPE CAN BEST BE USED NON-COMMERCIALLY FOR PROFIT?**

Radical Software is in the process of incorporating as an independent non-profit organization.

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**FEEDBACK**

Charles Bensinger  
Center for Policy Research  
Steve Christianson  
Tom DeWitt  
Electric Eye  
Fobilie Muck Truck  
Kira Gale  
Global Village  
Phil Gietzen  
Richard Green  
Michael Hastings  
Joe Hryvniak  
Leicester Commune  
Media Access Center  
Media Bus  
Media Ithaca  
J. Kearney  
Ira Einhorn  
Jud Yalkut  
Sally Surpin,  
Richard Kletter,  
Allen Rucker  
Phil Noyce  
National Center for  
Experiments in Television  
NYU Media Co-op  
Nam June Paik  
Guy Pignolot  
Jay Ruby  
Aldo Tambellini  
Albie Thoms  
TVX  
Vasulka/Lowenberg  
Venice Film Fricassee  
Video freesx  
Marco Vassi  
Joe Weintraub  
West Coast Video Magazine

Cover photos: Julie Katz and Tom DeWitt

The first edition of *Radical Software* (Summer 1970) it was reprinted with a few changes to its cover as Radical Software/Number One in September, 1970. 2000 copies of the first edition were printed for a total cost of $1650; $550 for typesetting, $1100 for printing, materials and layout for a cost per copy of $3.63; 632 copies were mailed out free at a mailing cost of $394 per copy, 570 copies were handed out free in response to requests by mail 394 were mailed out for a charge of $1. Radical Software incurred a $294 cost for mailing, $22 for postage and 7¢ for envelopes (West Coast and European mailings cost $.60-$1.00. 125 copies were mailed to Buffalo State University 324 were sold at 18 bookstores in New York City for $1 a copy (Bookmasters accounting for 9 stores). Radical Software received approximately 70¢ on a consignment basis from the bookstores after the copies sold.

The three thousand copies reprinted in September, 1970, for printing, materials, and layout, cost $860 or 29¢ per copy. Prices were raised to $1.25 at bookstores; $.60-$1.00). 125 copies were mailed to Buffalo State University; 324 were sold at 18 bookstores in New York City for $1 a copy (Bookmasters accounting for 9 stores). Radical Software received approximately 70¢ on a consignment basis from the bookstores after the copies sold.

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CABLE TV—MORE CHANNELS, LOWER COST OF TRANSMISSION

"...One of Cable TV’s great potentials is its inherent ability to end the economy of scarcity on which the power of the present TV broadcasting oligarchy is solidly based. Many new CATV rigs are being built for twenty-channel reception, and San Jose, Calif, is installing one for forty-two-channel capacity. Experts believe that the cable could carry as many as eight channels with present technology. If more were ever needed, they could probably be tacked on by using more sophisticated input equipment..."

"Since in a CATV system it is possible to transmit directly over the cable without receiving any signal from the air, the high cost of building and running an over-the-air transmitter is eliminated. In addition, while a commercial over-the-air broadcaster derives his entire revenues from his programming, a cable system does not make its money on what it transmits. The cable runs on the profit from the subscribers’ fees, whether or not the system is used for cablecasting."

BROADCAST TV—FEW CHANNELS, HIGH TRANSMISSION COST

"Television is a colossal hog of the electronic frequencies. The elbowroom required by each channel is what makes the over-the-air very high frequency (VHF) TV spectrum the scarcest of our natural resources. No more than 12 channels can be carved out of this choicest part of the TV transmission spectrum. When additional allowance is made to avoid overlapping and interference, and for the further restriction imposed by the economics of a commercially based broadcasting system, it works out that 75% of all American viewers get no more than three or four channels."

“A year ago, President Nixon, under sharp prodding from Rep. Torbert H. Macdonald (D., Mass.), chairman of the House Commerce Committee’s Subcommittee on Communications, finally released the text of a Johnson administration Task Force report on national communications policy. Among other things, the report concluded that money, even more than lack of space on the spectrum, was a major barrier to the expanded use of TV. The cost of building and running over-the-air transmitters, and programming costs, which are rising at a rate of about 8% annually, make any expansion of the present system almost prohibitively costly."

PRESENT LOCAL PROGRAMMING CONCEPTS began, in order to make the CATV service more attractive, by filling one or more empty channels on their viewers’ sets with such simple fare as weather reports, stock market quotations, and views of an AP or UPI news ticker. Such “programming” costs little, and is easily provided by even a very small system. Soon, a few systems went a step farther—they began to transmit live local material. Today 5—10% of cable systems offer live programming of local origin, usually transmitted for a few hours a day, or irregularly when events of interest take place. These include newscasts, religious programs, school activities, county fairs, fund-raising drives, sports, cultural events, political debates, public hearings, school board meetings, children’s programs, and daily variety shows featuring local persons and events.

(Netron, 5/18/70, Smith)

COAXIAL CABLE CONSISTS OF:
1. Copper wire in the center like lead in a pencil,
2. insulated by polyethylene foam (the major part of the diameter in cross-section), and,
3. coated with a tubular shield of braided copper or seamless aluminum sheath.

(Netron, 5/18/70, Smith)

When a current or signal is introduced into the cable an electromagnetic interaction takes place between the center wire and the surrounding sheath. The interaction prevents currents from radiating off the cable. This is the secret of the cable's key characteristic—its immense capacity for carrying electronic signals, data and information."

(Netron, 5/18/70, Ralph Smith)

CABLE GROWTH

THE MODERN CABLE SET-UP CONSISTS OF:
1. Tower selected for good reception,
2. antenna system so that there are separate antennas for each channel to be received, (sometimes distant signals are relayed to the tower by 1 or more microwave transmitters),
3. "headend", a small control station at the foot of the tower where signals are brought up to maximum strength and clarity. (Here, some of the signals may be rechanneled—i.e. cable systems put UHF stations on empty VHF channels),
4. amplifiers, placed at distances of 1,500-2,000 feet along the trunk line into town to keep signals strong,
5. "feeder" lines, "tapoffs", and "house-drops" which carry the signals from the main cable to individual homes and subscribers' homes.

(Netron, 5/18/70, Smith)

AVERAGE SYSTEM SIZE: 1900 subscribers.

PEOPLE SERVED: Estimating 3.3 persons per home, (service to 4,500,000 homes) CATV systems relay television signals to almost 15 million viewers, or about 7% of the U.S. television audience. In addition to the approximately 2400 systems operating as of January, 1970, there were as of May, 1970, an additional 2100 communities in operation. CATV systems relay television to almost 15 million viewers, or about 7% of the U.S. television audience. In addition to the approximately 2400 systems operating as of January, 1970, there were as of May, 1970, an additional 2100 communities in operation.

MEDIA OWNERSHIP OF CATV SYSTEMS
Of the 2,490 systems operating as of March 1970, following is by media ownership:

<table>
<thead>
<tr>
<th>Media</th>
<th>Systems</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Broadcaster</td>
<td>910</td>
<td>36.5</td>
</tr>
<tr>
<td>Phone</td>
<td>146</td>
<td>5.8</td>
</tr>
<tr>
<td>Newspaper-pub.</td>
<td>207</td>
<td>8.2</td>
</tr>
</tbody>
</table>

(Netron, 5/18/70, Smith)

U.S. CATV SYSTEMS—BY SUBSCRIBER SIZE (As of Feb. 7, 1969)

<table>
<thead>
<tr>
<th>Size by Subscribers</th>
<th>Systems</th>
</tr>
</thead>
<tbody>
<tr>
<td>20,000 &amp; over</td>
<td>8</td>
</tr>
<tr>
<td>10,000–19,999</td>
<td>50</td>
</tr>
<tr>
<td>5,000–9,999</td>
<td>144</td>
</tr>
<tr>
<td>3,500–4,999</td>
<td>123</td>
</tr>
<tr>
<td>2,000–3,499</td>
<td>279</td>
</tr>
<tr>
<td>1,000–1,999</td>
<td>423</td>
</tr>
<tr>
<td>500–999</td>
<td>427</td>
</tr>
<tr>
<td>50–499</td>
<td>730</td>
</tr>
<tr>
<td>49 &amp; under</td>
<td>46</td>
</tr>
<tr>
<td>Not Available</td>
<td>260</td>
</tr>
<tr>
<td>Total</td>
<td>2,490</td>
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(Netron, 5/18/70, Smith)
THE FIRST CABLE STATION was founded by Robert Tarlton who ran a radio sales and service shop in Lansford, Pa. . . . When TV sets became commercially available in the late 1940's, Tarlton had trouble selling them because reception was abominable. The nearest stations were in Philadelphia, 65 miles away. The signals reaching Lansford were very weak, and further blocked by a mountain that overshadowed the town. Tarlton experimented in 1949 with installing individual antennas for set owners on the mountain. That worked fairly well, and he quickly got a better idea . . . he and several friends pooled their resources and set up a firm called Panther Valley Television Company.

Panther Valley built a tall master antenna atop the mountain to spear the faint Philadelphia signals. These were fed into an amplifier to bring them back to full strength, and then into a coaxial cable that was strung down the mountain side and into town. The company offered to hook customers up to the cable for an installation charge of $125 and a monthly service charge of $3. Television-hungry residents of Lansford immediately began buying sets from Tarlton's shop and "going on the cable." They received three Philadelphia channels with greater fidelity and clarity than did a lot of people living within 10 miles of Philadelphia—or even in the city itself.

"Today, with its system modernized and rebuilt, Panther Valley Television provides 12 channels to 2,900 residents of the Pennsylvania hill towns of Lansford, Coaldale, Hatto and Lake Hatto, who would otherwise have little or no TV. Tarlton remains president of the company, and also of Titusville Cable TV in Titusville, Pa."
Any transmission of intelligence by means of radio involves the use of a specific frequency of radio energy, known as the carrier frequency, plus other adjacent frequencies (sidebands), which become involved when the carrier is modulated. The group of frequencies used by a given transmitter is called a channel, and the amount of information that it is possible to transmit through a given channel depends on the width of that channel, that is, the total number of frequencies available within the channel. Since there is an ever-increasing demand for “space” within the usable radio frequency spectrum by many different radio communications services, each service must be content with the minimum channel width and minimum number of channels compatible with the needs of the service. Television is relatively demanding both as to channel width and number of channels. Its 6 megacycle (6,000,000 cycles per second) channel is, for example, 200 times as large as the channel used in the United States for standard (AM) radio broadcasting.

In countries which do not have competitive television systems, the problem of allocation is much simpler since a relatively few strategically located stations can blanket the population with one, or even several, program services. When television was first authorized in the United States, it was assigned to a small group of 6 megacycle channels within the very-high-frequency (VHF) portion of the radio frequency spectrum. After some changes, the number of channels stabilized at 12, and no more room could be found for additional channels in the VHF band. The FCC sought to solve this problem by adding 70 channels in the next higher band, the ultra-high-frequency (UHF). A Federal law requires, since 1964, that all new TV sets must be equipped to receive UHF channels.

Though all 82 TV channels are the same size, 6 megacycles, their position in the frequency spectrum profoundly affects their relative usefulness. It is characteristic of radio waves that the higher they are in frequency, the shorter the distance that can be propagated with a given amount of power. While low and medium frequency waves tend to follow the curvature of the earth beyond the horizon, as one moves up the spectrum into the VHF and then the UHF regionsthe curvature of the earth beyond the horizon, as one moves up the spectrum into the VHF and then the UHF regionsthe waves tend more and more to behave like light, that is, to travel in straight lines to the horizon. Furthermore, the higher the frequency of a transmission channel, the more easily its signals can be blocked off by objects in their path such as buildings, trees, mountains, or even rainfall. In terms of the usefulness of the television channels, this means that the higher the channel number the less desirable the channel from the point of view of obtaining maximum geological coverage. The UHF channels, because they represent such a jump in frequency from the highest of the VHF channels, are markedly inferior to the VHF channels in their ability to provide reliable distant reception and to cope with obstructions in the path of the signals between transmitter and receiver. UHF stations cannot compete even with VHF stations. (American Encylopedia, vol. 26)
ports the Commission's objective promoting multi-purpose CATV operation combining the carriage of broadcast signals, program origination and common carrier services. However, it urges that a compulsory origination requirement, limitations upon advertising and the possibility of a dual Federal-State regulatory system are undesirable. With respect to the origination, or "cablecasting" requirement, it is urged that to compel cablecasting by systems not adequately prepared to undertake it will not advance the Commission's aims, but rather will retard their realization. The petition urges that there is no valid basis for assuming that CATV systems now originating programs do not have a valid reason for failing to do so; uncertainties over copyright legislation and state public utility regulation as well as economic problems related to capital requirements are referred to as obstacles to effective cablecasting.

3. We have carefully considered these contentions, but are not persuaded that either the public or the CATV industry would be better served by deleting the cablecasting requirement. As the petitioner's state, there is no disagreement about the value and importance of cablecasting. Since many systems are now originating, the general feasibility of origination is no longer in doubt, and we believe that we adopted a reasonable cut-off point in limiting the applicability of our rule to systems with at least 3,500 subscribers. The First Report and Order covers this issue in detail. 2/ Including available data on costs, and the initial rule adopted in that document is very broad, permitting great flexibility in cablecasting operations. We have been given no data tending to demonstrate that systems with 3,400 subscribers cannot cablecast without impairing their financial stability, raising rates or reducing the quality of service. We recognize that there are some uncertainties, but these uncertainties have not prevented the inauguration of cablecasting by many systems. 3/ Innovative arrangements are also possible, such as agreements with educational institutions under which a channel is made available for the use of the school which, with its own studio and other facilities, will produce educational, cultural and other programming. The CATV of course would be expected to see to it that local political and other affairs are covered on that or a different channel, but the costs of origination to it would be sharply reduced. We do not see, therefore, why a reasonable requirement for cablecasting should produce less quality originally than would otherwise be produced. 4/ The rule adopted is made in the light of the potentialities of cablecasting and, on our own motion, we are postponing the date when origination must commence to April 1, 1971 to afford additional preparation time.

4. Indeed, we recognize that there is a question of whether we should not go beyond the minimal rule and specify a minimum number of hours for local live origination (as against presenting primarily film). We adhere to the judgment ... namely, that it is appropriate to afford a period of free experimentation and innovation by cable operators: However, there is one development which does require consideration. It has come to our attention that some cable operators simply lease their origination channel to a local radio station, which in turn presents its disc jockey shows over this channel for virtually the entire broadcast day. While the cable operator is perfectly free to enter into arrangements with local broadcast stations during the period of experimentation, the main purpose is to provide an outlet for local expression. As we stated in the First Report, the very existence of "available facilities for local production and presentation of programs..." is a most important contribution to the public interest, since it means that the mayor, the local political candidates, those willing to discuss controversial issues, etc. have a means of access to the television viewer. However, if the channel is unavailable for such presentation because it is leased out to a local broadcast facility for television presentation of its shows, the above purpose is frustrated. We therefore... make clear that the CATV may not enter into any arrangement which inhibits or prevents the substantial use of the cable facilities for local programming designed to inform the public on issues of public importance...

5. Several parties urge that the Commission, in encouraging cablecasting has embarked upon a new course with respect to CATV, which was previously limited to the role of a supplement to broadcast television service. They say that CATV, still founded upon the carriage of broadcast signals, but now encouraged to originate programs independently, will pose a greater threat to the public's continued reception of "free" programs than either previous CATV operations or subscription television broadcasting. The adoption of rules similar to those preventing siphoning television programs from free television broadcasting to subscription television broadcasting will serve to insulate that cablecasting does not merely force the public to pay for what it now receives free. They are additionally warranted here because of CATV's inability to serve the same audience reached by a television broadcast station, and they serve the same purpose of protecting those who do not wish or cannot afford to pay for television. Finally, we believe that as is the case with subscription television, advertising should not be permitted where the public pays directly for the programs... However, we do not believe that cablecasting unaccompanied by per-program, or per-channel charges, presents a substantial threat of siphoning, or that such cablecasting, which we wish to stimulate, should be restricted to one channel or limited to sponsorship by local advertisers in small communities...

7. We note other requests by several parties that deal with CATV on a more comprehensive basis at this time, covering such issues as licensing, whether origination by the CATV operator should be permitted on more than one channel, regulation of common carrier operations, reporting requirements, and technical standards. We are not persuaded that all of these questions need be resolved before we proceed with the basic determinations made in the First Report and Order of October 27, 1969. CATV origination is still in its infancy, and, so far as we know, common carrier operations are still in the future. These various issues are not being forgotten...
THEA: I really brings up a very important question which I guess is the thing that really splits the cable operators. The FCC rules are saying that all cable operators must start operating programs if they have over 3,500 subscribers. (What it is, moved up to April to 1), is now a whole different ballgame. And then you get the theoretical companies in some areas saying, let's not do this, let's just make sure we're getting the right people into the cable industry evolve in such a way that the cable operators become the leaders of channels and operate the hardware, allowing other people to assume the programming responsibility of utilizing the channels, and, thus, giving up control and liability.

BARRY: I think this commission has this in mind. I think they feel that the cable TV operator is going to become the community channel. In your major markets you may get 3 or 4 or who knows how many community TV cable operators, and still not up to now has been running a reception service is faced with the dilemma of now getting into the programming business. That's why I suppose I have my job. I'm a programming person and now I'm a cable person with programming background. My job with the companies I've been with is to program the systems. The amount of money, the amount of talent, the amount of knowledge that it takes to program one of these things is extensive. You have to start from the bottom up. You have to start with a complete local concept. Everybody doesn't do this. We think this way. And I think eventually it evolves to itself. Start with local news, some in-depth news, and weather and sports and things that we know are acceptable to the community—things that they want to know.

PHILLIS: How do you go about finding out what they want to know?

BARRY: I personally run a marketing survey. I happen to be participating in a segment of the community and point blank I ask them, and I ask them in different ways which is the same thing I would do if I was marketing anything else. Because I know I can sometimes ask the right question, and I can ask them a point blank question and they'll tell me what they think they want to hear.

JEF: You have the national broadcast format to kind of clue you in to what you want to see. But there's still the problem of making the community franchise as well as ways of developing programming concepts in the areas of community input. I hope that Whitney has made a donation to Restoration to help them get this franchise, and in turn they might earn this obtain and as a communications consultant. Prior to this I had a number of people in the community trying to help them organize around the concept of cable, trying to see if we could work something out with the existent system. There is already a company in Manhattan that is franchised in the area of the Two Bridges community. There are another Cable-Streets, Inc. that would work something out whereby there could still be some sort of a community set-up within two bridges which the community could get access and control over.

JEF: How many channels are available now in that area?

THEA: I think they have what is presently available which is twelve, and only two others, 6 and 8. The New York City contracts that were signed stipulates that by July 71, seventeen channels will be made available. Actually, my plan was a little more ambitious and the concept that we developed there I think have now seen in the contracts and would now be picked up by individual communities. One of the things that's stipulated in the city contract is that the two franchise operators, Manhattan Cable in the north half of Manhattan, Teleprompter in the upper half, will have to within the next three years subdivide their systems into ten sub-districts giving access to each one of the sub-communities, setting up some sort of origination facilities in each one. So the concept I was developing in Two Bridges is now inherently a part of the contract. However, how that is going to be implemented is another question: Who's going to pay for the origination facilities? We'd like to have really small, really local people really go in and program on their own. Will the money really pay for programming of their own? Let me give me some further background to this question. There were hearings held on July 23. They were determined whether to have those two franchises and Teleprompter and Sterling, would indeed be awarded these two franchises and given the exclusive rights to operate cable in Manhattan. I think they are probably not going to be on this form. The operators in New York City have to decide whether they want to be independent or whether they want to be part of a major company. Ultimately it is going to be a decision of the终极 operator.

BARRY: I think they're all in line to what you're saying. Let's back it up a little. That could have been the point. I don't think the business today is revolved around that fantastic money machine theory. Maybe it appears that way.

JEF: Our influence and your influence, that is bigger money, bigger influence, the importance of the money, the impetus to make even more money...

BARRY: Well, anyone who is in business is in business to make money. How much money, I guess is how good a management you have with the investment you put in...

JEF: If you're a public stockholder you want to make more and more. If you're a local man owner you could be happy at some point.

BARRY: It's all well and good to yell and scream about profits but let's get back to the programming considerations and without this, industry must consider the local, the level, and the programming from the cable operator's point of view do one of two things. One, it must serve the viewer or he won't look at it; and the cancellations of what I consider some cases, be gone down the drain because viewer response through some measurement has not worked. The other 11 channels on there are what the majority of the people in the town are looking at. Now the programming as I'm saying, how can you come to a local programming concept doing nothing but local programming you have got to find out to what that local programming can be. Well, it's limited to the point of view of a certain area, an educational area, your sports area, or an entertainment area. Out of those five areas every town has certain amounts of these things. How do you take these from the town and turn them into meaningful programming? We're the viewers, and I'm sure something else as well as watch it compared to the Beaver Hhill, Bonanza, or NFL? You're up against a big thing here.

THEA: What is the question do you program to get the masses away from NFL, directly at the people that really care about it?

JEF: Well, let's say you have something on the sewer construction of Ridge Road, but there are going to be fifteen Ridge Roads so that you've touched quite a few people. Programming is a lot more meaningful programming so that the viewer will want to know? They want to know about the neighborhood programming concept, for getting the money, it takes people and time to put together meaningful programming in addition to running a normal business. We can't do both. In small communities, it is very easy to do this. We can go to the Junior Chamber of Commerce, who are very active people. They're young, aggressive, they have divisions which make it their business to know what's going on in politics, what have you. And we must give both sides hearing, whether it's the JC's on one side or the League of Women Voters on the opposite side. This is one way to do it. We do involve these people.

THEA: There are a few points I'd like to make. Everything you are saying is traditionally what most people have thought of television. You're talking about "we", mean "we" the cable owners, "we" the people who make the programs, the creators, the people who have the right point of view without the editorial." We. Now according to your line of thinking, I think you're right—if you're going to use this as your means or your staff. It's very difficult. You need a great deal of money. You want to control the computer, and what he can see his revenue, and what he puts into program-

JEF: The FCC ruling is saying, let's back it up a little. That could have been the point. I don't think the business today is revolved around that fantastic money machine theory. Maybe it appears that way.

THEA: One of the reasons that broadcast TV has taken the form it has that it has a limited spectrum. It is the FCC when it is through with a certain city, etc. what are your problems, what are the issues that you consider to be important? I understand that the cable operator has the problem of worrying about what is going to be the future of all cable systems. We've seen many markets, but there really is another way of going about this. What if you had a system in small communities that have had a terrestric take in the community, not the broadcast property, or the cable TV Better, if your desire is to promote the community, to make it a better place to live, to fight air pollution. I know many guys like this all throughout the United States. I've also known in these communities, the League of Women Voters, who spend a great deal of time working on issues, and to counteract them you've got JC's who work very hard to do the same thing and when you've got a really hot issue you have groups banding together getting mad, doing something to table in line to the community. But even in your choice of these people you have already made a statement of what is representative of community. There are a tremendous number of community groups that I think should be heard and understood and so I don't just mean the Panthers and the Young Lords, either, though of course, those, too, by young people, old people, people who you don't necessarily categorize, where are the people that are making the decisions that are being made, where is their input?

BARRY: I think you're quite right in that as technology develops and broadcast opens up, some of these problems will resolve themselves. There are 54 channel systems that are now going in, 24 two-way area, one to Worcester, Mass., my hometown, and there's no conceivable way that that guy can fill half of those channels with anything. Within five years, with the microcomputer, with devices, there's a lot of hardware available that has no software to go into it. A lot of cable stations are going to say, "take it here's a $1500 portapak that you can rent for $10 a day, come over, stand on line, and I'll put this over the TV set and you'll have a better system than you've ever had before and you'll be on the air. The beautiful thing about cable is that it is unlimited potential. You're talking about a system which can have 54 channels. Potentially it could be even more but then there's the reality that there are those places where more channels are not going in, or where there's limited, New York City being one.

BARRY: Please remember that five years ago there were only five signals.

JEF: Space, out 5 years.

THEA: Even, indeed, if there are 54 channels there are a lot of other things. A cable operator isn't just a transmitter of programs, he is making relations to those other channels, and we know that there are potentially many other users—computer hook-up, facsimile, reproductions, etc. Theoretically, idealistically, I agree with you. In all these things, everybody come, say it, do it, yours. However, how will this be implemented? Will it be used for more com-
ARTIE: cable, even the medium markets are not the same as the

JEFF: build this plant and you maintain it from day number

money particularly, money. It's not money that you

casting, sure you can get hurt, but there's a direct

being in business becomes questionable, and this

ifyou don't provide the service you lose the faith,

ly, but to provide a service that must be provided...

BARRY: everyone has altogether.

JEFF: come along and buy them out? Also the rationale

enormous amount of money, and who would really

be half of the franchises being granted for 20 years is

know it was millions of dollars. That's a lot of money

contracts would be awarded. These were 20-year

awarded these two franchises and given the exclusive

basis. The first programming concept which we've

tried to come up with is to provide, if only a half

hour a day—I know that sounds ridiculous since on

radio we did 18 hours a day, 7 days a week.

Cablecasting, you can't really do that.

JEFF: Can you say why?

BARRY: We're not really equipped to do it. First

off the equipment is not reliable enough to allow you
to provide it. Secondly, to bear the cost of doing it.

The cable operator can't really do that even if we

have the permission, which the Federal Commission

does we do, to go out and get commercial revenue to

help support this kind of programming. It costs money,
to do this at some point. I planned this to be a

reception service, a Monday through Friday over the

counter business, with men who work 24 hours a day

if need be if equipment breaks, or to keep it

maintained, but not to take on overhead and reception

reps and go out and do simple programming.

The nature of the beast at this point is a limited

service.

JEFF: Which is not to say that it might not work.

It's just to say that's the status quo.

BARRY: That's correct.

THEA: There's no question that it's going to take

a great deal of money not only to construct and

operate the cable stations, and operate them properly,

but to provide a service that must be provided.

We all know that no man builds a business as big as

it, if you don't provide the service you lose the faith,

and once you do that then the whole premise for

being in business becomes questionable, and this

more so than any business I've ever seen. In broad-
casting, sure you can get hurt, but there's a direct

relationship here of providing a 24-hour continuous

service that demands a great deal of expertise and

money—which, really, it's not money that you can

hope to get by having tremendous sales. You

build this plant and it does not go away, one

regardless of how many people are connected with

it. You definitely must have capital first, then the

sales later to pay back that capital or that investment
goes down the drain, which is a little different from

some others.

JEFF: But there is enough history in the cable

industry to tell one that the risk of sales not

following investment are low.

BARRY: Except in the major markets.... and even

in the medium markets, you don't get as much as

the small hometown markets and it's all based on

formulas we, the industry, have been able to

formulate over the years—a particular market gets no

television, cable television brings it, the demand is

great, everybody wants television. They want ade-

quate service, at least, and this is why cable television

was born.

ARTIE: How would you describe the service as

you are delivering it today?

BARRY: Basically a reception service. It's becom-

ing a program service—the new rules are going to turn

the industry into a programming service, but it is

basically a reception service. They have and will

probably have to continue to be.

get some kind of warning and then you

Let down. Fine, it's a big deal, but there are

things there that do interest the programming

person and it's up to the programmer to find out.

JEFF: Can you describe the kind of program-

ning you're doing now which we've talked about

before. Granted it isn't revolutionary, but it is

informative.

BARRY: There are three communities I've been

actively involved with on a day to day operational

basis. The first programming concept which we've

tried to come up with is to provide, if only a half

hour a day—I know that sounds ridiculous since on

radio we did 18 hours a day, 7 days a week.

Cablecasting, you can't really do that.

JEFF: Can you say why?

BARRY: We're not really equipped to do it. First

off the equipment is not reliable enough to allow you
to provide it. Secondly, you'd bring in more of the

national type of programming that the other 11 stations have. If it

doesn't work, you have to go out and get commercial

revenue, help support this kind of programming. It costs money,
to do this at some point. I planned this to be a

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ing a program service—the new rules are going to turn

the industry into a programming service, but it is

basically a reception service. They have and will

probably have to continue to be.
THEA: You're talking about feedback now, I think that the fact that radio stations are utilizing this now, and are doing well, which they are, is a statement about what people are asking and wanting in terms of media, just as they're asking for more participation in the level of society. However, that goes to the extreme—it's the total control. It's still somebody else programming the show and making decisions as to whether the show should continue to be carried. Usually the phone calls are screened, and maybe for good reason, but it does bring up the issue of professionalism and that the use of control and choice is still in the hands of the operator.

BARRY: A common carrier would not do that. In the proposed rules the common carrier will be encouraged to do that. Maybe this is the answer to it. From our point of view the problem is that the operator is honestly to try to do a job at the community level and see as many different points of view are put on the air as possible. And so far in communities we've worked with the public has worked fairly well, and I've got as far as getting press as well as the real problem was in becoming a very touchy situation. It got very wild for a few hours, and I wasn't sure I'd get out alive because I was the programmer and the vivisection, which was a very touchy situation. It got worked with it does work fairly well, and I've got as far as getting pros and cons in four ways on 10 people.

Jeff: Changing the subject a bit, from a straight financial point of view do we not think that the top 50 markets, in the short term, are going to provide as much success as some investors feel today, whereas, through the development of fairly small, rural towns of 25-30,000 populations, and the bottom 50 market, cities that don't have multiple network and all the available programming, in terms of cash flow they are going to be the most successful.

THEA: What I'm saying is that the visual has now in terms of television as opposed to the print medium, it will indeed change the way in which people think. There is a sense of being with the visual. And that is the real world. If those guys who are making the decisions about what you can see and what you can do are tuned into the view of reality as being destructive of many of our systematized things that they are functioning in, I'm not sure you're going to get people dropping levels, no less broadening into new areas of what you can and can't see. For example, Agnew might say—ok, keep it in the New York Times and not in the television. How then are human beings in this society function on that level of abstraction, in that they'll deny it, or it'll shake them up a little bit, but if you put it on television or CATV it'll present major problems because that's shaking something and saying that this is the real world.

BARRY: I've got to leave. Is there anything I can do in addition to this—you say project, go ahead—is that if you begin to realize the impact that the visual has now in terms of television as opposed to the print medium, it will indeed change the way in which people think. There is a sense of being with the visual. And that is the real world.

JEFF: I also think that a new impact on the scene is the home cartridages and cassettes, video recorders. If its successful, and there's a tremendous amount of capital being poured into it to almost force it to be successful. I see that video recorders reach the homes in the next few years which seems likely, the amount of video programming, software, that's going to be around will be immense compared to what it is today, and the broadcasters have no possible way to absorb all of the activities and allow people to experience all these different things.

THEA: Let me digress. The cable television idea is that freedom has to happen if in fact it works. Laws are fine. But make it work. We're trying to reach the cable operators. Explain to them the methodology. Show them some examples of things that have happened. Show them how it might be profitable. Put them in touch with Foundations that have money, that can fund the equipment to begin with, to start doing the things. If people like it, they'll pay for it. They're going to ask for more. They're going to write in, call up, look for equipment, and it's going to happen if in fact it works. Laws are fine. But make it work. The system as fluid as possible. Allow it to happen—as much money, as much exposure, as possible, and see whether or not our vision, our idea works.

Jeff: How do we ourselves get across what we want? How do we influence those who already have access? They'll both happen side by side. The second one already exists.

BARRY: I've got to leave. Is there anything I can do in addition to this—you say project, go ahead—is that if you begin to realize the impact that the visual has now in terms of television as opposed to the print medium, it will indeed change the way in which people think. There is a sense of being with the visual. And that is the real world.

THEA: Let's take a look at broadcast. Every broadcaster must do a certain amount of public service programming, which is a control of when and where he does it, so he puts it on at all odd hours—there's a Sunday morning ghetto hour—and he does it because he's made to do it. All I'm saying is that right now when laws are being made around the new cable industry, let's try to construct it in such a way that access is guaranteed to people. I do think that the operator will be able to afford it, and I've discussed this with cable operators. They certainly will be able to afford it if they are left those other channels. And also it's going to be less expensive for them if you allow them to lease the other channels, etc., or maybe do programming on one channel.

THEA: There are many fronts you have to operate on. On the one hand, having Paul and many other people going into communities that is not going to be adequate if you're not going to have the laws to back it up. They have empty time now. They'd be crazy not to give it to you. But you have to take people where they are. You are not going to change information systems that quickly, nor are you going to change people's ability and ways of taking information in. People now are programmed when it comes to television. You are not going to change their attitudes towards television that quickly or radically by introducing new types of programming (such as the kind of thing that Raindance would do) on a channel in a given area. That, in and of itself, will not prove to cable operators this is a great thing. And because what they're thinking about in reality is what's sexy, what can I put on my system that's going to make people subscribe? The Knicks and Ragers, that's sexy man, that's what people will subscribe to. People look at television and they think that's entertainment, as escape from reality. They have never experienced television in any other way. All I'm trying to do is to get this window open, to get that cable system and who need to be convinced that this is indeed what the people want to see.
JEFF: Barry, maybe this says how big cable is going to become the dominant form of information, and if information is a primary commodity, like food, and necessary, and people will express this to the powers that be, this thing could become a monolithic system. And in fact the concept may be a political one.

BARRY: Don’t forget that the cable TV situation itself stills and starts in every neighborhood.

THEA: But that’s not going to last for very long.

JEFF: Look at the merger between Teleprompter and HBO. How many systems throughout the country do they operate now?

ARTIE: And think about when you have micro-waves and satellites on a common carrier basis.

STEVE: I’ve never heard this CATV stuff before, but it seems to me you can draw distinction between information that’s going to be put across networks that are changing the face of something that exists in this country, and other kinds of information that are going to be incompatible with the existing structure and systems of this country. If you don’t you can’t do something about something that you can’t do, but you can do something about something that you can do.

ARTIE: You’re going to have to have private citizens accessing common carriers, who is a part of the system, let’s say the private entrepreneur who put up the system to begin with, who is at least going to be in a position of being able to control the system. Who comes on the bus, who doesn’t come on the bus, in the area of information. So it’s not really necessary, if you’re going to have a full interchange of ideas, if you’re going to have a system where you’re going to present viewpoints and information that have never been presented before, to totally take it from the hands of the group who is putting up the capital, and functioning in the profit making mode, or any monitoring mode? Don’t you need the community to say you can do something about something because they think their views should not be presented for whatever reason, or anybody else? Don’t you have to build in legal restrictions on that group who is doing the monitoring in the first place? Don’t you have to take the power out of their hands?

BARRY: As long as the group who owns the bus is protected from those who drive the bus.

JEFF: What you’re talking about is complete cultural freedom. I don’t think the culture can handle that. That amount of information, of free access, will be overwhelming. Doesn’t the concept of resistance is ‘Let’s do it slowly.’ Otherwise the whole thing may go zap.

BERYL: How do you insure that free access is implicit in the cable system? How do you avoid the temptation of giving information over and over, but never providing something if you want them to purchase and subscribe to your service. Traditionally, the cable company that has already been entities, on the people, on the people, or else they have provided importation of distant signals. In Brooklyn you don’t have either one of those problems. There is not a reception problem in Brooklyn. People are not going to subscribe to cable or be able to get a channel because it was not available, in that New York market you have a tremendous number of channels available to you now. So you’re going to have to provide some kind of a service if you’re going to have people pay you. Conceptually, the way this whole idea of cable has been formed is that the.B.

THEA: The Bedford-Stuyvesant project would be owned by the Restoration Corporation which is representative of the community, and the profits which are made off the venture would feed back into providing additional services for the community. It is going to have more community ownership because profits are going to feedback. The thing that’s really going to make a difference is that no television outlet in this country has ever had black ownership, and very, very often we know that those who own do control, before we were talking about a very different kind of system, but given this present system, as it exists, ownership determines control, therefore, the whole concept behind the Restora- tion’s proposal or hoped for actualization is to have ownership and control within a Black community so the Black man’s needs would be best represented. He would have programming that would speak to the needs of the Black people, in the community would have more access to the system than they do now. Reality and the problem of the system, however, is who’s going to buy it? You’ve got to come up with all kinds of money to put the system in—its tremendous expensive—and you have to give people something if you want them to purchase and subscribe to your service. Traditionally, the cable company, that has already been entities, on the people, or else they have provided importation of distant signals. In Brooklyn you don’t have either one of those problems. There is not a reception problem in Brooklyn. People are not going to subscribe to cable or be able to get a channel because it was not available, in that New York market you have a tremendous number of channels available to you now. So you’re going to have to provide some kind of a service if you’re going to have people pay you.

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<th>Address</th>
<th>Phone Number</th>
<th>Subscribers</th>
<th>Carries Capacity</th>
<th>Affected Stations</th>
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<tr>
<td>1</td>
<td>Mission Cable TV</td>
<td>San Diego, CA</td>
<td>4110 Mission Ave</td>
<td>619-232-2800</td>
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<td>Allentown, PA</td>
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<td>Atlantic Cablevision</td>
<td>Atlantic City, NJ</td>
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<td>8,000</td>
<td>8,000</td>
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<td>4</td>
<td>Perfect TV</td>
<td>Harrisburg, PA</td>
<td>238-2933</td>
<td>7,000</td>
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<td>Elmira Cablevision</td>
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<td>734-2261</td>
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<td>6</td>
<td>Chippewa Valley Cablevision</td>
<td>Wausau, WI</td>
<td>715-261-8818</td>
<td>5,000</td>
<td>5,000</td>
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<tr>
<td>7</td>
<td>Greater Lafayette Cablevision</td>
<td>Lafayette, IN</td>
<td>765-748-3141</td>
<td>4,500</td>
<td>4,500</td>
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<tr>
<td>8</td>
<td>TV Cable Co.</td>
<td>Ft. Walton Beach, FL</td>
<td>850-475-4208</td>
<td>4,000</td>
<td>4,000</td>
<td></td>
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<td>9</td>
<td>Lima Cablevision</td>
<td>Lima, OH</td>
<td>412-7045</td>
<td>4,000</td>
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<tr>
<td>10</td>
<td>Cleveland Cablevision</td>
<td>Cleveland, OH</td>
<td>216-247-4200</td>
<td>3,500</td>
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**CABLE SYSTEMS MOST LIKELY AFFECTED BY FCC PROGRAM ORIGINATION**

<table>
<thead>
<tr>
<th>Rank</th>
<th>City</th>
<th>Cable Company</th>
<th>Address</th>
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<tbody>
<tr>
<td>1</td>
<td>Jackson TV</td>
<td>Jackson, MS</td>
<td>601-732-5333</td>
<td>9,000</td>
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<td></td>
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<tr>
<td>2</td>
<td>Tri Town Video</td>
<td>Endicott, NY</td>
<td>607-292-4400</td>
<td>8,000</td>
<td>8,000</td>
<td></td>
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<tr>
<td>3</td>
<td>Cold Springs Video</td>
<td>Chickasha, OK</td>
<td>405-224-4535</td>
<td>7,000</td>
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<td>4</td>
<td>Total TV</td>
<td>Jemison, AL</td>
<td>205-462-4411</td>
<td>6,500</td>
<td>6,500</td>
<td></td>
<td></td>
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<td>5</td>
<td>Owensboro Cablevision</td>
<td>Owensboro, KY</td>
<td>270-627-8600</td>
<td>6,000</td>
<td>6,000</td>
<td></td>
<td></td>
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<td>6</td>
<td>Port Huron Cablevision</td>
<td>Port Huron, MI</td>
<td>586-862-4224</td>
<td>5,500</td>
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<td></td>
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<tr>
<td>7</td>
<td>Florida TV</td>
<td>Orlando, FL</td>
<td>407-708-7000</td>
<td>5,000</td>
<td>5,000</td>
<td></td>
<td></td>
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<tr>
<td>8</td>
<td>Central City Cablevision</td>
<td>Savannah, GA</td>
<td>912-354-4333</td>
<td>4,500</td>
<td>4,500</td>
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**CABLE SYSTEMS LIKELY AFFECTED BY FCC PROGRAM ORIGINATION**

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For more detailed information, see Televiston Digest, the Factbook's associated authoritative publication. The television Factbook may be kept up-to-the-minute each week through subscription to Televiston Digest, 2025 Eye St. NW, Washington, D.C. 20006, phone: 202-983-3301.
THE POTENTIAL IMPACT OF THE LASER ON THE VIDEO MEDIUM

By Lloyd Cross

In 1954, Charles Townes, working at Columbia University in New York, demonstrated the laser and its application of this concept. By constructing a laser, or a laser-like device, Townes was able to produce a beam of light that could be directed and focused on an object with great precision. This was a major breakthrough in the field of light technology and paved the way for the development of new technologies.

In 1959, the first laser was developed by Theodore Maiman at Hughes Aircraft Company. This laser was the first to use the laser principle and was used to demonstrate the potential of laser technology.

The laser has since become a powerful tool in a variety of fields, including medicine, communication, and entertainment. In medicine, lasers are used to treat a wide range of conditions, from cancer to vision problems. In communication, lasers are used to transmit information over long distances, allowing for faster and more reliable data transmission. In entertainment, lasers are used in stage shows, concerts, and other events to create stunning visual effects.

The potential impact of the laser on the video medium is significant. Lasers can be used to create high-quality images and videos, allowing for greater detail and realism. In addition, lasers can be used to create interactive and immersive experiences, allowing viewers to engage with the content in new and exciting ways.

Lasers can also be used to create new forms of media, such as holographic videos. These videos use lasers to project images in three-dimensional space, allowing viewers to see and interact with the content in a new way. This technology is still in its early stages, but it has the potential to revolutionize the way we consume and interact with media.

In conclusion, the laser is a powerful tool that has the potential to have a significant impact on the video medium. As technology continues to advance, we can expect to see even more exciting developments in the use of lasers in the media industry.
The existence of the laser at least lets us know that the above numbers by a factor of ten thousand which brings had a capability of a 10^9 cps bandwidth, which reduces all people in a comfortably lightened environment.

Prior to the laser, the highest frequency coherent oscillator had a capability of a 10^9 cps bandwidth, which reduces all the above numbers by a factor of ten thousand which brings information transmittal back into the problem area of carrier frequency assignments, interference, limited number of channels and all that bullshit we presently have to contend with. The existence of the laser at least lets us know that that particular bullshit will be gone forever, with the advent of the first economical optical transceiver equipment.

Consider, for example, a possible future in which millions of low cost mass-produced optical transceivers are available operating on one optical laser wavelength which, when pointed to the sky, day or night, rain or shine, anywhere in the world, would pick up scattered optical carrier waves from a few synchronous satellites which could potentially contain the equivalent of one million continuous open video channels. (A tiny computer would be required for fine tuning.)

(Since there are extensive, but not insoluble, problems in the area of optical cabling and atmospheric optical transmission, there will probably be an intermediate period of microwave transceiver equipment in the near future.)

In terms of information transmitted by stored information, tapes, cassettes, holographic cassettes, etc., the laser will again supply the technology to reduce the cost and volume of storage equipment to a level such that those materials can be considered to be virtually free.

Consider, for example, a possible future where in a small holographically coded plastic coin, say the size of a quarter, would be dropped in a slot in a small holographically coded plastic coin, say the size of a quarter, would be dropped in a slot in a one hundred HOURS.

The above examples are complete fiction, without laser technology. Of course, it goes without saying that the above linear projections will probably not evolve exactly as stated, but some equivalent thing can happen with the use of the laser. The laser comes from beyond the year 2000. We have the laser N O W.

But what can we do with it NOW?

A four color krypton laser would produce a bright, total color image in which line resolution could be reduced to that of the finest commercial monitor, if desired. Further, the direct laser beam could be scanned at lower rates to achieve visual effects completely impossible with a conventional video projector pack, as in the laser projection of sound right now.

Consider for example:

A reasonably priced laser video camera which would be virtually independent of environmental lighting conditions. The Perkins-Elmer Corporation has built an experimental prototype of such a device which can record bright video in complete darkness, but it is far too expensive for the typical video artist. A development and design project could produce low cost laser camera within one or two years, again the questions of time, cash and return on investments need answers, but it could be done--NOW.

Consider also:

Given stereo information from two conventional video cameras, it's possible that a laser projector in combination with a holographically etched screen could produce 3-D stereo projection video without the use of polaroid glasses or other physical encumbrances. This technique, again, is really feasible only with a laser projector and it is possible NOW.

And, consider still further:

Using a 360° pickup system with a conventional Vidicon camera system, and a 360° overhead laser projector scanning the recorded video onto a circular wall, viewers would receive a complete 360° view of the camera's environment over a vertical angle of 60°. The viewer would be standing or seated in a large circular room seeing in all directions and having difficulty determining the reality of their environment. Again, given a laser projector, this is possible N O W. Cost, may be one year and another $200,000. Why not, should video stay in the tube forever? I say, let's get it out of there, man, let's see what it can really do for us.

Considering such things as holographic television, mass transference via laser beam, projection in free space without screens and stuff like that, either forget it forever as a totally fucked up idea or maybe wait ten or fifteen years, if we last that long, for some kind of holographic 3-D video. That's all I've got to say about that, right now. I will be willing to discuss these or other applications of or questions about lasers with anyone. Write Lloyd G. Cross, P.O. Box 60, Prince Station, New York City 10012.
FREQUENCY AND FORM

by Vic Gioscia

What I’m doing with my life is building a set of generalizations comprehending how time works. I call the comprehension of the time laws of any process “chronetics”.

I’ve been working at it a “long” time and have done it in some strange places. Like, a dissertation on Plato’s theory of time, which started in ’58 but didn’t come till ’63. Like, in ’65 getting a videotape system installed in a family therapy agency so families and therapists could play back their sessions during their sessions. Like getting headaches trying to transform the laws of general relativity into classroom sociology since 1953, though I hate the math. Like trying to figure out acid time expansion during acid time expansion. Etc.

This rap is about the chronetics of software, in other words, some thoughts on the time forms of current communication events.

As everybody knows, Universe is not a very large expanding balloon with galactic light bulbs interspersed at varying distances. Einstein told us Universe is not a simultaneous assembly of things. Universe isn’t there—in fact—man’s invention of the concept reveals his terror crouching behind a facade of omniscience. Currently, our mythos is that Universe is “really” atoms, (i.e., waves of energy spiralling at light velocity) arrayed hierarchically (i.e., a few is a gas, a lot is a planet, a very lot a galaxy, etc.). Whitehead said the only philosophical mistake you could make (hence the error of every philosophical mistake) was thinking you could simply locate anything anywhere. This “fallacy of simple location” is the intellectual form of man’s wish to evade the terror which would flood him were he to admit the Heraclitus vision that all is flux. The emotional form of this saving illusion is hubris—pride—the myth of individual autonomy. Freud once wrote that the human central nervous system is to be compared to the osmosis process of the cell wall, whose main function is to keep some fluids in but most fluids out. Fuller suggests the inside is the inside of the outside—the outside of the inside of the outside. Laing ponders why some people who spit in a glass of water can’t—can’t drink it. Others can. Recent experiments by Italian physicists, who ran electrons going “the wrong way” against positrons going “the other” both at the speed of light, lead them to believe there’s another whole realm “underneath” quantum atoms which is continuous, i.e., not “composed” of quanta, but of processes.

So, in my view, there is no Universe anywhere, “at” any instant, for there are no instants. Better—there isn’t. Time is. What seems to be happening is a myriad of energy-rates dysynchronously accelerating. Nobody seems to know why there are different rates, or how they change. Recent speculations include a realm on the “other side” of the light velocity barrier wherein “particles” only go faster than light, and, if they slowed down to light velocity would annihilate as in E=mc² (Feinberg). Others, at the Princeton Center where Einstein thought, wonder if there isn’t a realm under the atoms where time “goes the other way, or not at all.”

What I’m trying to show, in mosaic, is a Universe of varying frequencies, in which occasional synchronicities are called communication.

Software, therefore, results whenever dysynchronous frequencies are mediated, i.e., related in some form of temporal harmony. It is not very far from the Platonic vision that the music of the planetary spheres is in proportion to the ratio of string lengths on a lute, to the view which reveals that the fundamental units of software are the chords and rhythms of perception. It is utterly banal to hold that the “bits of digital information” metaphor comes any where near the kind of planetary orchestration man is beginning to compose. This vision can be ecologized by the recognition that software results not simply from passing items of perception associated among human sensors, but whenever and however Universe frequencies are proportioned. Man is not the only Universe function producing software. It is an entirely common event in Universe, and may in fact turn out to be its fundamental process, i.e., how it basically moves, so that, to do it is to be like the Druids at Stonehenge dancing to the rhythms of the cosmos. Groovin’, as it were.

But there’s more. Recent evidence suggests that brain waves can very easily come under deliberate control, that alpha highs can be turned on at will, that autonomic nervous system-endocrine interactions can be accelerated-decelerated consciously, that, in short, electronic yoga is now an increasingly popular research sport. It begins to seem as if experience, not surgery, is the design avenue for deliberate human evolution. All this before the mass availability of mini-laser communications technology, holographic environments instead of rooms/walls of plaster, liquid crystal read out systems, etc. etc.

So, it’s time to ask—what are the chronetic laws of that accelerating process of which electronic software is the current mode? By this I do not mean “how soon will the matter transmitter be invented” or “will lunar language finally substitute Einsteinian categories for Aristotelian ones”. Such inquiries are an exercise in linear prophecy only, necessary but not sufficient. I’m more interested in temporal design and its prerequisites.

For example, sociologists have unwittingly placed at the foundation of their game the notion of “expectation”, by which they seem to mean what Eliot meant when he said the human mind can stand very little reality—raw. People seem to have to know how long a thing will be what it is to know how likely it will stay what it is they can expect it to remain what it was so when it comes by again they can say—ah yes—that big—nothing new (terrifying) there. They want to be able to anticipate recurrence and periodicity, so they can generalize, and say, oh yes, it’s one of those—I’ve seen it before—it won’t hurt me because none of them ever did before. When things (societies, cultures, groups, etc.) change fast, faster than they can be generalized, people experience future shock—they need to experience and generalize faster than they can. When they repeatedly fail, they concludes (generalize) I can’t know what to expect. This hopeless condition is known as despair. Are there ways to accelerate the formation of generalizations which can stave off this despair. Does acid do it? will videotape? How? It will be perceived that these questions are special cases of the more general question: how to mediate discrepant frequencies—that is—what forms of software (generalization—culture) do we require in this temporal myriad we call home.

Surely, a beginning is the creation of a new global network of communications hardware and software, so those who now dance to vastly different drummers can come together in the first planetary synchronous civilization ever to steer spaceship earth’s evolution consciously deliberately joyously, freed of the fetters of national political (i.e. humanicidal) idiocies.

More important, I think, is the work heretofore left to mathematicians, physicists, philosophers, psychiatrists, and other intellectuals—that is—identifying the waves and frequencies of which our experiences are the result, intuiting the laws which govern them, and designing better freer forms in which to live.

For example, a friend of mine set up his hardware so his five year old son could

1) watch Sesame Street broadcast
2) watch himself watching Sesame Street on a second live monitor.
3) make a tape of himself, watching his tape while watching himself on a live monitor watching himself on tape.
4) tape himself with a 5 second delay loop on 1 monitor and try to mimic that so that the second monitor was in synch with the first.
5) play with variable delay loops on both monitors (2 decks).
6) play with multiple variable delay loops and live monitors.
7) varying recording and playback sounds while doing any/all of the above.
Now, some frequencies, after million year evolutionary periods of interacting dys synchronously, have come into a harmony which we call sensation. Air waves and ear vibrations in synch result in our experience of sound. Light velocities in harmony with retinal phot ochemistry result in vision. Rates of neural transmission, when exceeded or un reached, do not result in experience since there are limits within and only within which nerves fire. Overload or underload, outside certain limits, result in nothing. No experience. No communication.

Hence, Fuller says, human "sensory equipment can tune in directly with but one millionth of the thus far discovered physical Universe events. Awareness of all the rest of the millionfold greater than human sense reality can only be relayed to human ken through instruments devised by a handful of thought employing individuals anticipating thoughtfully the looming need of others."

This is probably an overestimate. There is no reason to believe that the tiny region of human synchrony with Universe frequencies which is our band of experience is as much as a millionth, because it well may be that the range of frequencies goes from $-\infty$ to $+\infty$. I have no quarrel with Bucky's adorable naturalism, but the range of options for synchronicity may be vaster than he has said. So far.

Even if the spectrum is not that large, it serves as a perspective on which to map the tasks of software design. Like Huxley's remark that any good plumber could have done better than god-evolution with the human appendix, it seems to be the case that the human sensory channels are fairly crummy samplers of the range of Universe frequencies. Hence, any software system which sets the outer limits of its responsibility as fostering the synchronicity of present human wavelengths could be guilty of a reactionary nostalgia. Filling in the gaps of the sensory range now is a tactic worthy of admiration, but it shouldn't be confused with the grand strategy, which, minimally, in my opinion, must include not only the design expansion of the realm of human experience, but the design expansion of the range of synchronicities in our local region or universe. Man may be neentropic, but there's more to Universe neentropy than man. How to tune in on that is the larger task. To say nothing of feedback.

It will be objected--this is visionary--idealistic--there are many more pressing urgencies presently at hand. To which a good reply might be if you're unaware of the spectrum you're working in, you're working with unnecessary blinders.

To put the matter differently--the larger the generalization, the more significance (meaning, value, importance) the event. That's why we're interested in Cosmology. That's why we fly space ships. That's why we seek Atman, Buddha, Satori, enlightenment, trip.

For example, a friend of mine set up his hardware so his five year old son could
1) watch Sesame Street broadcast
2) watch himself watching Sesame Street on a second live monitor.
3) make a tape of himself, watching his tape while watching himself on a live monitor watching himself on tape.
4) tape himself with a 5 second delay loop on 1 monitor and try to mimic that so that the second monitor was in synch with the first.
5) play with variable delay loops on both monitors (2 decks).
6) play with multiple variable delay loops and live monitors.
7) varying recording and playback speeds while doing any/all of the above.

Not surprisingly, the boy began asking his father to help him do things that went beyond the design limits of the hardware. To explain why he couldn't, his father began drawing diagrams of multiple feedback loops with variable time loops, which the kid dug on the basis of his experience. Then, this 5 year old started wondering how to design hardware so he could have the experiences he wanted. He had found the limits of the temporal rhythms built into the hardware available to him, and imagined himself beyond them--i.e., temporal design. He wanted more software than there was in his world. I pass over the obvious corollary that he also immunized himself to the information pollution belching from commercial TV. What interests me about such experiments (which we occasionally do at the Center) is the experimental immersion in complex time pools which are not only exciting but architecturally motivating.

A question which bothers everybody in software--Will enough of us get our hands on enough hardware to produce enough software to sustain a new (global) culture in time? That is, can we do it well enough fast enough?

The first half of this question involves ecological recycling--there's an awful lot of good information around which we could share better if only those maverick data banks were set up. After all, it's chronetically silly to shoot tape at light speed then air mail it to friends in London. And, since they own the satellites, all they have to do is charge prohibitive rentals so we can't move our information as fast as we shoot it. So far. They are not gonna rent us time to create alternatives to them.

So, it seems to me, we are going to have to come up with software which is not only good for us but good for them too. That's what global means. We have no choice but to take them with us--i.e., turn them on to the benefits of our way. We're gonna have to go beyond the hip ethnocentrism we built to defend ourselves against them. We can't any longer enjoy being so "far out" that nothing happens. This could turn out to be a fatal underload.

The only choice we have, in my opinion, is to produce software which mediates their (slower) frequencies and our (faster) ones into those which harmonize both of us with the (much faster) vibes of a really global synchronous system. To put it crudely, we have to show the satellite-computer people how our way is better for all of us, that a planetary form is better--for all of us--than a cartel.

I guess my own naturalism is unmasked in the following optimistic statement--somehow the people always recognize a masterpiece, so that's what we have to do. Which is not, in the strict sense, a political, but rather a cultural-aesthetic task.

The dilemma--you can't have a revolution unless your head's together--but you can't get your head together unless you have a revolution--here arises. I'm suggesting that both tasks--solidarity and revolution--are facilitated by broadening the collective imagination with such questions as: What is that process of which industrialism, then automation, then cybernetics are the acceleratively appearing moments? What are the unknown time rules such processes follow? Can we design other frequencies and forms?

I think so. But, as Fuller says--"This means things are going to move fast".

Vic Gioscia is Executive Director of the Center for the Study of Social Change, N.Y.; Senior Sociologist, Department of Psychiatry, Roosevelt Hospital, N.Y.; Associate Professor of Sociology and Philosophy, Adelphi University; Co-editor--International Journal of Social Change, 30 West 60th Street, Apt. 1C, NYC 10023. (Subscriptions invited)
things. The universe isn't "there"—in fact—man's invention of the concept reveals his terror crouching behind a facade of omniscience. Currently, our mythos is that universe is "really" atoms, (i.e., waves of energy spiralling at light velocity) arrayed hierarchically (i.e., a few is a gas, a lot is a planet, a very lot a galaxy, etc.). Whitehead said the only philosophical mistake you could make (hence the error of every philosophical mistake) was thinking you could simply locate anything anywhere. This "fallacy of simple location" is the intellectual form of man's wish to evade the terror which would flood him were he to admit the Heraclitus vision that all is flux. The emotional form of this saving illusion is hubris—pride—the myth you could make (hence the error of every philosophical mistake) was thinking you could gas, a lot is a planet, a very lot a galaxy, etc.). Whitehead said the only philosophical mistake atoms, (i.e., waves of energy spiralling at light velocity) arrayed hierarchically (i.e., a few is a gas, a lot is a planet, a very lot a galaxy, etc.).

What I'm trying to show, in mosaic, is a universe of varying frequencies, in which occasional synchronicities are called communication.

Now, some frequencies, after million year evolutionary periods of interacting dysynchronousy, have come into a harmony which we call sensation. Air waves and ear vibrations in synchrony result in our experience of sound. Light velocities in harmony with retinal photochemistry result in vision. Rates of neural transmission, when exceeded or unreach, do not result in experience since there are limits within and only within which nerves fire. Overload or underload, outside certain limits, result in nothing. No experience. No communication.

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This is probably an overestimate. There is no reason to believe that the tiny region of human synchrony with universe frequencies which is our band of experience is as small as a millionth, because if it well may be that the range of frequencies goes from $-\infty$ to $+\infty$. I have no experience of objects and processes outside this range, but I expect the range to be much wider and that the frequencies of which our experiences are the result, intuiting the laws which govern them, are continuous, i.e., not "composed" of quanta, but of processes.

So, in my view, there is no universe anywhere, "at" any instant, for there are no instants. Better—there isn't. Time is what seems to be happening is a myriad of energy-rates dysynchronously modulating. Nobody seems to know why there are different rates, or how they change. Recent speculations include a realm on the "other side" of the light velocity barrier wherein "particles" only go faster than light, and, if slowed down to light velocity would annihilate as in $E=mc^2$ (Feinberg). Others, at the Princeton Center where Einstein thought, wonder if there isn't a realm under the atoms where time "goes the other way, or not at all."

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If the Greek revolutionaries had organized an individual communications system, most of them by now would have escaped the CIA organized colonies and would probably be fighting in the mountains of Greece. It was known to them that each had his own file in the NATO organized offices. Though the Greek revolutionaries knew this, they didn’t enter their minds what they should do to eventually escape. The first thing the colonels did, of course, through the instructions of the CIA and NATO was to occupy the radio stations and to cut-off the telephone lines. The next step was easy—they got practically every revolutionary asleep in his bed. With the same system they will eliminate all revolutionaries all over the world. It works perfectly, why not use it?

What would happen if the revolutionaries created an Anti-Tech (Technology Against Technology) movement? It would strongly counter the whole system and would paralyse the establishment. For instance, create an Anti-Tech network, Anti-TV network, personal telephone lines, information bulletins to translate the existing news media—i.e., when Nixon said he was not going to attack Cambodia, it should be translated: Nixon will attack Cambodia. Two weeks before the colonels took over in Greece, the New York Times published an article saying that there was no other way for the king to save his throne than to declare general elections. Everything should be interpreted by underground media to mean that the Americans are preparing the public to accept the dictatorship in Greece. It’s very clear that the progress of electronics and technology has changed the way of fighting enormously.

If technology helped in the fight against disease to diminish the deathrate, it also gave enormous power to the ruling classes. It’s very evident that exploring the moon doesn’t only come from human curiosity. The scientists, collaborating with the ruling classes, offered them enormous power. And it’s clear that, unless part of this power goes to the revolutionaries, their existence is just a joke to the ruling powers. For instance, if we had seduced some scientists in the electronic fields they could have created an Anti-Tech machine—let’s say that this machine could distort the information on the stockmarket, it’s evident that it would have completely disrupted it. The same is true or a machine that could distort the waves in important TV speeches of the chiefs of governments and... And for the sake of instantaneous communication, electronic instruments like tape recorders and TV and personal telephone lines should be in the hands of revolutionaries and sympathizers of the movement. Until now, the only instruments that were in the hands of the revolutionaries were some primitive polygraphs and some free radio stations.

It’s absurd to think that the revolutionaries have tried to get modern munitions and didn’t think that technology itself is one of the most important munitions to get hold of...

...Due to the population growth, space diminishes everyday and people in big cities already have very little space to live in per person so that it is more necessary than ever that small spaces be better organized for living. In the near future even the possibility of weekend getaways in the country may be cut-off entirely. What remains for people to do is to organize their homelife more and more. Certain objects can help to create a pleasant environment. But we shouldn’t leave room for illusions here. Big technology is in the hands of the colonels. They are only using it for their own benefit. They will not give a damn about air pollution until it affects their own personal interests and for the time being this is not the case. The same is true for space... which also does not see as if it will be something asymptomatic or near future. Therefore, limited living spaces must be organized as well as possible. They should be equipped with all necessary electronic equipment—possibly independent telephone lines, independent televisions, personal computer TV sets, tape recorders, and esthetically unlimited editions of works which carry revolutionary messages.

To come back to the Anti-Tech we are obliged to analyse the situations and facts. In the last decade more and more artists have been inspired by technology and aimed to use technology to express their ideas. Unfortunately, though some of them touched the bone of the problem only very few... started using technology to fight technology. For instance, Stan VanDerBeek used the teletape to transmit photos, but unfortunately the meaning of those photos is far from fighting the establishment. The only group of artists whom I can mention here who took a stand against technology are the TV artists who exhibited last fall at the Howard Wilson gallery. One of them explained to me his idea of using videotapes of subjects concerning the revolution and other events which usually are not shown by the media. This way of using videotapes could permit the communication of the real events in the underground, and in the meantime allow the artist to make his living through selling those tapes. Of course, this would only be effective provided that the underground would have TV sets available and videotape machines in order to circulate the documentation.

How can an object or an edition of an object carry a revolutionary message? First, the editor should be the right person, one who does not try to brutalize the object. The conception of the artist is aimed to keep production cost down. The artist should probably express his idea from the outset in a simple way, choosing the cheapest means of production so he doesn’t create attrition with the editor (or distributor) of the object. The editor should ask the public or the revolutionary community to finance the message. The object should circulate at the lowest possible cost, the profits going back to the community with some minimum rights to the artist. There should be no special publicity for the artist, and it should be known to everyone that the object exists and circulated in places where everyone can see them.

Some words to the scientists—During the last few years some of the scientists, though they are as much a minority as the artists, started getting radicalized and wondered if they should continue to give their services to create weapons and poisonous gases, especially in America where the establishment is at war with Vietnam. Those scientists should be seriously approached by the revolutionaries and their help asked, especially those scientists involved with electronic technologies. Colleagues, scientists, engineers, editors of technical journals should talk to the right people, and themselves be editors of technical journals. A few facts should be presented on a thin plasticscreen containing microscopic bubbles of different gases (one for each of the basic colors) which will provide a high definition color picture according to the variations of electrical potential across each bubble. This is being called a “plasma screen.”

The technology has also been developed to plug these wireless videophones into film printers, AV tape recorders, xerox and linotype machines. Thus, for a cost comparable to a bottle of beer and a pizza, a person could transmit the copy for an underground newspaper from the East Village in New York City to the West Village in Paris. A young film-maker could notify the world that by touching a specific number anyone can get prints of his latest underground films. The possibilities are endless. At first these publications published will be available at our finger tips, with the result that people will read much more and comprehend much more. The world’s computers will be available as public utilities for solving routine problems, and each of us will be able to draw on the collective intelligence of billions of fellow human beings in conducting our artistic activities, such as each nerve cell in the human cerebrum draws on the collective intelligence of billions of fellow nerve cells. ...
X-RAYS
by Don Ward

"...To protect the public from exposure to dangerous x-ray levels, Congress has charged the Department of Health, Education, and Welfare (HEW) with the task of formulating regulations influenced by the recommendations of the National Committee in Radiological Protection. For color television receivers, the recommended limit of permissible radiation is 0.5 milliroentgens (mR) per hour, when integrated over an area of 10 square centimeters and when measured at a distance of 5 centimeters from any portion of the television receiver cabinet.

Before discussing the possible dangers, remember that it is almost the unanimous opinion of the various investigating committees, that there is no dangerous radiation from any current model receiver when it is correctly adjusted, in good operating condition, and operating on a normal voltage power line.

Many scientists have the view expressed by S.P. Wang of the Rauland Corporation. He states: "The radiation level from assembled receivers has been measured both under normal and abnormal operating conditions, the exposure dose rate is close to the background due to the natural environmental radiation."

"...X-rays are electromagnetic energy, differing from other forms of electromagnetic energy mainly in frequency or wavelengths. All X-rays are characterized by their ability to ionize air or other gases and tissues. This is the characteristic that makes them dangerous to humans. Radio waves are measured in meters or centimeters of wavelength, while the light wavelengths are more conveniently measured in angstroms. But the wavelength or frequency of X-rays is measured in angstroms. The energy or wavelength and frequency of the resulting X-rays are determined by the voltage that accelerated the electron. The result of these cases resulted from excessive high voltage. Replace all "weak" high-voltage rectifier tubes and regulator tubes, since gas and/or poorly aligned electrodes in the rectifier greatly increase radiation from the rectifier, and since reduced emission and/or transconductance of the high-voltage regulator increases radiation from both the regulator and picture tube."

Check all components of the metal high voltage cage. This cage not only protects against accidental shock hazard, but shields X-radiation emanating from the regulator and rectifier.

"...Surveys conducted by several interested agencies have found hundreds of receivers emitting radiation in excess of the established "safe" limits. In almost all cases, the situation could be corrected by restoring the receiver to its original condition with the replacement of substandard tubes and components and the correct adjustment of high-voltage controls. While there is little difficulty in guaranteeing that the receiver leaves the factory in "safe" operating condition, there is at present no method of insuring that this condition will be maintained in the owner's home during the life of the equipment."

Manufacturers are, therefore, turning their attention to the development of "fail-safe" circuits.

"...Radiation is produced when electrons at high velocity strike a target and give up their energy as X-rays. It follows that the energy or wavelength of the resulting X-rays are determined by the voltage that accelerated the electron. The resulting rays are then measured in terms of "electron volts." This unit is the energy required to move an electron through a potential of 1 volt. Thus, the primary radiation generated in the TV receiver has energy values peaking around 25,000 electron volts (25kV). Unfortunately, our situation is not quite as simple as it might at first appear. When X-rays penetrate a material, some of their energy is absorbed by that material being penetrated by the radiation, an interesting situation occurs. Regardless of the energy level of the X-rays entering a material, much of the emerging energy peaks around a discrete energy value that is characteristic of the particular absorbing material."

"...Since the danger of radiation comes from its ability to ionize air or tissue, the energy distribution of a particular flux becomes important. The more direct and in the center of the ionizing ability of any particular flux of radiation would be to measure the current flowing from a calibrated ionization chamber located in that radiation beam. Unfortunately, this requires the accurate measurement of currents as low as one millionth of a microampere. Obviously, this type of instrument is both delicate and expensive."

"...It is hoped that such instruments will be available in the near future." (For taking readings.)

excerpted from a copyrighted article which appeared in Radio-Electronics Magazine April 1970.
**TIPS FOR USING PORTABLE HALF-INCH EQUIPMENT**

(Information from Parry Teasdale, Videofreex, New York City)

**THREADING**

Threading is the first step toward making a videotape.

Make sure the machine is turned off and there's no whirring sound coming from the heads.

Make sure your deck is in the STOP position besides being OFF—those are two different things. If you leave it ON—in a motor position—you'll have a chance of threading wrong.

The heads spin at a high rate, if they're still moving when you're threading, the tape can become caught and damage the heads and/or tape.

Check the threading diagrams.

The equipment referred to directly in most cases is Sony AV Series.

Watch tape coming off and going on to take up reel to see that it's moving smoothly and regularly. If something goes wrong put machine in STOP and wait until heads stop spinning and then try to correct error.

A lot of times the tape will sit on the edge of a roller—you've got to watch and see that it's moving smoothly.

The last thing to check your threading is put it in play—watch the tape path. Look to see that it's moving smoothly.

Put machine in play—the AV machine is marked Forward FWD—the CV and any portable deck without playback put into record or "Standby" and Record.

These machines are fairly tolerant so that you don't have to worry a lot if you make a mistake as long as you correct it fairly soon.

The first thing you should check when something goes wrong is the threading.

**BATTERIES**

Check by putting record lever into record.

They usually last 30 minutes. You can count on good strong power for no longer than that.

The battery meter does not register in rewind.

Old batteries from CV can be adapted to work with AV series.

The instruction book is very clear about how to insert the batteries in the back of the pack.

If they're charged simply put the machine in play.

The AV model has two batteries that put out 12 volts. The old deck (CV model) uses the same batteries but in a different configuration.

There are two ways to tell when the batteries are going. One way is the battery charged meter on the deck. The other is when you can see the picture start to flutter (in the camera), then it starts to be impossible to focus. If these two things happen, your batteries are low. Change them or recharge them.

All decks, when purchased new, come with a charger which also acts as a power supply. The deck and camera run off DC power. If you want to use wall current, which is AC, use the power supply/adaptor.

Cine 60 Battery Belt will supply from 2-4 hours of power for portable tape recorder from 12 volt source output. Rechargeable but expensive.

Sony claims to have new more efficient batteries.

"Creeping Crud" tends to get on terminals of batteries and on deck preventing batteries from making contact—you get partial power or no power. Take emory cloth or sandpaper and scrape or brush till shiny.

**MICROPHONES**

The microphone that's built into the camera is an adequate low impedance omnidirectional microphone for unharried rooms. Basically what happens is you get all the background noise which sometimes drowns out the voice you want. You can bypass the camera mike by plugging another mike into the deck with a minijack. (Sony uses these for all audio connections on half inch and can be purchased in any hi-fi store.) When you plug a microphone into the mike input on the deck, it cuts off the mike in the camera. You can't use both. If you want to use more than one microphone, you need a microphone mixer.

**MAINTENANCE OF DECK**

Source: Scientific American, March 1970

**Diagram: Adapting old "gel cell" batteries**

1. Remove top cover
2. Remove battery holder
3. Install new battery
4. Reassemble and test

Most manufacturers make reels so you can only put them on the deck one way.

There is only one side of the videotape you're supposed to record on.

There are two different types of helical scan tape in the market now.

1. Oldest type—is shiny on outside and duller on recording side
2. Newer technology—duller on outside and shiny on recording side

*Creeping Crud* tends to get on terminals of batteries and on deck preventing batteries from making contact—you get partial power or no power. Take emory cloth or sandpaper and scrape or brush till shiny.
Computer Tape: Don’t use computer tape. Computer tape isn’t hard enough to withstand the pressure of impact of the video heads. (What happens to the tape?) Nothing. But an oxide builds up on the video heads. They get very dirty and will break if enough residue gets on them.

Tape is Sensitive To:
1. Moisture—can cause dropout
2. Magnetism (like power supply from Electric Generator, voltage regulator, top of monitor)
3. Heat
4. Touching recording surface at all with your hands causes grease deposits.
5. Mutilation—getting caught in machinery or twisted. Remove portion that is wrinkled.
6. Dust

Problems:
The most common problem is dropout.
The recording surface is coated with an Iron Oxide. As long as the continuity of the oxide isn’t broken the tape is intact and won’t show any defects. If the oxide is disturbed (grease, scraping, crumbling, moisture, etc.) then dropout, which is lack of Oxide on the Tape, results. This shows up on the Monitor as a white line at bottom of screen and moves rapidly to top. There is no way to replace lost oxide—can’t recoat, there are commercially produced dropout compensators which hide but don’t replace dropout.

Any sudden momentum change other than motor function to STOP can cause problems: 1. Tape gets caught under lip of reel—chips oxide. When played will hear a buzzing sound. Should be physically edited out of tape. 2. Can get off tape path and become enmeshed in mechanism of machine. Damaging tape and machine.

Handling:
Don’t handle the parts you want to look at. Make sure your hands are clean. Handling the leader is OK as long as you don’t put it across the heads as it would deposit a layer of oil.

However, the tape is essentially rugged and strong and responds well to strain and tension, and can be rerecorded.

MAINTENANCE OF DECK
Keep the heads clean.

Cleaning Video Heads: popsicle stick with chamois cloth glued to one end dipped in alcohol. Don’t use cleaning stick for cleaning video heads when it becomes visibly dirty.

Other Heads: use cotton swabs with rubbing alcohol.

Tape Guides: clean strongly.

Degaussing (demagnetizing): a degausser can be bought commercially to demagnetize the heads. Cover metal tip with one layer of plastic electrical tape.

Not wise to oil the deck. Squeeks are usually caused by something else.

Handling: Pick deck up with two hands. Don’t pick up by strap which causes banging.

The video heads sit on a bar and spin very quickly. On the tips there are very brittle pieces of metal which can break easily. Don’t slam anything on them.

Track: is a control for playback only. When playing back you’ll see that there’s some undesirable type lines that pop up in the picture—a small horizontal snowstorm which you can get rid of by adjusting the tracking knob (basically a head positioning mechanism).

CAMERA: DON’T POINT THE CAMERA AT A DIRECT SOURCE OF LIGHT

Maintenance: Put the cap on the lens. If you’ve lost the cap, put the lens in the case.

Storing: Don’t store it pointing down. This would cause a residue to fall on the face of the vidicon. There’s a very delicate phosphorus grid and phosphorus screen coating on the front. If the residue falls on that it can score the vidicon. It shows up in the picture as a dark spot. There’s no way to correct it. So, store the camera tilted upward or level on its side, or upsidedown, as long as you don’t point the lens down.

Though the camera is pretty rugged, treat it with care. There are components inside that can be broken.

All the cameras come with stops that block dirt or anything that can get on the face of the vidicon.

Flickering: means the horizontal frequency is off and needs adjusting.

Someone said the cameras won’t work in the Subway.
that it's moving smoothly and regularly. If something goes wrong put machine in STOP and wait till heads stop spinning and then try to correct error.

A lot of times the tape will sit on the edge of a roller—you've got to watch and see that it's moving smoothly.

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Put machine in play—the AV machine is marked Forward FWD—the CV and any portable deck without playback put into record or “Standby” and Record.

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**TAPE**

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There is only one side of the videotape you're supposed to record on.

There are two different types of helical scan tape in the market now.

1. Oldest type—is shiny on outside and duller on recording side.
2. New type—called “dull back” tape is extremely dull on outside and shiny on recording side. The difference is a lot clearer.

(Unconfirmed) There is soon to be (not presently available) a third type made by 3M. A chromium dioxide tape which will cost the same but supposedly has no drop out and the signal to noise ratio is very low. Older machines will have to be adjusted to accept it because it requires a different recording current.

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Diagram: Adapting old “gel cell” batteries

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*Source: Scientific American, March 1970*
MICROPHONES

Much of the information here was obtained from the Sennheiser micro-revue 69/70 and friendly assistance from one of their personnel at Sennheiser Electronic Corp., 10 West 37 Street, New York 10036, Tel. LOU-0433.

The purpose of a DIRECTIONAL microphone is to suppress unwanted sounds. The Directivity is a measure of the relative sensitivity of a microphone for sound approaching it at varying angles. The response pattern varies with frequency. The directivity index is related to acoustical power, and the acoustical power decreases as the square of the speaking distance.

A CONDENSOR or CAPACITOR microphone has two main parts: (1) a condensor element which receives sound waves and transmits to a coil, (2) oscillator circuit which produces high frequency. Audio is transformed to high frequency to amplifier then to another amplifier. Needs current and has a wide frequency range. It has a thin, tightly stretched diaphragm that resonates outside the major part of the audio spectrum so that no one major frequency is given a boost. An OMNIDIRECTIONAL microphone picks up sound from all directions. Uses: Conferences, Record Music, Chorus or Orchestra. However, it may pick up unwanted sounds in some locations.

The UNIDIRECTIONAL microphone is more sensitive to sound from certain directions. Uses: Public Address, Pinpoint Soloists. It can minimize the pickup of background noise and tame reverberation.

The CARDIOID microphone has the acceptance pattern of a kidney and picks up direct, not too distant, sounds. It has a maximum sensitivity in the forward direction with a minimum pick-up of random sounds reflected from the walls of a room. Uses: Pin-pointing short distances—cuts out surrounding noises.

HIGH FIDELITY results mainly from two factors. (1) Range of frequency response (ideally should encompass the whole audio-frequency band—at least 50 to 15,000 Hertz). Smoothness with which the microphone reproduces the various tones.

The purpose of a WINDSCREEN is to lower the microphone's wind susceptibility and, in some cases, its pop susceptibility. Wind blowing over a microphone may produce a bassy rumble. A foam-rubber or foam-plastic windscreens will usually reduce this rumble considerably.

The frequency range of notes on the piano keyboard. The equally tempered scale is used and it is based on the American Standard Pitch (A=440).

SOUND in physical terms means vibration of air particles, small fluctuations of air pressure which spread like waves from a source of sound. A space in which this is occurring is referred to as a sound-field. It is the purpose of a microphone to convert sound waves into electrical energy. The quality of a microphone is its ability to effect this conversion accurately.

The purpose of a MICROPHONE is to convert sound waves into electrical energy. The quality of a microphone is determined by its capacity to convert sound waves accurately. The quality of a microphone depends on how evenly it reproduces them.

The QUALITY of a microphone is determined by its capacity to convert sound waves accurately. The quality of a microphone depends on how evenly it reproduces them.

The FREQUENCY RESPONSE of a microphone includes two characteristics: the range of frequencies the microphone can reproduce, and how evenly it reproduces them.

The IMPEDANCE of a microphone is a measure of its total resistance to the flow of direct and alternating electrical current, as measured in ohms usually at a frequency of 1,000 Hz.

The quality of a microphone is its ability to effect this conversion accurately.

DYNAMIC MICROPHONES

- Cardioid
- Unidirectional

A DYNAMIC microphone is basically a small loudspeaker designed to work in reverse. It consists of a magnet, a coil and diaphragm. The coil moves and produces an inductance; therefore producing a signal that can be fed directly into an amplifier. It needs no current and has a narrow frequency range. Sensitivity to Sound. Good Fidelity. Relatively low cost. Can withstand high sound pressure levels. Problem: Any microphone has frequencies at which its diaphragm prefers to vibrate. The favored frequency in a dynamic microphone usually lies in the middle of the audio range. When the microphone picks up the favored frequency from a sound source, the resonance of the diaphragm will emphasize that frequency and the overall frequency response will be uneven. The trick is to compensate for that condition. This is accomplished with dynamic microphones with greater and lesser frequency response.

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The QUALITY of a microphone is determined by its capacity to convert sounds into electrical vibrations equally well, over the whole audio spectrum. The pitch of a sound, its frequency, is measured in hertz (Hz) = cycles per second. The higher the pitch, the higher is the frequency. The human ear can perceive sound vibrations from approximately 16 Hz up to 15,000 Hz.

The IMPEDANCE of a microphone is a measure of its total resistance to the flow of both direct and alternating electrical current, as measured in ohms usually at a frequency of 1,000 Hz.

Low IMPEDANCE ranges from about 30 to 600 ohms. It permits a microphone to be used with a long cable—from about 200 feet to perhaps several hundred feet.

At HIGH IMPEDANCE a microphone begins to lose treble at cable lengths over about 20 feet.

You can change the impedance on most microphones by making a simple change in a soldered connection, rotating the plug or changing a pair of connections inside the microphone.

All low-impedance microphones have balanced output connections. That means there are two signal wires and one ground wire.

The SENSITIVITY of a microphone is a measure of its capacity to translate acoustical sounds into electrical impulses or a measure of its electrical output for a given sound-level input; the higher the sensitivity, the greater the output for a given input.

HIGH FIDELITY results mainly from two factors. (1) Range of frequency response (ideally should encompass the whole audio-frequency band—at least 50 to 15,000 Hertz). Smoothness with which the microphone reproduces the various tones.

The purpose of a WINDSCREEN is to lower the microphone's wind susceptibility and, in some cases, its pop susceptibility. Wind blowing over a microphone may produce a bassy rumble. A foam-rubber or foam-plastic windscreen will usually reduce this rumble considerably.

PROXIMITY EFFECT When the sound source is within two feet or less of a microphone, there may be a boosting of the bass called proximity effect. Unidirectional microphones often have that characteristic, while omnidirectional microphones do not.

CRISPNESS EFFECT A high frequency response that is undesirable for fidelity in recording music, but for speech it can be a virtue because much lack of speech intelligibility in noisy situations is due to relatively weak high frequency components in sibilants and other consonant sounds.

WIND blowing over a microphone may produce a low, rumbling sound that can be very undesirable, especially if you have an audio system that reproduces low bass well.

POP Certain consonant sounds such as "p," "ch" and "k," when spoken close to some microphones, produce a thumping sound.

HUM can be produced by nearby power lines, by transformers and by some kinds of electronic equipment.

White Cages Represent Directional Patterns

Kidney

Super-Cardioid

Coiler

Ball
WHAT IS TELEVISION?

We know that electrical impulses can be fixed on magnetic tape for later playback. But exactly what impulses or "information" actually get onto the tape in the equipment we shall be using?

When we see a television program, whether live or prerecorded (the two are indistinguishable), the receiver is handling three different kinds of information. These are: 1) the picture, 2) the sound, 3) the synchronization. If we are recording a videotape of this program we shall have to fix all three kinds of information on the tape. Let's take them in order.

The picture we see, of course, is a moving picture; but just as with movies, the motion is apparent, an optical illusion and not real. This motion is produced by the rapid succession of slightly different still frames. In television, according to a standard observed throughout the USA, these frames succeed each other at the rate of 30 per second. In other words, in 1 second 30 individual pictures pass before the eyes. At this rate we are left with the impression of continuous motion.

Television finds it convenient to take a further step and to divide each frame in half. This isn't difficult to visualize. If you go up close to a television screen you'll notice that the picture seems to be made up of a great many horizontal lines. Such a picture can be divided by showing at one instant every other line and the next, all the lines not included the first time. Lines 1, 3, 5, 7, 9, etc., would be shown first, then lines 2, 4, 6, 8, 10, etc.

Another U.S. standard specifies that each individual frame be composed of exactly 525 of these horizontal lines. 262.5 lines would appear during the first half of the frame and the same number during the second, totaling the requisite 525. (Just reduce for 250 line images.) A half picture or half frame is called a "field" as it appears on tape. This is due to the fact that it is "drawn" there by a magnetic "field".

During any given second of a television (program) we "see" 30 frames, each composed of 525 horizontal lines or that each second we "see" 60 fields, each composed of 262.5 horizontal lines.

On tape, the fixed pulses which represent fields are recorded.

Diagram: A Segment of Recorded Videotape

Audio Track: We hear the sound; and it is easier to record than the picture. It is merely striped across the top of the tape longitudinally, with some room separating it from the video tracks.

Synchronization is something we can't strictly see and which we usually don't hear. It's essential to the correct retranslation of the picture, however, and it has to do with the lines we noticed earlier on the screen. Have you ever pulled a loose thread only to find it began to unravel the fabric, left to right and top to bottom? If so, you won't have trouble visualizing how synchronization helps to draw the picture on the television screen.

The television picture is drawn by a beam of electrons directed at a phosphorus screen. The screen glows wherever it is hit and with a brightness proportional to the beam's strength.

Remember that a field comprises 262 or so lines. The beam, to accomplish this, must traverse the screen 262 times horizontally. A clocking mechanism is built into the various components of a television system to trigger these horizontal crossings. In figure 3, they are indicated by solid lines.

In order to keep line 1 from being overlapped by 3, 5, 7, etc., the beam must also drop a small distance vertically as it crosses the screen horizontally. Another clocking mechanism takes care of this. The simultaneous crossing and dropping causes the resulting lines to be slanted very slightly.

During its sweep from left to right across the screen, the beam is "on"—going in the opposite direction it is "off". This is noted in figure 3 by solid ("on") and dashed ("off") lines.

Correlated Points:
1. The three types of information recorded on videotape:
   1) video (pictures)
   2) audio (sound)
   3) sync (synchronization)

2. The same heads tend to build up a residual magnetism from repeated recording and playback. (An electromagnet ideally is supposed to have no inherent magnetism, only that created by the flow of current through it, but this is not achieved in practice.) This residual buildup reduces a head's ability to record or read back electrical signals faithfully. A simple demagnetizing process corrects this problem.

3. Aside from the two items of "preventive maintenance" above, none is required except the occasional cleaning of the camera lenses.
GLOSSARY

AMPLIFIER—An electronic device used to boost a weak signal without undue distortion.

AUDIO-VIDEO MIXER (MODULATOR)—An electronic component of an RF transmission system that combines the separate audio and video signals into one.

CHANNEL—The segment of the RF spectrum to which a television station is assigned or to which a television camera is tuned when transmitting via radio frequencies.

CLOSED CIRCUIT—A system of transmitting TV signals to receiving equipment directly linked to the originating equipment by coaxial cable, microwave relay or telephone lines.

CONTRAST—The range of light and dark values in a picture, or the ratio between the maximum and minimum brightness values. For example, in a high-contrast picture there would be intense blacks and whites, whereas a low-contrast picture would contain only various shades of gray.

COAXIAL CABLE—A special cable designed to carry one or more channels of television signals simultaneously.

CRT—Abbreviation for Cathode Ray Tube, the type of tube used to display television signals.

DEGAUSS—To demagnetize or erase, a Degaussing being the device which does this.

DISTORTION—The departure, during transmission or amplification, of the received signal from that of the original transmitted waveform.


FIELD—one half of a complete picture (frame) interval containing all of the odd or even scanning lines of the picture.

FIELD FREQUENCY—The rate at which a complete field is scanned, nominally 60 times a second.

FILTER CHAIN—One or more motion picture or slide projectors fed through an optical system to the pickup tube of a television camera. Multiplexer is a type of film chain where many projectors combine to supply the image to a single TV camera. Uniplexor is a type where only one projector is used.

FRAME—one complete picture consisting of two fields of interlaced scan lines.

FRAME RATE—The rate at which a complete frame is scanned, nominally 30 frames a second.

FRAME ROLL—A horizontal vertical roll on the picture tube.

GRAY SCALE—White through grey to black shade values on the TV screen.

HELMET SCAN—The type of videotape which records video information along slanted tracks on the tape. For this reason it is alternately called slant-track recording.

INTERCHANGEABILITY—The ability to exchange tapes between different videotape recorders with no appreciable degradation of playback image. Available at the present time only between machines of the same make and model.

INTERFERENCE—In a signal transmission path, extraneous energy which tends to interfere with the reception of the desired signals.

INTERLACED SCANNING (INTERLACE)—A scanning process in which each adjacent line belongs to the alternate field.

KINESCOPE RECORDING—A film recording made by a motion picture camera designed to photograph a television program directly off the front of a television tube. Sound is recorded simultaneously. Often called “KINE”.

LINE FREQUENCY—The number of horizontal scan lines per second, nominally 15,750 a second. (The number of frames 30 times the number of lines per frame (525).)

MASTER—The prime or original recording.

MICROWAVE—A method of transmitting closed circuit television signals through the air on a highly directional, line-of-sight system from the originating station to one or more receiving stations.

MONITOR—a special type of receiver used specifically in video reception, rather than RF. Video monitors are not turnable to channels, and must be used with video cameras.

NOISE—The word “noise” is a carryover from audio practice. Refers to random spurs of electrical energy or interference. May produce a “salt-and-pepper” pattern over the picture. Heavy noise sometimes is called “snow”.

PICKUP TUBE—An electron beam tube used in a television camera where an electron current or a charge-density image is formed from an optical image and scanned in a predetermined sequence to provide an electrical signal.

PICTURE TUBE—A cathode ray tube used to produce an image by variation of the intensity of a scanning beam.

RECEIVER—a television set, designed for tuned (RF) channel reception of sound and picture. A receiver/monitor is a combination instrument capable of receiving RF or video and sending out video information.

RECORDING HEAD (AUDIO)—A stationary assembly used to record or playback electrical impulses at audio frequencies.

RECORDING HEAD (VIDEO)—Mechanical rotary assembly, usually a rotary motor driven device, for impressing video information onto videotape.

RESOLUTION (HORIZONTAL)—The amount of resolvable detail in the horizontal direction of a picture. A picture which is sharp and clear shows small details has a good, or high, resolution. If the picture is soft and blurred of horizontal scanning lines per frame.

RF—an abbreviation for Radio Frequency, a system of transmission utilizing tuned bandwidths of the radio spectrum to carry both audio and video signals as in commercial TV broadcasting.

SCANNING—A single continuous narrow strip of the picture area containing highlights, shadows and halftones, determined by the process of scanning.

SECOND GENERATION—A copy of the master recording.

SYNC GENERATOR—a device permitting selection of several special combinations of images, supplied by one or more video inputs.

SWITCHER—a control which permits the selection of one image from any of several cameras to be fed into the television display or recording system.

SWITCHER-FADER—a device permitting gradual overlapping transition from the image of one camera to another. Sometimes incorporated as part of a special effects generator.

SYNC GENERATOR—a device used to supply a common or master sync signal to a system of several cameras. This insures that their scanning pulses will be all in phase. Scanning pulses out of phase produce distortion or rolling. This is sometimes noted as “rolling”.

SYNCRONIZATION—the maintenance of one operation in step or “phase” with another. Abbreviated “synchron”.

TAPE RECORDER—a device, partly mechanical, for impressing electrical signals into magnetic tape. It usually operates by feeding tape off one reel and onto another (generally from left to right).

TRANSFER—to go from videotape to film, or the other way around.

VIDEO—the visual components of a television signal.

VIDEO TRANSMISSION—the picture signal applied directly to the viewing tube without use of an RF carrier frequency. As no conversion-reconversion stages are required, there is no picture deterioration. The result is a higher quality image.

VIDICON—The type of camera pickup tube used most frequently in closed circuit television. Uses Antimony Trisulfide as a photo sensitive surface.

VIEWFINDER—a small monitor built into the TV camera, enabling the cameraman to see exactly what his camera “sees”.

VTR—Abbreviation for Videotape Recorder.


FIGS. 1000-1006

Mailing a Videotape

- Mailing a Videotape is $.56 per foot. The N.Y.C. brokers fee for clearing through Customs and delivery is $15.00, or you can clear the tapes yourselves by going to the airport, signing forms and paying the Duty.

- New way to get quick “hard” copies from a TV receiver: a desk-top terminal contains a second TV tube and a camera to take “still”s of the duplicate image. The picture (5 inches square) is put on paper via an electrostatic process and developed with liquid toner. Cost of each copy is less than 1¢ each.

- New Kind of “subscriber TV”—a prediction coming out of Variar Associates. TV over the air (not cable). The subscriber would receive only the signals he purchased. A “talk back” circuit would be available.

- New way to turn a TV monitor into a burglar alarm: 2 light sensors are attached to suction cups to the screen of a closed-circuit TV monitor. When the sensors detect motion, they can trigger an alarm or a videotape recorder, etc. “Video Sensor” via G&K (Ikegami), Japan. $495.

- By the year 2000 the distinction between broadcast and closed-circuit television will disappear and, in effect, all television will be “closed-circuit.” The emergence of CATV as a force in televised communications has started to bridge the gap between broadcast and closed-circuit, inasmuch as all members of a particular community system fulfill the definition of CTV: they are a controlled viewing segment.

- The end of the use of tape and film in TV is now clearly in view: Solid state memory banks are presently capable of storing sufficient information to reconstruct the TV processing research. There are people right now who are working on a new method of building a cigarette-pack sized inert memory block that will contain within it total information necessary to “play” a one-hour TV program. This will be immune to all shortcomings of today’s TV recordings, give instant random access, and, weighing but a few ounces, will make custom TV truly a reality. With millions of plug-in programs.

- Videotape is $56 per foot. The N.Y.C. brokers fee for clearing through Customs and delivery is $15.00, or you can clear the tapes yourselves by going to the airport, signing forms and paying the Duty.
Standardization

We’re in the generation of hardware before global compatibility. This is very serious because it means U.S. tapes can’t be played in European machines and vice versa. Ironically, movie stock is still world standard for TV material exchange, and 2" videotape runs it a close second. Manufacturers have got to pull their fingers out and (1) standardize on a tape width and running speed worldwide, (2) produce a dual standard playback machine operating on 525 lines 60 cycles and 625 lines 50 cycles, (3) make the whole thing cassette loaded. Then, whatever the originating hardware—and present incompatibilities will last for a few years—at least the hardware for a global network will be standardized.

Prices

“...It’s a well known fact in the electronics business that retail price is about 4 times cost price to the manufacturer.”—Hans Heinzel, Hamburger Filmschau, September 1970. Prices have got to come down.

Information-1

There is a shortage of information in Europe about latest hardware developments. And a shortage of hardware. We got the feeling that the Sony-625 line portable is already obsolete with its 11 ips tape speed, and correspondingly greater drop-out and running costs. Akai quarter inch seems to have Sony half inch AB series to the post as far as European appearance goes. Sony, doesn’t realize that at this stage, for individual/group use, the line system is relatively unimportant, but what is important is cost, both running and capital. I think this is because they don’t understand how this hardware is actually being used, and this includes the social context. We’ve tried making feedback to Sony about this and the time lag in comprehension is at least twelve months, and even then, slow as a tortoise.

Information-2

How well are we, as seminal groups in the subculture, disseminating information to the people who could use it: the revolutionaries, the youth, the alternative press, the possible, of an overview. What is familiar territory to us is virgin to them.

The Global Net

It’s emerging throughout the Western World that the network of video heads is both local and international. In practical present terms, the separation between any two points on the net is the travelling time between them of a little parcel of videotape (half-inch), depending on the means of transit this can be several days. Closest analogy is the global transportation system for people. It’s still actual matter transfer, mechanical rather than electronic, like the distribution of printed matter.

No one has yet said much about the local configuration of software movement thru a point on the global net. Evidently some sort of further distribution—broadcast or narrowcast—would be useful in reaching more people and as a source of income. Broadcast—TV station or regular access to one. Narrowcast—videocinema.

Videocenters

Let’s take a look at the sort of functions a point on the global net might have or what is a videocenter? Any manufacturer with the foresight to spend a few hundred thousand dollars setting up videocenters thru the Western World would be very smart at this point in time. A videocenter would house a production unit, a compatibility center and videocinema, a small tape library and a gang of resident video freaks. The payoff for the manufacturer is software market research and publicity—huge publicity. The payoff for the man in hardware is access to the means of production and the chance to decondition all those years of one-way TV viewing.

Getting it on: hardware

Where is the hardware and who’s got it? There is one Sony portable to every 20,000 people in the USA. So where the fuck are they all? Most of it needs liberating. Our particular interest is how to liberate it from schools and colleges. One way (legally) is to turn on the people in charge of the hardware to the immense possibilities of this friendly little machine. Best way is to turn it at its owner and zap him/her with immediate feedback. It works. Most people never see themselves on TV, etc. Then it’s just a case of letting the guy take some ideas from you and call them his own, in return for which you get to use the hardware. Reference to previous experience with TV hardware also cuts ice, Tell a few lies.

Leasing

In England, leasing companies are uptight about long term hardware hire. And the potential sponsors wanted by them—Arts Council, TV Companies—are just as stupid. Something’s got to give. Already there’s a healthy scent of “Rip It Off” in the air, as potential videohedget more ruthless with Puppet suppliers.

Mass Media: what is to be done?

Production. Portable video has to be established as an important input to broadcast. This has already started in Europe but hasn’t got further than news flashes and the occasional interview. There are not a few exceptions; David Frost interviewing Ian Smith; TV Children’s program on Swedish TV, Sept 70, shot entirely by children on portable half-inch videotape.

Structural shift in network TV is already possible. England is covered by 3 networks, approximately, according to the 4-color theorem of topology. This can be broken down—perhaps on a new fourth channel in UK—so that every transmitter is linked to a TV studio, or video center. Rigging up a TV studio is not expensive. In fact there are over a hundred “ham” TV stations in the UK alone, and the universities and colleges are crammed full of unused hardware. British Amateur Television Club is organization for the hams.

Software concepts

One of the reasons broadcast TV is so rigid is that the producers haven’t yet got concepts to fit the possibilities of the medium. Evidently the opposites Entertainment/Documentary and Sport/Education are not the right parameters, or program concepts. We’re actively pushing the concept ‘Advanced Television’ at TV stations. It means whatever you want it to mean, and it’s what we’ve been doing and developing all along.

Software Markets and Types

West Germany is the wealthiest TV market. They’ve already bought U.S. underground movies for regular programming, and some of their home grown products are very heavy, violent, exciting. There are no videomakers there yet outside TV stations. All the output of the underground filmmakers is in some way political. So feed your antimatter to one of the 9 West German TV stations.

In England it is not generally realized that the legal weekly 53 odd hours does not include schools, religious, education, and outside broadcasts. Adult education is quite a good business spinoff to cassettemarket, for young people that isn’t just pop music, trendy clothes and talking heads. We hope that our “Electric Newspaper” is the answer (see below).

The People

The movie industry and the TV industry is generally out of touch with young people. The exception are Startrek and Easy Rider. Another reason for using video as input to broadcast: it shows the people to the people. The potential is enormous. Most people never saw themselves on TV, etc. A new communication parameter: how many people in a locality can be served by one open-access TV station?

Cassette Market

No one manufacturing cassettes yet knows what sort of software will be consumer popular. Early EVR demand is for more pop music than expected (source: APB, Boston) and early video cassette use in Japan is for blue movies (source: Association of Broadcasting Staff bulletin Sept. 70).

The Electric Newspaper

This is our next step, in spite of the fact that we’re broke and don’t have the right hardware yet. We’re putting out a regular videotape series called “Electric Newspaper”, to anyone who send us an empty reel of videotape and some bread (a few dollars), or free to anyone who sends us a full reel of videotape. During the next few months we’ll be making prototype activity with the Electric Newspaper project: a pilot which is also the real thing. Inlets and outlets should be properly set up by 1971.

MASS MEDIA IS A SOURCE OF BREAD.

We need $25,000 for starters. Any suggestions?

Prediction

The first travelling bunch of freelance video heads rather like a pop group but making TV. Gigs at TV stations. Software spinoff to cassette market.

22 Sept 70
excerpts from a transcript

For instance, a happening...

I selected 18 minutes out of three hours to playback for them immediately when the whole thing was over. The whole point of the selection was that they would see it back—and what I picked up was people crawling on their hands up a wall, and most critically the couple that found each other with blindfolds and got into necking—right, not knowing each other. Before I played that back, I said publicly that people who were involved in this tape may not want this to be shown. And if they don’t that’s cool, because it’s your information and you have a right to it. They told me don’t that’s cool, because it’s your information and you have a right to it. They told me on the process.

The process. We’re trying to redesign the equipment. As an engineer said, if they were using large scale integration instead of transistors, all right... the stuff wouldn’t weigh 22 pounds, it would weigh 2 pounds. That’s what’s coming if we can get that kind of thing designed.

I hardly ever use a tripod. I’ve gotten so—I’ve been taking some T’ai Chi because it seems that the T’ai Chi is the most appropriate exercise for video tape. You don’t, as in Yoga, go from a stop state to another stop state. You’re constantly in motion with T’ai Chi. You don’t, as in Yoga, go from a stop state to another stop state.

other hand, teachers should have an available space where they can go self-process to get some control over their own image. It’s the whole business of where the authority is, and the authority goes with the information structure. If the authority is in books, the authority is in video, it’s in the hands of the kids that have video. That’s another ballgame. The disenfranchised—in this case the youth—go for the new media as a power leverage in the society. You’re running guns to the Indians when you give kids video and let them do with it what they want.
fected people and how it might be affecting you’re aware generally of how that camera affects you. You have a camera in your hands and this camera is going to be an "absorber" and let the people relate back to that process. You understand that you have a camera, more or less an "absorber" and let the people cause you have a camera in your hands, be-

In other words, they were able to participate in their own audience participation. What you're selecting are things that are useful for feedback.

... Metaphorically, in a sense, people are blind to the process that they are involved in. Be involved in the process is not to see certain things.

You can inhibit by playing back at the wrong time, by taping too much, by boring people with their own activity. You have to be able to pick up on people that are nervous in front of a camera; those who may be pretending they want to be on and don't really want to be. You don't put those things on camera.

... When you're shooting tape, you have to understand what sound and ambiance is. You have to understand that the microphone picks up the reallibility of conversation, so you don't have to follow it with the camera. The camera is free to follow other things. Often it’s more interesting to follow reactions than to follow the face of the speaker. Stick with the ambient sound, stick with the environment and work with that. There are a lot of things to learn about sound in terms of acoustical space.

The camera is as it's conceived now, where you look through an eyepiece that's mounted on the camera and goes through the lens on that same box, as Carlos says it's "film, it's ridiculous," it's perspective space--C.B.S., exactly. We can separate the monitor and put it on a mount on your chest, or you can freehand the vidicon and have the mike in the other hand and be in face to face contact with people. You're more capable of being involved in

I hardly ever use a tripod. I've gotten so I've been taking some T'ai Chi because it seems that the T'ai Chi is the most appropriate exercise for video tape. You don't, as in Yoga, go from a stop state to another stop state. You're constantly in motion with T'ai Chi. You develop your legs to such an extent that you can move your whole body in rhythms and so forth off your legs, rather than use a tripod which confines you to a fixed point of view. Also the T'ai Chi method of exercise, the Chi sense of oneself and the whole Taoist approach is very congruent with our own attitude of minimal presence, and also, I think the attitude most appropriate to tape. Where you let it happen—and go with it in most in-

... Anybody sitting down should be able to stop the tape, and they should be able to control the speed of the tape. The viewing environment has to be vastly improved; they should be able to flash video of themselves watching the tape—and not only video, they should have electric read-outs on their heart pulse, nervous system, that could be graphed so that they know what their real relation to that information was.

People say how many times can you infold people and feedback and so forth, but after awhile the visual information of just the face is not enough. You really want a whole electronic scan of how people are behaving in the presence of the activity, and you want that information available to them. So how you're watching tape and how you're seeing it becomes important. You develop a sense of information structures: where is the control point? who has control over the information, the images here, how did they get control, have they got a right to control? What is this surveillance system doing here, who runs this place?

To walk into a church with a camera will freak some people out, a police station, schools... especially a school watching a kid bring a videotape in and shoot the teacher and take it home to show his parents o.k.? Why can't these things happen—and they can in fact.

I wonder what the reaction would be if high school or grammar school teachers were videotaped. A teacher should have the right to practice on the video. In a school situation you don't force people (and you don't force feedback—if people don't want to see it, you don't force them their own image) because the teacher is a public figure and their public behavior affects kids, the kids and society have a right to that information. On the
In Look-Out! we used videotape

The Manifestation-Happening-Event-Street

Look-Out! took place at the Corcoran Gallery in Washington, D.C. in July, 1970. We wanted to turn the entire city inside out. To look away from its inner concerns toward the outside. We wanted a 24-hour mass meditation, a Look-Out! The Event had nothing to do with ecological politics. We sat sideways to that. We just wanted to turn the city inside out, to feel it turning.

The score read:
LOOK OUT AT THE WORLD FOR A MIN-UTE, AN HOUR, ALL DAY, ALL NIGHT. REPORT WHAT YOU SEE. PHONE IN MESSAGES TO 333-6433. BRING MESS-AGES, OBJECTS, DRAWINGS TO THE CORCORAN BETWEEN 8-10 PM. LATE AT NIGHT EACH REPORT WILL BE RECORDED ON GIANT CANVAS. THE CITY CAN BE ART.

Television is

In Look-Out! we

The Manifestations began with Dada, took place in night clubs, admitted audiences. Happenings got rid of audiences, made it all active. The Events of George Brecht and the Fluxus Group were personal and slight, like the Water Street Works, very cool. I began to think that whatever was worth doing had to be done on comfortable scale, that is very large scale. Where our brains are. In units of space like entire cities, states, continents, globes, planetary systems. Aristotle said no man would consider an object 1000 miles long beautiful. But in 1961 Piero Manzoni drew a line from Amsterdam to Milan. Aristotle never rode an airplane, or understood that when we look at the stars we look back millions of years in time.

Look-Out! was our second adventure in scale. The first came in April, 1970, when we went to Kitt Peak Observatory in Arizona and made through heliography the largest direct print ever made of the Sun, hanging now at the Smithsonian, in Washington. The sun's rays, interacting with chemically treated canvas, burned themselves into the picture— making possible a full, clear, non-glare image, impossible with photography. Man Ray's Rayograms are an early Dada example. Our sun is the universe and the birth of time. We will use Television to

Watch! The Project would be called a Space Station where experiments with audio and video space would be carried on. In this audio-video space, levels of awareness concerning the borders and boundaries of one's body and various objects would pass through Changes determined by the individual which would help him and the experimentor to discover implications of the image with regard to control of the Media. This experience would help confirm people in their decision to take an active role in determining the Content of the media and to provide contexts, having provided their own, in which others can, who desire, do the same. Some of the concepts and their interrelations which might be put in audio-video space are:

1. I will decide what is best for me to do.
2. I want to control the situation in which I live.
3. I can only know the world through my own eyes and the same for everyone else.
4. Conformity is not only undesirable, it's impossible.
5. A person should not follow a directive if it doesn't make sense to him.
6. Be careful—what you want, you may get.

In a group situation this interplay might also serve as a substitute for telepathy in communicating essential concepts. As a kind of personal learning it provides a visual stimulation/meditation experience for the stimulation of sensory awareness and learning. The interesting difference between this and the usual methods is that television being a Con-
form in a pattern similar to the firehose, water spurting across the canvas. Finally, a procession through the canvas in the middle, hundreds grouped around it, others manning vases, stopping traffic, to wash off the chemicals and look at the picture.

Lamps, shining down upon the canvas from above, slowly exposing with chemicals, like the Sun print. People spread themselves out on it, the results of the 24-hour meditation—on the canvas, specially treated—fully of flowerson the canvas. At 10PM we began spreading the records—men: Eugene McCarthy’s office told us he would come and lay a hand of the universe, and make art in the rhythm fixed thereby the law of nature.

The ultimate process medium. What began as a Manifestation ends now with the doing of it, the city turning inside out, that gets remembered, not for the act itself, for what it says about Television. Of course it is anti-art, in the old sense. It means we must create now and for the first time in the history of the world, with our own hands, with our minds, with the breasts of our bodies, with the sores of our cramp, not for the press, pays any attention to this act. I wasn’t sure myself.

The next day we hang the videotapes in front of the canvas. No one least of all, they record the making of the city. All day. That night, at the Corcoran, they were there, too, recording what is said, brought and done. Most of all, they record the making of the machine. The machine is his “daughter born without a mother.”

Television is

Taping even the end, when the poor, epic canvas is hung, badly exposed, very few of the images printing through clearly. Heliography, due to bad conditions, fails. The Event is the victor, though; the Event, the doing of it, the city turning inside out, that gets remembered, not the work of art, the artifact, at the end. The next day we

Paul Haviland, a friend of Picabia’s, said it long ago, 1915:

Man made the machine in his own image. She has limbs which act; lungs which breathe; a heart which beats; a nervous system through which runs electricity. The phonograph is the image of his voice; the camera the image of his eye. The machine is his “daughter born without a mother.”

Television is

The next day we hang the videotapes in front of the canvas. No one least of all, the press, pays any attention to this act. I wasn’t sure myself why we did it until days after. Then it became very important. I mean not for the act itself, for what it says about Television. Of course it emphasizes what the failure of the canvas emphasized—the ongoing, living, process. But it also says

Television is the eye in process. It doesn’t stop things, fix them in a static form. It is anti-art, in the old sense. It means we must create now in the rhythm of nature itself. Electronic images, KQED is discovering, form in a pattern similar to

Vision is the eye in process. The camera fixed life, like Impressionism. Television—through videotape, vinyl, film—keeps it moving. Our canvas became the first work of art with the capacity to depict its own making.

Television is

The ultimate process medium. What began as a Manifestation ends now properly in the Television Event. It is both inevitable and pleasing. The form matches the medium point for point.

As for Fred and I, we will take TV into space and time, to the beginning/end of the universe, and make art in the rhythm fixed there by the laws of nature.

—D.D. September 1970

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Andrea Brown

The latest video piece by Andrea Brown is one entitled, Electronic Tune Up and will be displayed at Cal State LA, through the month of Oct 70. Electronic Tune Up is a totally automated multi-event video sculpture created technically for Andrea by Charles Bensinger. Three large monitors are used, structured in a vertical fashion, topped with a video camera fitted with a special fisheye lens. A modified auto-rewind Shibaden series 700 VTR is placed on a black pedestal flanking the vertical monitors. Across the room is another video camera fitted with a remote control electric zoom lens. The lens is wired to a custom circuit design which causes the lens to zoom in and out at a preselected speed continually and automatically.

Prior to the exhibition of the piece, Andrea taped continuously for 18 hours with a special variable speed VTR operated by Rick Bloom of Odetics Inc. In downtown LA and on the freeways, certain rear views of trucks were selected displaying unusual design or apparati. Traffic patterns on the freeways were recorded, along with human individuals, and events along the streets. All events were taped at a greatly reduced speed on the special time lapse control Odetics Shibaden VTR. The VTR was powered by a 12 volt car battery. When the 18 hr tape was played back at regular speed, it completed a full showing of the taped material in 7 minutes, displaying the events in a greatly accelerated fashion. The prerecorded tape was then placed on a Shibaden auto-rewind VTR which then served to play the tape continuously and automatically. This is done with a special transparent lead in the middle of the tape which is sensed by a light relay. (Made specially by Shibaden)

The truck and traffic tape is therefore being viewed on the center monitor. The top monitor displays a static fisheye picture of the crowd facing the video sculpture, while the bottom monitor displays a continuously zooming composite picture of all three monitors and the backs of the crowd watching the video piece. Thus, exterior time and physical elements are combined with interior spontaneous elements of both static and motion picture. The spectator is confronted by the technology, is entertained and involved within, and becomes an integral part of what he is viewing. The sounds of the electronic oscillation of the VTR itself are amplified providing the audio portion of the piece.

Individuals viewing the piece seem to be captivated for long periods of time by the events taking place on the monitors.

Charles Bensinger
Oct. 5, 1970
SELF-PROCESSING

by Paul Ryan

Everyman's Moebius Strip

Your inside is out and your outside is in.
Your outside is in and your inside is out.
So come on come on.
Come on is such a joy.
Come on is such a joy.
Come on make it easy.
Come on make it easy.
Everybody's got something to hide except for me and my monkey.
-Lennon and McCartney

A moebius strip is a one sided surface that is made by taking a long rectangle of paper, giving it a half twist and then joining its ends. Any two points on the strip can be connected by starting at one point and tracing a line to the other without crossing over a boundary or lifting a pencil.

The moebius strip provides a model for dealing with the power videocapsule gives us to take in our own outside. With film, we are taking in the edited experience of others. With videocapsule we can pre-edit our own experience. What follows is a composition for video to be edited, directed, acted and viewed by you in privacy. Feel free to bend fold and mutilate as you wish. It is not designed to please McLuhan understands all extensions of man as inducing a corresponding numbness and closure. Narcissus' image in the pool is a kind of self amputation brought on by irritating pressures. To counter the irritant of amputation, his image in the pool produces a numbness in Narcissus which makes it impossible for him to recognize his extended self.

This mechanism is at work with people seeing themselves on tape. The most telling instance I know of is a replay I did for a three year old girl in a family setting. She felt compelled to imitate what she saw herself doing on the screen: if her taped self was singing, she sang; if dancing, she danced. In one aspect of video, we are taking in the edited experience of others. With videocapsule, we are taking in our own outside. We are taking in our own outside with video means more than just tripping around the moebius strip in private. One can pass through the barrier of the skin-pass through the pseudo self to explore the entirety of one's cybertool-i.e., the nexus of informational processes one is a part of. You can listen to the Beatles too much. You can turn a moebius strip composition into a merry go round of ego tripping on a single loop. In fact, we live in multiple loops. Moebius composition can touch on these loops; Agnew-mother-Huey Newton. But to confine ourselves to this use of video is to confine a cybertool to closet drama.

Cybernets... "recognizes that the "self" as ordinarily understood is only a small part of a much larger trial-and-error system which does the thinking, acting and deciding. This system includes all the informational pathways which are relevant at any given moment to any given decision. The "self" is a false self of an improperly delimited part of this much larger field of interlocking processes."

The cybernetic extension of ourselves possible with videocapsule does not mean a reinforcement of the ordinarily understood "self". Total touch with one's cybernet precludes the capitalism of identity at the expense of understanding process that the west has habitually engaged in. One's resume is not one's reality. Master Charge does not make you master of anything but involves you in an expensive economy of credit information filtered by computer, your checking account, TV ads, long lines in banks and busy telephones.
The moebius strip provides a model for dealing with the power videotape gives us to take in our own outside. With film, we are taking in the edited experience of others. With videotape we can pre-edit our own experience. What follows is a composition for video to be edited, directed, acted and viewed by you in privacy. Feel free to bend fold and mutilate as you wish. It is not designed to peel your own skin off until you find some fiction called the Your strip.

Your strip. Your trip.

Technically, this is the way it works.

Using an audio tape recorder, record the following series of cues, pausing after each instruction for as long as you would want to follow it out.

Set yourself up in front of the videocamera for a head and shoulders shot.

Have the monitor off.

Roll the tape.

Follow/don't follow the cues.

Relax and breath deeply, just relax and breathe deeply

Loosen up your face by yawnning

stretcing your neck

working your jaw

Now, explore your face with your fingertips

Touch the favorite part of your face

Close your eyes and think of someone you love

Remember a happy moment with them

With eyes open give facial responses to the following people

Joe Nameth
Don Rickels
Spiro Agnew
Your Mother
Huey Newton
You

For the next Twenty minutes, do what you want

Now let your face be sad

Now explore your face with your fingertips

Touch the favorite part of your face

Close your eyes and think of someone you love

Remember a happy moment with them

With your eyes open give facial reactions to the following people

Joe Nameth
Don Rickels
Spiro Agnew
Your Mother
Huey Newton
You

For the next twenty seconds do what you want

Now let your face be sad

Turn your back to the camera

presures. To counter the irritant of amputation, his image in the pool produces a numbness in Narcissus which makes it impossible for him to recognize his extended self. This mechanism is at work with people seeing themselves on tape. The most telling instance I know of is a replay I did for a three year old girl in a family setting. She felt compelled to imitate what she saw herself doing on the screen: if her taped self was singing, she sang; if dancing, she danced. In one section of the tape she was walking down stairs—upon seeing this section of the tape she ran up the stairs and walked down again. This three year old seemed to be using real time mirror groundrules to deal with her videotape experience. It seemed she was playing a mirror part for her video image—the part the mirror would ordinarily play for her. In doing so she became a numb servomechanism of her extended image. The next time I brought the camera around she ran. She refused to become spellbound by her tape extended self. By contrast I hear a children's sensitivity leader once brag that he had seen so much of himself on tape that he was desensitized to it.

The moebius video strip is a tactic for avoiding both servomechanistic closure and desensitizing in using videotape. Tape can be a tender way of getting in touch with oneself. In privacy, with full control over the process, one can learn to accept the extension out there on tape as part of self. There is the possibility of taking the extending back in and reprocessing over and again on one's personal time warp.

There will be tape, there will be time.

To prepare a face to meet the faces that you meet.

It may be wise to invite a good friend to watch some of the replay with you. Yet avoid inhibiting word labels on what you're doing. The moebius tape strip is a tactic for infolding information unto a fullness. "Exuberance is Beauty . . . the cistern contains, the fountain overflows." To overflow one need be infolding. The process of infolding cannot be frozen in words. Let go the formulations and take another trip round the moebius strip.

Videotape is the "some power" that is answer to the prayer of Burns people which they instinctively quote when talking about tape.

Oh whoa some power give us To see our selves as others see us It would from many a blinder free us And foolish notion. What airs in dress and gait would be us And e-v'n devotion.

"It would from many a blinder free us." It would enlarge our ability to self correct. It would extend us in a cybernetic way. With video we can know the difference between how we intend to come across and how we actually do come across. We put out, what is taken by the tape, is an imitation of our intended image, it is our monkey. A video system enables us to get the monkey off our backs where we can't see him, out onto the tape where we can see him. That is the precise way in which we've been making a monkey of ourself. The monkey has been able to get away with his business because he operates on the other side of the inside/outside barrier. The moebius tape strip snips the barrier between inside/outside. It offers us one continuous (sur)face with nothing to hide. We have the option of taking in our monkey and teaching him our business or letting him go on with his.

Remarks on First Seeing Self on Tape

"I always thought of myself as peculiar, but I can see I'm just together like anybody else, like someone you'd see on a subway."

"Wow, its like making it with yourself."

"Ooh, so that's me huh, and I'm not ugly."

"I just meet a beautiful person."

Other Tactics

Take the video to your private therapy sessions. Set it up on a tripod and record. Take the session home with you.

Hang the video camera from a rope. With some favorite music playing, dance a naked solo in the videospace.

With the monitor on, compose an advertisement for yourself designed for the monitor space.

Leave the camera set up near the phone. Flip it on when you get a call. Replay it to get a better idea of how you relate to the party at the other end. Tap your body, not the wire.

Buddhist Mirror Meditation

word for mirror “dakpana” means “causing vanity”

He gazes at this reflected image in the mirror in front. The constructed colored features of his face are void of entity. The face of the reflected image looks hither; his own face constructed colored features of his face are void of entity. According as he looks thither. Because there is no disagreement of mindfulness, the genuine face is also void of entity. According as he gazes at this reflected image in the mirror.

"I am the Master of My Soul; I am the Captain of My Fate." We have yet to understand there is no master self. They are now putting photos on charge cards when they should be mapping the credit system the card involves you in. Video users are prone to the same illusion. It is easy to get the monkey off your back in a "self" to the exclusion of environmental or social systems.

Doing feedback for others one comes to realize the necessity of taping and replaying context. I had the opportunity to do a kind of video meditation on the house of two friends while they were away. The replay served to deepen their sensitivity to their everyday surroundings.

*Bateson, Gregory "Toward a theory of Alcoholism: the Cybernetics of "Self". This section is an adaptation of notions developed in Bateson's paper. It is the most lucid discussion of the kind of cybernetic identity implicit in video systems that I know of.

Inscription on a fifteenth century Italian mirror

"Ooh, so that's me huh, and I'm not ugly."

"Wow, it's like making it with yourself."

"I just meet a beautiful person."

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COMMUNITY

PROJECT REPORT

by Allen Rucker and Richard Kletter

OF THE MEDIA ACCESS CENTER—
A DIVISION OF PORTOLA INSTITUTE

The following is a report on what occurred when two groups of high school students, one white and one third world, used videotape to explore their school. The resulting tapes revealed student reaction to their district's voluntary busing program, while this article relates the process which produced those tapes.

We first got involved in this project as a result of a proposed "evaluation" to research student attitudes toward a voluntary transfer plan which brought minority students to white schools but few, if any, whites to the sole black school. There was much tension in certain "whiter than white" communities and some hostility in the black community from fear that the district would shut down the one black school.

The school district's research division intended to rely on formal interviews and questionnaires to judge their project's success, and hired a Stanford professor to do the work. He put us on to them and we came up with another approach.

We asked them to let us take randomly chosen groups of transfer and resident students at one school, give them a Sony Portable Video equipment, and let their findings stand as a test for the district's questions. The students, black, oriental, and white, would then have a real voice in the issue and the board would have another source of information. For what it's worth, here is our formal proposal language.

Methods designed to evaluate social or educational programs rarely allow for the observations of the evaluated. Coded questionnaires and disciplined interviewers investigate program efficacy and potential for wider applicability but the impressions of the interviewed and observed are expunged for lack of precision.

We believe, however, that a necessary concomitant to any evaluation methodology is one permitting the participants to convey their own impressions of a program. A person's sense of his own environment, his selection of imagery, may provide the researcher and social planner with the kind of eyesight necessary to a more complete understanding of a project's human component. In short, we believe that a person should be an active participant in defining his own experiences...It is to this end that we employ videotape...

This was putting things in their language—no video jargon, no cultural implications, no politics—and they bought it...Of course our proposed budget was nothing—approximately $500—and we assumed the entire burden of equipment and production. We also had our friend, a prominent Stanford educational evaluator, backing us up.

School districts are by nature prissy and timid but their official stamp opens some well guarded doors.

The school chosen for our experiment was the very safest in the district. It was the perfect suburban cliche. During the Cambodian upheaval, while other high schools in the area were either on strike or holding all day teach-ins, the kids at this school held a cake sale in the courtyard. The open courtyard surrounded by one-story buildings in Pentagonal arrangement was the focus of school life. Well-defined cliques gathered about. As one black kid said, it was "an ocean of white faces", peppered only by 60 some transfer kids, 31 of which were black.

The principal was extremely cordial and cooperative. He literally opened the school to us, and never once asked us what we were doing or what we were doing. He is no longer

The approach of the transfer kids was bold, if not haphazard. They were practiced at roaming the school and entertaining themselves, and the camera facilitated even further explorations. The first place they toured without warning was the administration building. Three of them casually wandered from one office door to the next, off-handedly describing who and what they saw, "...and that is Mr. the principal...he looks pretty busy in there, probably working on something for the transfer students,"...and that is another counselor, Mr. , he generally sleeps all day."

Later in the same tape, which became a propaganda piece about "This square-ass school," they entered a girls' gym class. PANning badminton courts filled with white coeds, they settled on the lone black girl in the class. This set them off. "They say we stick together...but looks here, only one soul sister in this whole gym," "Patty, how does it feel to be the only black in the class?" "Feels kinda funny." "You know, I was talking to a counselor the other day, and she was telling me about all the opportunity...opportunity, hell, what kinda opportunity do we have...down in the ghetto." "You say it, brother..."

"This place has got about as much soul as the bottom of my shoe...can I get a picture of the bottom of my shoe. Just like Larry said, this place is as white as snow." "That's right, brother, all the soul is on the bottom!"

These kids continually used the camera to their own advantage. Tempering their initial impulse to just barge into places and start popping questions, they arranged situations in which they could both perform and confront the indigenous population.

They taped two sessions between black students and the principal concerning demands for a Black Student Union. The tapes traced the dialogue from stern refusal through patronizing concession to fists clenched in vixiery and proud students, white and black, planning their first group activity.

Two days in another class probing white kids about their attitudes toward black people produced a stirring confrontation between Larry, the black leader, and one of the school's leading freaks. The depths and subtleties of racism were revealed in a series of really genuine exchanges.

At this point, we felt the limitations of the project. We tried feedback sessions, turning those tapes back into the class that produced them, and igniting discussions in other classes, but we had little tape and less help. Several moving moments were unrecorded. We also wanted to interface student tapes with tapes of parents and community people, but these doors too were closed.

Editing presented the greatest problem both technically and in terms of group process. Students had to travel at night to use our borrowed Ampex 5100E. Inconvenience, wasting time and fear at the prospect of so demanding a task reduced the number of participants to a dedicated five—The three kids were still separate but each became increasingly anxious about the other's work.

We held several brain-storming sessions examining the tapes, talking about the various points of view, and figuring out how to best present the information in editing. They made the decisions but we performed the mechanics—a necessary result of working with borrowed equipment and limitations. We assembled segments from old format Sony 1/2" to Ampex 1" and suffered the rollover.

Editing in this context was almost an afterthought—a function necessary to appease those who would not find time to watch the complete four hours. Perhaps it was useful for the students to work at refining and presenting their statements but we hope to limit editing in future project designs.

Energy cycles built up through student explorations and their interactions with us and their schoolmates was dissipated by the district's control of the information. Our notion was to continue feeding tapes back into the school allowing other students to pick up on the information, if not the action. At the very least we hoped the kids involved could accompany showings in the community and at other schools to give a sense of the learning process undertaken. What actually happened after completion of the final tape aborted further efforts.

We held onto all tapes, raw and edited, consenting to copy onto other formats for presentation. The recent school commission did not grant us permission to present them here. We are now in the process of editing a series of smaller segments for presentation to school districts and community centers around the country.
The manner of selecting students and introducing videotape as a perceptual tool is probably the most delicate step in the entire process, and we didn't do a particularly good job of it. First of all, we were to go through official administrative channels, which is not only inherently suspect from a student's viewpoint, but generally a bad medium. No one listens to the morning bulletin, and no one by the office to find out what's new. Most of the students who finally came to us did so by accident—they either wanted to cut a class or were cutting a class when we got them interested.

We had planned to form the groups by walking around the school with portapaks for a few days, then selecting from among those who gravitated toward us. This approach is less suspect though conducive to bias, and in this project random selection was the key phrase. We would use the portapaks for a few days, then selecting from among those who came to us did so by accident—they either wanted to cut a class or were cutting a class when we got them interested.

The resident group got caught up in the CBS interview style from the beginning, and didn't begin to see their role as active cybernetics until much later. Their taping consisted of long monologues by verbose friends, short stand-off interviews with the courtyard crowd, and some excellent footage of frisbee throwers, food machines, and the school landscape. This was an extremely difficult set for them to break, given the fact that they didn't want to talk much about the project to each other and they didn't harbor strong feelings which might inspire new designs. Here's how a couple of the participants felt about the whole thing was over:

**Roger:** Tell them more techniques of shooting... more about class discussions, things like that... even entering the community and you know, seeing what you can find.

**Ron:** One thing, now looking back, that I appreciate is that you didn't show us another tape. That point, the first point, I wanted to see something else, to get some ideas, and that's when we didn't do anything, and I just started thinking about it, talked to John, and we got going. But then, I didn't know what to do... now I'm glad it was that way, because it was our own.

Despite their timidity and set ways, kids produced a tape as demanding as the white group's. While the black group talked about how fragmented and dead things were, this group should have talked about it—point blank. Most of the people they talked to either mimicked parental rhetoric, ("integration must be a slow process...") or, they didn't see what the problem was. (Ron: ... As long as it doesn't affect them, they don't see anything to the problem. They just, refrained from comment. (Ron: They were afraid... one teacher was afraid his views wouldn't agree with the people upstairs, and he might get canned.) No transfer student was ever interviewed. To the tune of "What a Day for a Daydream" and CSNY, the school was summed up by frisbee throwing and "friendly chatter" in the courtyard.

Each group spent three weeks shooting tape. The kids arranged the shooting schedules among themselves, given the liberties passed down by the principal. We stationed ourselves in a playback area, handled the equipment, and questioned students, and occasionally shot a discussion. We would attempt to generate dialogue among people who entered our domain. They would see themselves replayed, but otherwise we rarely entered the process directly. One reason we think things worked out well is that the participants could fit taping into their regular school routine without much adjustment. It simply became an extension of normal daily patterns, and with the transfer group this meant the bus ride and a few scenes from back home as well as school.

The students we did attract were for the most part quiet, straight, inconspicuous kids. Only one of ten had had camera experience of any kind, and only one, a black student, could be considered a leader. We kept the groups separate and our approach to each was undisturbed. We expected students to give us attention. We spent several hours and shot about two minutes of tape; the black kids were back in session forty minutes with a completed twenty-minute reel. Their tape was mostly shucking and jiving in front of the camera, playing with the zoom while singing and dancing, and they erased it immediately. They didn't care to learn about using the equipment or about understanding their task. They just jumped into it. We considered it now a perfect beginning—sort of getting things out of your system. By the second day they were ready to create their own school folklore.

**Ron:** First point, I wanted to see something else, to get some ideas, and that's when we didn't do anything, and I just started thinking about it, talked to John, and we got going. But then, I didn't know what to do... now I'm glad it was that way, because it was our own.

Energy cycles built up through student explorations and interactions with us and their classmates were dissipated by the district's control of the information. Our notion was to continue feeding tapes back into the school allowing other students to pick up on the information, if not the action. At the very least we hoped the kids involved could accompany showings in the community and at other schools to give a sense of the learning process undertaken.

We held onto all tapes, raw and edited, sentencing to copy onto other formats for the school district's purposes, and to make a dub of the edited version for ourselves. According to our verbal agreement we were then to return all tapes. Copy privilege on the raw tapes was still to be decided, but our one final tape was central to the verbal agreement.

Problems began when a casual conversation we had with a school district official turned into mutual suspicion: on our end, about permission to copy certain raw tapes, and on theirs about ever receiving those tapes at all. (The raw tapes were not covered in the written agreement signed by the school district and the Stanford professor.) His superior called ours—instant delivery of the tapes resulted.

They received no other format copies and we were denied our one copy. We kept a few "white albums", i.e., tapes made by the students on their own after the project allotment had run out. We then climbed the rung to the next higher official and told him about the "white albums", told him that they had no machine in their district capable of playing the raw tapes (4 months later, they still have not been seen), and that the edited version was made on a mal-aligned Ampex machine which would never play back properly. Finally, but most important, we told him we had undertaken the project, understanding that little money was involved, because an experiment, a process, which we believed valuable would be attempted, and we expected a copy of that effort. He was impressed by our dismal portrait of affairs, offering cautious, "perhaps something can be worked out."

Prior to our next conversation, several weeks later, the final tapes were shown to school district administrators, including the principal of the high school involved. They liked it—began to spin off a variety of possible uses—until the principal spoke.

He said the tape portrayed his "school unfavorably, that it reflected the bias of a few kids, that we had an inordinate influence over the outcome, that parents who saw it outside the proper context might hedge on integration and that therefore the tape should not be shown again. He offered to write a script and help produce a new tape, "a real tape."

The principals objections prevailed. At present the final tapes will be used only in teacher training in the black and minority area and the raw tapes will just sit.

The higher official squirmed about the regrettable situation and deemed unlikely our hope that his boss would contravene his principal and release the tapes—"Perhaps in time, when things have cooled down."

He said our only access to the tape, even for a single restricted showing was to have a PhD, preferably but not necessarily in education, formally request its use, stating that he would be present at its showing.
A REPORT FROM CANADA: TELEVISION AS TOWN MEETING

by Dorothy Todd Henaut

A TECHNOLOGICAL TOWN MEETING

Television has the potential for being a technological town meeting, an important instrument in re-democratization. A handful of people start organizing around an issue—let’s say pollution, which is an ever-present problem nowadays. They need numbers. They need to reach all the people who have been privately concerned; they need to educate others and instigate new concern. And they need to gather all those people together, and initiate action.

If the handful of concerned citizens has access to community television, they can make a TV program themselves—with the help and advice of someone familiar with the technology of video tape recording. But they control the program; they decide what to film; they add commentary; they do the editing. And they invite all the viewers interested to come to a subsequent meeting to discuss possible actions.

Then the meeting is taped, and highlights from it are shown on the community TV (or the meeting could be televised live). The two are kept informed. Subsequent actions by the group are taped and shown. Dissenters are given their chance. A movement is built in part by public, and decisions taken by public bodies are taken after the well-informed public.

PLUGGING IN THE PEOPLE

Community television can ensure the right to be informed and the right to inform. Communication becomes a tool-the-counter tool—of people who are being plugged into the media. And television becomes a tool for democracy.

BROADCAST OR CABLE?

Broadcast TV has the advantage of being in every home, today, but it also has the weighty disadvantage of being tied into network schedules. Between the two, the possibility of free, open-ended, uncensored community television is damn remote.

Cable, on the other hand, has the inestimable advantage of being developed. Alternatives are still possible. Cable companies, of course, are owned by private enterprise. Nonetheless, in Canada we are lucky to have the Canadian Radio-Television Commission, whose concern for Canadian community television is a rare example.

The Cable Companies provide the necessary channel for community television service, and they must purchase this material from the CBC. An instruction from the CRTC to all companies to raise rates by 60 cents per month to pay for this non-profit-making, non-commercial service would be a realistic beginning.

Cable companies should make such a commitment to the provision of studio facilities, remote equipment, etc.

THE CABLE COMPANIES

The Cable Companies provide the necessary channel for this community television service, and they must purchase this material from the Cable Companies. The Production Company is responsible for coordinating community events to be cablecast, for ensuring that individuals and groups within the community have easy access to the medium, and for the overall production of the programming for the community.

A community television company must be in some way responsible to the community. It must not become a vested commercial interest of any one group. It must not be commercial in the usual sense of the word, be able to attract a substantial part of the audience, and some system must be found to make available to it substantial amounts of money. It must be able to argue that amateurism in community television is an enduring virtue. Community participation is a two-way process involving the activists who appear before the camera and the viewers who are witnessing the events on the screen. Hopefully, the latter group will become more actively involved with their community, but whatever happens, it must be recognized that the audience is an important element in community television.

From these objectives it is obvious that a community television service must not be owned and operated by the cable companies in their own commercial interest. It must not be "sold" to any commercial interest other than the cable company. It must not be "managed" by a citizen's committee but by a production company with an interest in the effectiveness of its programming and the efficiency of the operations.

STRUCTURE

There are six elements in the structure we propose for a community television channel within the cable network. These six bodies are the CRTC, the Cable Companies, the Charter Board, the Production Company, the News Service and Community Groups.

THE CRTC

As the ultimate authority, the CRTC must approve the charter of this community television venture, and judge the performance of the Charter Board in its administration of the charter.

THE CABLE COMPANIES

The Cable Companies provide the necessary channel for this community television service, and they must purchase this material from the Cable Companies. The Production Company would own little or no capital equipment, and thus would be no problem concerning the non-renewal of the contract. But the Production Company is the servant of the charter, and in that it must have independence in fulfilling its obligations.

Community television must have the freedom to experiment and to give expression to the diversity of opinion within the community, without every decision being subject to bureaucratic interference.

THE NEWS SERVICE

The News Service is crucial to the success of the operation. It is only part of the programming, but an important part, for the duty of community television is to inform. The provision of news is the raison d'être of community television service, and they must purchase this material from the News Service. The News Service will be the body to which the community television channel is responsible. The News Service will be the body to which the community television channel is responsible. The News Service will be the body to which the community television channel is responsible.

THE CHARTER BOARD

The Charter Board would be a large committee representing community interests and responsible for ensuring that the terms of the charter are fulfilled. Representatives of the Cable Companies, the Production Company and the News Service should be on this committee, although the major representation would be of interested groups in the community, e.g. members of the business community and labor, citizens groups, religious groups, political parties, schools, sports associations; in fact, as representative a cross section of the community as possible.

The importance of the Charter Board is paramount: it represents the community, which is the audience and the participants. The charter company to provide the production and coordinating services necessary in programming, and the agent to provide the news service, etc. As the protector of the charter, the Charter Board is a non-profit, non-commercial body; indeed, it is the embodiment of the aspirations and ideals of this community television venture.

THE PRODUCTION COMPANY

The Production Company is responsible for coordinating community events to be cablecast, for ensuring that individuals and groups within the community have reasonable and easy access to the medium, and for the overall production of the programming for the community.

THE CABLE COMPANIES

The Cable Companies are responsible for coordinating community events to be cablecast, for ensuring that individuals and groups within the community have reasonable and easy access to the medium, and for the overall production of the programming for the community.

PEOPLE CAN DO THEIR OWN SHOWS

I think Nielsen and Ferns place a different emphasis on the role of professional television and news people than I do. It is only necessary if people are taught to use TV themselves. Obviously, programs should not be sloppy or boring. But the experience we have had with "amateurs" using half-inch VTR has been quite different. Some of the programs can be produced easily and well, when people have something to say. And a recent experience in Thunder Bay, where a citizens' group, Town Talk, produced a half-hour show on the local broadcast TV, has shown that the audience in the community takes a lively interest in local issues presented on TV. The program included phone-in comments from the audience during the broadcast (sometimes as many as fifty were received); very often the same topic continued spontaneously on phone-in radio the next day; and at least one organization was formed through interest generated by the program.

Community television should really try to create a new style of TV—get out of the rut of self-styled "objective" journalism, have a staff prepared to teach and support groups in making their own programs, and spend time seeking out participation by groups still too timid to try. Not quite a community-organizer role, but as close to that as to the classic TV role.

The need for a strong core of professional staff will always be a real one, however, as many citizens willing to participate in programs will not have the time or the desire to produce them themselves. But the attitudes of professionals will have to be those of "facilitators of communication" rather than those of "experts and controllers of communication"—they will have to develop talents as teachers and animators.

THE NEXT TECHNOLOGICAL STEP

If the idea of a community television is to be the tool we learn to use the tools presently available for community dialogue and debate, they will be used to prepare for the maximum facilities that will be available in the near future, with "wired cities" providing television and film "banks" computerized for easy access. There will perhaps be more of a chance to use that technological breakthrough for useful human ends.

THERE WILL BE A BATTLE

The foregoing theory of communications has not yet been put into practice, and it will not be easy to do. It disturbs the status quo; it risks controversy; it could generate a lot of changes. The owners of the facilities are very jealous of the prerogatives of property-owners, and the impact could be so great on the established media that they too may feel very threatened. Local governments may also feel nervous about all this free debate of public issues. Advertisers may dislike the idea of "free" TV advertising. But there will be a lot of talk, mostly vague and self-righteous, about "responsibility". It will take some alert, determined, convinced and committed people to make it come true.

Reprinted from Challenge for Change newsletter, No. 5, P.O. Box 6100, Montral 101, Quebec, Canada.

A community television service must be in some way responsible to the community. It must not become a vested commercial interest of any one group. It must not be commercial in the usual sense of the word, be able to attract a substantial part of the audience, and some system must be found to make available to it substantial amounts of money. It must be able to argue that amateurism in community television is an enduring virtue. Community participation is a two-way process involving the activists who appear before the camera and the viewers who are witnessing the events on the screen. Hopefully, the latter group will become more actively involved with their community, but whatever happens, it must be recognized that the audience is an important element in community television.
VIDEO in EL BARRIO and the CLASSROOM®

by Elliot Glass

A few students chuckle, a few frown, but all look attentively at the monitor which flashes the Spanish lesson of the day, “La basura en el barrio.” A lesson on Garbage in the barrio! “Outrageous,” shout the paradigm and verb specialists who would rather see a “grammatically well rounded lesson,” say “Juan en la universidad de Madrid” than a natural dialogue between two angry residents of el barrio. The fact is, however, that the unnatural “well rounded grammar lesson” is rarely if ever interesting or relevant and is most often not at all “well rounded.” Verbs, nouns and adjectives, in various set patterns and combinations, put the student into a verbal straight-jacket so that he is only able to respond to a programmed set of questions.

I remember that when I taught English and German in Tokyo, the Japanese, diligent and intelligent as they are, were unable to comprehend and communicate the simplest ideas, despite the fact that they had studied English for thirteen years. Why? They had learned very contrived conversations, neatly packaged information which corresponded to specific situations. Any deviation from the input patterns would confuse and confound rather than extend the grammatical concept. If you asked, “Do you have the time?” and if they had learned to respond to “What time is it?”, you would receive a polite Japanese smile and “Sorry, I don’t understand.”

The examples are far too numerous and every language teacher is all too familiar with the shortcomings of the pattern drills and the concocted stories and dialogues. TO THE STREETS MOLDY PROFESSORS? TO THE STREETS WITH YOUR PORTABLES! GO TO EL BARRIO AND TALK TO THE PEOPLE. It is there and not in books that the language lives. By video taping natural situations, you not only inform the students of the attitudes, values and problems of the Spanish speaking community in New York but also expose them to the dialect of over a million Puerto Ricans, Cubans and Latin Americans. We are in New York not Madrid. For those who still believe in a dialect caste system, I advise a rereading of La pronunciación española by the renowned Spanish Philologist and linguist Tomás Navarro Tomás. There are no superior dialects. That is not to say that we should teach “Spinglish” or any of the dialects spoken in New York, but simply train the student’s ear to be able to understand what is said in the streets of the city.

The video process (class → barrio → class) provides more than just exposure. With each new tape the paranoia of the middle class students lessens and finally disappears when the students themselves go to el barrio to make tapes for their class. When the latter happens, the University is supplied with an invaluable link with the Spanish speaking community. As a result of this communications flow between el barrio and the campus, tensions can be reduced and misunderstanding averted. It is probable that Spanish speaking community action groups will soon set up video theatres to disseminate information to their constituency and their software products can supply Spanish classes and, in fact, the entire academic community. I say the entire academic community because I am sure students will also be setting up ½" video theatres through Student Union funding—which would serve not only the local University but also the National University Community.

While the Video theatres—campus and community—are not yet a reality, video tapes of el barrio produced by professors and students alike are being used at Queensborough Community College and will soon be used at Columbia and C.C.N.Y. ALL MEDIA TO THE PEOPLE.
A four part view need be employed in approaching the problems of activating an information flow: 1) creation of hardware stations; 2) production of information; 3) methods of distribution; and 4) modes for integration information into the reality.

When People's Video Theatre began operating in early June 1970, specific objectives were outlined to define its aims as a model for community hardware stations (theatres) capable of sustaining themselves economically. PVT is conceived as a means for exposure of community people's ideas, goods and services to be supported by those using it. Toward the development of video journalism, PVT serves to explore more responsive handling of information in working with groups and covering their needs. The facility exists as a studio for groups to use. The audience participation in feedback—Live forums—has already provided a demonstration of the video process to hundreds. A video library now exists for use at other hardware stations.

The material input to create the theatre was $2000 worth of equipment, lost space ($200 a month) and tape (for twenty minutes in volume purchase). The commitment of initially two people's time and energy has now expanded to three and will soon involve more. Thus hardware stations can be set up, established by any who call themselves a group and can, by servicing a constituency, develop support activities for economic survival.

During the month of August 1970, PVT began a three-hour taping in Washington Square Park which was under construction. Only one-third of the park was open to the many youths, senior citizens, bums, Italians, blacks, summer students and travellers who use the park. Out of the week long taping, consisting of statements from the social services representative, local political people and some press. Responses to the tape were then collected, consisting of statements from the social services representative, members of the Washington Square Park's Council and the Chairman of the Architects Committee from the local planning board. This added to the original tape was shown to the public in the park on a Saturday afternoon during which time PVT collected feedback. The latter seeking to illicit positive input as to how the situation might better be dealt with.

This represents PVT's first attempt at video mediation. The process is conceived to deal with issues in creating lines of communication between antagonist groups whereby each can experience the information of the other without direct confrontation; therefore working for and towards a resolution of conflict through dialogue. Several types of antagonists can be identified. Establishment Agencies (EA), whether private or public, are one. Local Power Groups (LPG) whether political, cultural or commercial, are another. Thirdly, are Citizen Consumers (C-C), the people in the street, which in many cases. An issue can exist related to only one of these groups or can be localized within any one: example: city agency versus senior citizens, political party versus political party or youth versus senior citizens.

The process firstly finds an initiator, the EA, LPG or C-C that will be exposed to the antagonist element(s) for response. The cycle of "statement-exposure-response" essentially defines the video mediation procedure. A group may initiate the process by motivating an antagonist group, the first statement to which it will respond. This might apply to EA's or LPG's that are anticipating a conflict or issue or wish to mediate a conflict as a neutral party.

Passive participants of the elements can also be identified and involved through video polls and surveys carried on in the streets. Information can be input to the principal antagonist's dialogue. PVT believes that the above describes production techniques as significant to the making of programs as the coverage of an event, packaging of educational materials, creation of entertainment tapes. The function of a communications resource—a medium for idea interaction—is to put forth new frameworks for information handling being response to the process and problems of interaction.

The people are the information; media processes can reach out to their needs. Procedures for helping a group define and refine its statement, whether an initial or response statement involves utilizing the video system. Video rules of order governing debate, even within a group to get itself together, need be developed. Playback can be utilized to periodical punctuate debate for identifying points of agreement and disagreement by reviewing what has been discussed. A time structure facilitates cutting down irrelevant dialogue. The role of mediator functions best to guide interaction toward the creation of a concise, clear statement-tape, comprehensible to the antagonist group(s).

Approaching the problems of distribution brings to mind the portability of the hardware. Either via battery or AC line the equipment can be taken out on the street, into parks or to the community group meeting halls. A mobile unit might be created with the bare minimum of a car or small truck with an inverter to operate the equipment off the auto-battery, placing the monitor and VTR in the trunk. The camera can as well be operated with that power. Checking with local authorities, as to permits for street or park showing, is in most locales necessary. As to tape libraries and exchange policies between hardware stations, tape costs for copies is the essential problem. This remains to be worked out. Different relationships can develop between different groups.

The fourth and final area of concern is integrating information into the reality. PVT's thinking has produced several comprehensive proposals titled Environmental, Cultural and Campus Mediation Projects. The proposals outline procedures for setting up networks to collect and expose particular areas of information focusing on particular areas of human concern. For example, the Environmental Mediation project describes creating a number of communication districts in New York City manned by youth crews, who are given a number of tapes on environmental issues. The tapes would be produced in cooperation with the city and citizen ecology groups. Environmental forums would be conducted by the district crews within their districts, collecting responses to the various issues exposed on the tapes. This information would be fed back to the city and ecology groups and be responded to by definition of new programs for how local groups can deal with their problems related to the environment. The overall collection of information could be utilized as an encyclopedia of the NYC environment available to others for reference. It could supply the basic content of environmental curriculum for school use on all levels, etc.

The Cultural Mediation program is conceived as a state-wide mediation project. Cultural districts would be created and crews would collect the information of cultural activities within their districts. They would act to expose within their districts these activities to groups not heretofore aware of them. Upon completion of surveying each district an exchange of taped information would commence between districts all the time utilizing the feedback collection technique to involve and develop audiences. This bulk of information also would comprise an encyclopedia of the NY state cultural scene and be useful as a cultural curriculum for schools and a better roster of groups for public funding agencies who support the arts, etc.

The Campus project simply proposes establishing video theatres on all campuses, each capitalizing on their own wealth of information by producing educational and informational tapes. These could be exchanged via distribution centers that would purchase the original from the originating campus. The center would then make copies and distribute them at low cost to other campuses. Collective tape buying because of volume needs could cut costs considerably. Even equipment costs could be cut because of volume buying. The problems of organizing this effort are immense. We feel it is important to expose this potential before the assault of marketers pitching second-rate cassette and video package hits the universities. Students, through campus unions, have the option to select and fund the best systems which include production as well as playback abilities.

In conclusion to this section, PVT has recently begun to identify other media groups working in print, film, and on radio. And all media cooperation is obvious and necessary. Even, when possible, establishment media should be approached. The essential blood of media, information, flows in many forms. We might even say the first and foremost mediation project might be carried out on Media itself. All media to the people.
TELEVISIGOTHS

by David Silver

Television is so bad, its vision has so much turned to zombiland, that you tend to dismiss it as utterly lost. Glen Campbell, Tom Jones and Johnny Cash continue appearing on each other's shows endlessly and the News gets slicker. Why bother?

Because television is in fact a pure medium karmically created for expanding the awareness of masses of people. It is an eye in society. It is a means of furthering the reduction of dualism - in perception, alienation from Nature, and the competitive fascist disease that informs the system. Its priority use is as the medium through which to disseminate radical information: to show what's really going down. The best way to fight the ego-dominated, class-conscious, pitting competitive fascist disease that alienation from Nature, and the expansion of dualism - in perception, the priority use is as that week's Big Story. We are not only have television as that week's Big Story. We are not only have television as that week's Big Story. We are not only have television as that week's Big Story. We are not only have television as that week's Big Story. We are not only have television as that week's Big Story. We are not only have television as that week's Big Story. We are not only have television as that week's Big Story.

So, While the commercial madness scrambles to get Jackie Gleason, Ringo Starr and Oh Calcutta! onto cassettes, we should be obtaining the wherewithal to create an alternative TV. Students were not shot at Kent, but Life Magazine bought the truth and gave it to us as that week's Big Story. We must make the media into our hands so that there is no control or ownership of information.

Sony portable video machines are now available and in fact there are a lot of them around, lying unemployed in Universities that have in general forgotten what to do with their resources. These machines are easy to operate and therefore we, the people, do not have to be trained as TV producers (as if anyone can) to use them. Groups have already been formed that are free from corporate pressures to make television whether there are immediate outlets or not - Video-free and Raindance in New York, for instance. More groups must be formed all over the country, formed with intention of covering the immediate reality around them that the network cameras never seem to find. Then we can not only see beyond America but allow others in on the information. The truth isn't anybody's property.

At the Goddard College Alternative Media Conference, several groups of video freaks opened themselves up to each other and formed a Data Bank. That is, they decided to pool their video material and create a situation where there can be swapping of tapes, coming together of different production units and, perhaps most important of all, a Collective Video Bank that anyone who needs the information can draw from. This data collective will contain all the visions, guerrilla reportages and godknowswhat that people are into and going through. It is now the job of this radical 'network' to acquire the hardware (cameras, playback machines and video tape) and make actual a system which gets the information flowing freely. Cops bullying orしており stands as a witness and as a means of getting the recording equipment both to produce and play back half-inch video tape; there are video theatres like Global Village opening; the cassette home viewing scene is about to happen - it is therefore imperative that there be liberated production groups working right now on building up stockpiles of information that people can use to educate themselves and those less privileged.

People should acquire the portable equipment by whatever means they can and start taping - then send it to the data bank, perhaps swapping that for other stuff taped thousands of miles away. Camera units must be loaned or given to ghetto dwellers, factory workers, freaks, artists, mental institutions, jails, travelling neo-Kesey bands of bus dwellers - PL and yogis both. Then we not only have television creating the vitally necessary free flow of information but acting as mind-blowers, electronic therapists for anyone who perhaps would benefit from digging him or herself on a monitor. Self awareness via TV could be one of the most important functions of the medium in the seventies; what golf pros are doing now with the equipment could be put to use immediately to help the underprivileged, the unhealthy, the oppressed in general get back into their selves. As the video bank grows so will its usefulness, in ways that are not even possible to imagine right now.

Those interested in the meaning of the word 'alternare,' some of whom were at Goddard, want to see the media opened up to everybody's eyes, thereby avoiding, destroying the energy-killing paranoia of feeling that the networks own the air. It is shortsighted to believe that the networks have all the power - as the technology advances, old modes of communication channelling, become obsolete: already many colleges have the equipment both to produce and play back half-inch video tape; there are video theatres like Global Village opening; the cassette home viewing scene is about to happen - it is therefore imperative that there be liberated production groups working right now on building up stockpiles of information that people can use to educate themselves and those less privileged.

The Anti-Network then creates a readily available mass of information, the presence of which in the society both freaks out the fascists and substantiates the reality of a counter-culture and an on-going revolution. The Big Eye Big Brother Kafkaland that could well happen in toto in America can be aborted by opening up the immensely powerful TV medium. But quickly Before the incoming of the plastic, inordinately cruel, computerized apocalypse of soft repression takes over and erases the potentially liberated minds of modern man.

It is stupid to big deal about circumstances brought about by a somewhat unreal conference in the hills of old Vermont, but it is a crime not to stress the urgency of the situation as regards the brainwashing of a nation by the use of media. Therefore, it is only sensible to bring our visions out into the open right now and let people know that they are realizable if we only seek alternative modes of communication. Television either will become the program manager of the people or the eyes of our brothers - the former to dehumanize us, the latter to humanize us. Television unfiltered stands as a witness and as a friend to truth and a powerful enemy of distortion, hypocrisy and cruelty. As TV's technology improves, so does its potential pacification, but so does its potential for jolting people into seeing what's going on.

Totalitarian, sexy fascism (the kind that needs no Hitler, needs instead the mindfuck power of just exposing the war dead in Vietnam with feminine hygiene spray ads) comes out of artifically created realities - the commercial media shape the minds of the public not under the weight of moral conviction but under the amoral, self perpetuating criteria of making money and having power over people under you. Truth doesn't sell Lavoris. So the news readers will remain calm and still tie their ties properly as the tactical nuclear weapons start being used, cross lasers start popping up here and there, as listed dissenters ('ideological criminals') are locked away or murdered, as blacks are blatantly discriminated against and enslaved anew. So Dick Cavett still tells jokes in between getting into hand some intensities with Margaret Mead or whomever.

The alternate media must give as many cameras away as possible - this is the only liberation of the media that will actually change the state of things. The real community must become the program manager. Collective ignorance cannot be destroyed by involving yourself in the pitifully ad hoc, unmotivated except-by-profit and ego-gain machinery of corporate businesses thinly disguised as communication media. A vital TV collective doesn't need NBC - all it needs is a commitment to getting the recording equipment into the hands of the radically aware, the humane, the visionary, the man in the street.

FOBILE MUCK TRUCK

NEW YORK:
Woodstock on Broadway
Airplane at the Fillmore
Trinity Church—Business/rock symposium

VERMONT:
Goddard Alternate Media Freak Out
Hackett's Garage (or the old fashioned toilet)

SAN FRANCISCO:
North Beach, Broadway (topless)
North Beach, Grant Ave.
Talk back, Black paroles involved in art program
Free clinic in S.F.
Los Sietes, Calif.

grape pickers interviews, gallery opening.


PHIL GIEZEN

Palace Theater (remote) 4 hr. originals
with Dorothy Combs Morrison
(Oh Happy Day), Lamb, Mad
River, Rad Lab Moog Synthesizer,
James Smith, Demersia, James Rheinhart, MC.

Video LP
1 hr. Studio Mix
1 set from each of above.

Post Palace Video
2 hr. original
40 min. mix effects
over recordings.

Media Mind Massage

Upper Grant Street Fair
Soledad Brothers Documentary
Fremont Dragstrip Documentary
Picies are Witches

Additional listings on request.

PHIL GIEZEN, 47 Clarion St., San Francisco, California

GLOBAL VILLAGE

Abbie Hoffman:

Katzman Interview on Trial
Press Conference
Rally-Panthers
Jerry Rubin:

Press Conference
Global Village with Rosemary Leary
CBS Demonstration on Censorship of Abbie Hoffman
Peace March—18 Minute Documentary
Street Scenes—Bowery—Harlem
NYU Rally
Afeni Shakur—Black Panthers
Allen Ginsberg
Phil Ochs
Jimi Hendrix
Johnny Winters
L.A. Police Riots
Pink Floyd—UCLA
Rosemary Leary at WBAI


Nov '69
March '70
March '70
March 20
May '70

June '70
April 2, '70
Spring '70
May 1 '70
May 1 '70
April 70
April 20
April 70


PHIL GIEZEN, 47 Clarion St., San Francisco, California

GLOBAL VILLAGE

Abbie Hoffman:

Katzman Interview on Trial • Press Conference Rally-Panthers Jerry Rubin:


Nov '69
March '70
March '70
March 20
May '70

June '70
April 2, '70
Spring '70
May 1 '70
May 1 '70
April 70
April 20
April 70

NCET

More than 100 hours of experimental videotape in color and black and white. Two-inch, one-inch, and half-inch including:
The Bridge By Cinematographer Phillip Greene Linearity Electronic composer Richard Felciano Trio Electronic composer Richard Felciano Descartes by poet Joanne Kyger Feedback and Tape Featuring dancer John Graham Delay

Heimskringla 90 minute color production for NET; both & West Pole with videospace mix by Robert N. Zagone

Dawn Experimental piece by Brice Howard
Color
Growing By sculptor Benedict Tatti / Color
Recent tapes include extensive explorations in color and black and white of light forms, largely the work of Willard Rosensquist, and of feedback graphics by painter William Gwin. The Center also holds copies of experimental videotapes produced by a number of the fourteen interns from public television stations who have studied at the center over the past year.

NATIONAL CENTER FOR EXPERIMENTS IN TELEVISION, 425 Brannan St., San Francisco, California 94107 (415) 362-4650

P V T

MEDIAION DOCUMENTS:
15th Street Squatters Washington Square Park 14th Street Business Survey

FEATURES:
Tour of "El Barrio" by a Minister of the Young Lords Gay Liberation Day The Brotherhood of the Spirit Commune Puerto Rican Independence Day

VIDEO POLLS:
Should policemen carry guns? Should cars be banned from Manhattan? Should the U.S. be involved in Indochina?

NEWSREELS:

VIDEO COLUMNS:
Rene Dubois: Ecology
Frank Gillette: Video
John Mandel: Art
Judith Lipfield: Education Robert Verderosa: Music
Dr. Guinea: Lead Poisoning

MINI-FEATURES:
New York Company: Jewels
Allen Ginsberg: Mantra's and Poetry
South Bronx Community Action Theatre (Flamenco and Afro Dances)

IN PRODUCTION:
Alternative '70's: A survey of people in culture, science, politics, education, media and government service as to their view of the coming decade.

PEOPLE'S VIDEO THEATRE, 544 Ave. of America, NYC
Ken March and Elliot Glass.
All tapes: Sony 1/2 Old Generation

RAINDANCE CORP.

OFF THE AIR:

STEVE CHRISTIANSSEN

P V T

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RAINDANCE CORP.
STEVE CHRISTIANSEN

OFF THE AIR:
Jerry Rubin
Bill Kunstler
Dancing and Stuff
Omega Point Omega

Where is Columbia?

CREATIONS:
Massage Montage—Mideke, Hilton, Cohen

STEVE CHRISTIANSEN, Dept. of Instructional Systems Raps (Forthcoming)

EAST RAP arrayList

WOMEN RAPPERS:

Pamela Z

CONSUMPTION:
Pollution

La Dume est Finie

STEVE CHRISTIANSEN, Dept. of Instructional Systems, Antioch College, Yellow Springs, Ohio 45367 (613) 767-3731

All tapes on either 1/2" Shibaden, or 2" Ampex format. Most of the Originals were made on Shibaden.

TOM DeWITT

Interview 30 min Camera Three broadcast Sept. 26, 1969. At WCBS TV 525 W. 57th., NYC. Contact office of Merrill Brookway for viewing.

Instant 20 min Experiments from the Spring of '68. TV Dept., San Francisco State College. Contact Herb Zettl for viewing.

ELECTRIC EYE

Dick Gregory 2 hrs. Speaking at San Jose State College, November 1969.

Philo T. Farnsworth III 3 hrs. Interview with the son of the inventor of television, Philo T. Farnsworth II.

System of Teaching Reading by Color Coding Words several Work of Dr. Cattegato at San Jose 1 hr. Includes some of alpha's Zen and Yogi implications. Electric Zen?

Alpha Wave Research at Stanford Showdown in Portland 30+ hrs. (Hardly a Working Title) Political scene in the Pacific Northwest.

ELECTRIC EYE, 584 Park Court, Santa Clara, California 95050 (408) 244-3014; In San Francisco (415) 626-7893

TOM DE WITT, Badel Road, Poughkeepsie, New York 12603.

HOMESKIN

a 3-hour Sony 1" tape (3 reels)

ATASCADERO STATE HOSPITAL FOR THE CRIMINALLY INSANE ALIVE ON THE OTHER SIDE Visit by Cleveland Wrecking Company Band, Free Family, Noel Jewkes, Food, Guards, Outmates

HOMESKIN, Peter Berg, P.O. 31251, San Francisco 94121

RAINANCE CORP.

PART I

Summer '68 St. Marks Tapes (street Rapping)
Jan.-Feb. '69 Antioch tapes (midwestern American subculture; interviews and experimental video entertainments).

May '69 Composite tapes for Wise Gallery show—TV as a Creative Medium (Panasonic)

Aug. '69 Woodstock Tapes

March '70 Locusts Attack Chicago

California trip (The Rays, and Supermarket, plus Here's to your Goiter Man, Tender is the Tape, Alternate TV sub-edit pre-prototype No. 1, More, and Alternate sub-pilot).

April '70 Earth Day in New York (Uptight about Bushes, I was an Eagle—I am Extinct)

May '70 Interview with R. Buckminster Fuller, NYC

May '70 Post-Kent State-Washington DC Peace Demonstration

City Hall Labor and student anti-administration demonstration plus News taped off TV during the week of the Kent State killings and Cambodia protest demonstrations

President Nixon's State of the Union Message (midwestern Peace demonstrations)

The Party the President threw for the Astronauts Keep: composition for four synchronized screens Loop Sketch: an abstract tape composed of feedback patterns

Ira Schneider, Frank Gillette, Michael Shamborg, Paul Ryan.

All tapes Sony 1/2" old generation.

PART II

Mountaindale Festival (Frank Gillette)
Year of the Mushroom—Upstate N.Y. Commune at home and on stage with musical show (Frank Gillette and Paul Ryan)

Robert Schwartz—street dancer

Nam June Park at WGBH (Frank Gillette)

Interviews with Levittown, N.Y. housewives and newlyweds about their television viewing tastes

Lower East Side Park Fair

Walter Brody—interviews and verite video of Ecological design commune in New Hampshire

N.Y. State CATV operators convention

Glens Falls, N.Y. profile of a town about to install CATV

Clinton Program's Tapes of and by Junior High School Students in Clinton Program

Tapes by Judy Yalkut

Nicholas Johnson at Raindance loft

RAINANCE, 24 East 22nd Street, NYC, 982-5566/7

All Tapes Sony 1/2" Old and New Generation.
ERIE BIEGEL

Einstein 5 min. Video exploration into the inner essence of the mind of Einstein. To music of Rimsky Korsakov, Color.

Symphony of Planets 12 min. Cosmic flight into the macrocosm and microcosm and finally life. To music of Tchaikovsky.

Tomasso Never Knows 2½ min. Video abstract trip to the music of the Beatles’ song of the same name.

Psychelevision I 27 min. A program expressing the Karma of 1968 through psychedelic abstractions combined with outside reality. Featuring: Susan Berge, dance; Peter Sorensen; Columbia SDS and music of the Beatles, Stones, Cream, Korsakov, and Procol Harum. Portions in Color.

Nineteenth Nervous Breakdown 2 min. Eric Siegel mouthing Stones song of same name.

ERIC SIEGEL, 2852 California Street, San Francisco, Calif. 94115

All tapes available on Sony ½'' New and Old

TVX

WOODY VASULKA

Filmore East (with Jon Blom) Jan-Feb 1970
Jethro Tull 1 hr
Jimi Hendrix & Band of Gypsys 1 hr
Voices of East Harlem 1 hr
Ten Years After 1 hr
Zephyr 1 hr
Doug Kershaw 1 hr
Bonnie, Delany & Friends 1 hr
WBAI Free Music Store Jan-May 1970
Peloponnesian War—Daniel Nagra 2 hrs
Archie Shepp 40 min
Evening of Black Contemporary Music 40 min
Hank Johnson & Steve Chambers 40 min
Wind Ensemble Workshop 20 min
Bartok Trio 20 min

OH Broadway Theaters May-June 1970
Femme Fatata—Jackie Curtis 1 hr 10 min
Space Mass—Bird Can Fly Gallery 20 min
Theatre Laboratory Ensemble 45 min

Sketches June-Aug 1970
Charles Story 5 min approx
Mouth Piece 5 min approx
Nixon’s Speech 5 min approx
The Rose 5 min approx
Animal’s Grief 5 min approx

Experiments Some of the experiments are done with direct interaction of Sound Synthesizer (Moog & Buchla) Experiments with Moog coordinated by Richard Lowenberg; Moog by Gino Piserchio.

Structures
Single and Double Feedbacks
Distorts

Many Hours of Personal Taping Jan-Aug 1970

WOODY AND STEINA VASULKA, 111 East 14 St, New York

All tapes Sony C-V series ½”

PART II:

POLITICAL
Washington, D.C.
New Haven, Conn.
Blood, Sweat and Bullshit
Anti Blood Sweat and Tears Demonstration
Hard Hat Demonstration
Save Sunfish Pond Demonstration
Panther Chants
Richard Nixon ending war
U.N. 25th Anniversary Cop Banter
High School Confidential

MUSIC

Jerome Rothenberg
American Indian Poetry
Manhattan Center Concert—Rock Music
N.Y. Pop Festival—Randall’s Island
The Ruffins
Sarod Player
Ten Wheel Drive Road Concerts

ALTERNATE CULTURE INFORMATION—SURVIVAL TAPES

Ferro Cement
Building Geodetic Dome
Wild Herbs
In the Kitchen with Davidson & Una
Dr. Electron—on soldering connectors and on microphones

USING ½” Sony Equipment

EVENTS

Goddard College Alternate Media Conference
N.Y. Pop Festival Interviews
Electric Yoghurt
The Making of a Times Square Pornographic Flick
AIA Convention
Soho Artist’s Benefit
Feast of St. Anthony, N.Y.C.
Hell’s Angels Meet
Sussex County Horse Show
Ray Brock’s Wedding
Alice’s Barbeque
Phoenix House Happening ’70
Astral Fair
David Peel at Columbia University
Beautiful People’s Party

MISCELLANEOUS

Vermont Fair-haired Children
Hog Farmers
Joe McCord—Pantomime
Flying Above NY
Sailing up the Hudson to Sing-Sing Windows
Money Commercials
Feedback experimentation
Officer Obie Interview

VIDEOFREEX, INC.

PART I:

Industrial and Education
The Food Line—“Supermarkets for Progress”; The Group; Group Names—March ’69
Easter in Spain—April ’69
Smokey Bear Commercial—Sept. ’69
California Experimental High School; Jessie Ritter at San Francisco State—Nov. ’69
Cloisters—Dec. ’69

Genre Tapes
Crawfish and Sally Bell—July ’69
Chadis—May ’69
Rivington Street Dope Speech—Aug. ’69
Tarwater—Dec. ’69
The Great White Way—Jan. ’69
Eclipse and Eireahl; Trippy Meeting; House Hunting I and II—April ’70

Music
Buzzly Linhart—last half of ’69
Incredible String Band—Nov. ’69
Major Wiley; Morgan, Mason and Downs; Hubie—Dec. ’69
Charlie Mariano—Jan. ’70

VIDEOFREEX, 98 Prince Street, NYC 10012 (212) 925-7286
Nelson Becker (Canada), M. Blumberg, Nancy Cain, David Cort, Bart Friedman, Davidson Gigliotti, Chuck Kennedy, Mary Curtis Ratcliff, Allen Scholom, Parry Teedale, Carol Vonnobel, Ann Woodward, Fat Leo

All tapes ½” Sony Old and New Generation

VIDIDEOGRAPHICS, INC.
STAN VANDERBEEK

**Violence Sonata** 1½ hr. Simultaneous 2 channel/screen 1/2 hr. essay/drama on violence (an off-air record of the WGHB simulcast produced Jan. 12, 1970 as a color program.)

**Violence Sonata** 45 min. Color excerpts of the above, to be screened as 2 channel simultaneous event, in 3 parts. “Man,” “Man to Woman,” and “Man to Men”

**Danceworks** 45 min. Unedited, meant as a background for a live dance concert. Color high

**Danceworks** 2 hrs. Complex video-mix of dancers and film, intended as a background for a live dance piece, intended also as a multi screen simulcast.

**O, Or, For, Form** 1 hr. Complex video-mix of actors, film, and slides meant as a multi projection.

**A Walk in the Mill** 45 min. Multi projection video-mix, meant as a dance film.

**Supereimposition** 15 min. A political/social farce.

**Newsreel of Dreams** 45 min.

**One** 10 min. Experiment with graphics and film chain.

*indicates that a 16mm color or b/w kinescope exists of the work.

STAN VANDERBEEK, Gate Hill Coop., Stony Point, NY

**THEATRE**

T1/1 Tony O'Gara Mine, London Docks

T2/1 Bruce Lacy Moon Landing, Birmingham

**UNDEFINED**

U1/1 London from the back of a Harley Davidson

U2/4 Roy Sawh interview, London

The above is a partial list of tapes available through: TVX, Institute for Research in Art and Technology, Ltd., 1, Robert Street, London NW 1, England

John Kirk, Cliff Evans, Steve Harman, John Hopkins

**VIDEOPHOTOGRAPHY, INC.**

1. Woodstock Tapes
2. WNEW Birthday Party (Ten Wheel Drive/Exuma/ Van Ronk)
3. Judith Crist
4. Earl Wilson
5. Bosley Crowther
6. “The Wedding” (High Frees/High Society)
7. Earth Day—Margaret Mead
8. Columbia University Graduate School of Business: STRIKE!
9. Children at play
10. Bicycles
11. Folk Singers in Central Park
12. The Band—Felt Forum
13. Wall Street Demonstrations
14. Earthnight Theatre
15. Gay Liberation Day
17. Freddy Ford—New York Auto Show
18. Village Gate Benefit for Chicago 7 and Panther 21 (Ruby Dee, Vivica Lindfors, Jerry Rubin, Gerry Leavecort, Abbie Hoffman)
19. Di Sant'Angelo Fashion Show
20. Protest Against High Price of Woodstock Movie
21. Sandy Bull
22. Maureen Grey
23. Ibiza Rummage Sale

All tapes Sony ½” Old Generation

**VIDEO VAN**

Spacedream 23 min. IVC Black and white

Media Mind Massag 18 min. IVC Black and white

Thunderegg 15 min. IVC Black and white

Post Palace Video 40 min. IVC Black and white

Palace Theatre; with Mad River, rock group; Jimmy Smith, guitarist and vocalist; Lamb, Dimensa, acting troupe; James Reinhart, juggler; & Doug McKechnie, Moog.

**VIDEO VAN, INC.** Tom Martin, 280 Visitacion Mall, Brisbane, Calif. 94005. All tapes Sony ½” Old Generation
JUD: You entered television at 15? E: At 15 I did the first outward thing with television, building the first TV camera, and it continued from then on, building more and more equipment.

J: What had you been doing before that time? E: Electronics. Pure electronics. You were studying electronics? E: Yes, electronics, and then I got turned on to TV through electronics.

J: Actually first get to work with videotape? E: About 2 years ago, someone gave me some kind of material that could be' manipulated.

J: And that's what I began to get a hold of. You start to get these two, and that's what I'm mostly concerned about. That's what I'm mostly interested in, on a certain level. And that's what I'm going to continue to do.

J: Do you see the video synthesizer making television a performing art? E: I see it doing several things. It'll enable live performances because no sets are needed, you don't have to control actors—you can present abstract visions, images, with music. It'll work especially well with music, with live groups. You can make the documentary which gets dated, and the other kind which doesn't get dated. For instance, this kind of video if you're expecting regular people to pay, because American technology is just not going to keep up with it. The Japanese are giving us all our media—supplying us with the media tools, and we have to let them know what we want in the future. J: How did you find the video synthesizer? E: First of all, it fascinated me, and secondly people are interested in making something new—into an expanded medium, and a few are getting ready for it, by making the new hardware that will enable the new kind of programming—the new kind of video communication and all the possibilities of what you can do.

J: Do you think flat tubes will make the color sets obsolete? E: Oh, yes—if they perfect it. J: In Truflaut's film of Bradbury's FAHRNHEIT 451, people have wall size color television in their homes, during an era of book burning. E: Well, video will become like books, with the advent of dubbing, if they'd be burning video cassettes.

J: You don't think there would be Instamatic television? E: No, the Wise tapes were different material. The Channel One tapes are needed, you don't have to control actors—you can present abstract visions, images, with music. It'll work especially well with music, with live groups. And that's what I'm mostly interested in, on a certain level. And that's what I'm going to continue to do. That's what I'm mostly interested in, on a certain level. And that's what I'm going to continue to do.
R: Again, the when of that is spread.
S: How did it begin to concern you?
A: I think when you're dealing with an analogue that got me much much further. That analogue is just a vessel of volume. But it's still a two dimensional surface.

B: Welt, it's a curious thing. I wish j...and in a way that's exactly what I was trying to say and it took me near 5,000 words to come to that now and that is a real serious problem...

A: That is the place in is fact definable.
B: Yeah, I recently was invited to write an article for the M.I.T. Technological Review and it involved same thing that concerned me, and I did, and in a way that's exactly what I was trying to say and it took me near 5,000 words to come to that now and that is a real serious problem...

How did it begin to concern you?

B: How would you describe the Center to someone who's never been here? If someone were to ask you, what is your Center do or what is your Center?

A: How did you realize that there was a flow of electrons? I thought that was very basic.
B: Why did you realize that there was a flow of electrons? I thought that was very basic.
A: What made you decide to deal with the technology basically as it was rather than to try to adapt it in an analogous way?
B: What made you decide to deal with the technology basically as it was rather than to try to adapt it in an analogous way?
A: I think when you're dealing with an analogue that got me much much further. That analogue is just a vessel of volume. But it's still a two dimensional surface.
B: I'm not sure what you mean by that.
A: I don't know whether it's good or bad or indifferent or flawless or flawless or giant or midget; all I know is that, you know, the singular experience is so goddamned glad, I can hardly bear it. Not because I don't dig a lot of stuff that's going on around, but because that question kept coming up, and by golly it had to follow that question long enough. What can you do if you dump the optical system and make it a two dimensional system itself? How strongly are these other histories going to be at work now? When we're around the theatre, we've dumped the motion pictures, we've dumped journalism, we've dumped all the other images in one hour. Now I don't mean they know what's going on in there, but they spend a lot of hours. The average American housewife, 6-6 hours a day is up like, 'That's a lot of looking experience, So when you come into a situation like ours, you sit down, and you are an expert in these old habits. What I was going to say is that here I've been working with this stuff for awhile. I'm getting out of these sets, and we had a two-week workshop last weekend and some teachers had made a tape, and they were watching the monitor, and it was time for lunch, and lunch was outside, and I was watching that watching with it, and I was thinking-I know what they're thinking cause I'm the same thing. We want to eat all the time. We want to eat all the time. We want to eat all the time. We don't need to do anything. But at any rate over a period of some time they made some imaginative proposals. That is to say, the Rockefeller Foundation was obviously interested in having some kind of work and over a period of time a proposal was made to them. The response to it ultimately was that the Rockefeller Foundation gave $150,000 and said in a year do what you can with this. Kind of generally moving around, and that happens when you bring artists into a television studio. Although, I frankly don't think that sentence bears down in the way that...

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A: I think when you're dealing with an analogue that got me much much further. That analogue is just a vessel of volume. But it's still a two dimensional surface.
B: That makes your analogue very interesting. You know, with analogue, you're always dealing with a material which may not be invent something? And it became a matter of time in other than auditory terms. I have a sort of an unsophisticated visual, and that's not talking about the optical system. It's just saying, let's stay away from that for a moment. Therefore, when you do, you don't care what the manifestations are concerned, it's got to be finite or else you can not handle it. And it's a question merely second, you start getting into mighti seconds, etc., but that still makes it fairly clear to me that you know the quantity of time that you are dealing with. If you want to that you can make an alternative estimate of maybe a million images in one hour. Now I know that anybody who knows how... taken an environment in which gifted imagination can be directed, since I'm not a composer, I have a sort of an unsophisticated auditory and in a way that's exactly what I was trying to say and it took me near 5,000 words to come to that now and that is a real serious problem...

How did it begin to concern you?

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Lion in potential maturity.

"The convoluted wording of legalisms grew up around the necessity to hide from ourselves the violence we intend toward each other. Between depriving a man of an hour from his life and depriving him of his life there exists only a difference of degree. You have done violence to him, consumed his energy. Elaborate euphemisms may conceal your intent to kill, but behind any use of power over another the ultimate assumption remains: 'I feed on your energy.'"

"The struggle between life elements is the struggle for the free energy of a system."

Energy is the basic stuff of the universe. Its use controls the history of mankind up to 1945.

"Information has to do with any posterior restrictions of a priori probabilities."

Only pure energy has no past.

```
E = mc^2
```

Simulated out of the potential of the universe. Energy can be adequately described by the laws of probability.

Ecology—a new rubric—a new way to express the.

```
S = -H
```

That all conscious beings wish to understand continuously as they contemplate the totality of what man is presently doing to himself and his environment. A radical evocation of horror at our present mode of utilizing energy which is the legacy of our planetary history. Eecology is an unsolved problem—a form of a question; something to do about how we live. It is derived from the Greek word for house, the same word that fathered economics, the management of the household. Until ecology and economics become synonymous our Earth House Hold will continue to be mismanaged.

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H = INFORMATION S = ENTROPY
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"Evolution has shown that whenever the need arises the art develops." Buckminster Fuller

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H = INFORMATION S = ENTROPY
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In the old environment (pre 1970), information followed S; in the new environment (post 1970), S will follow information, until the need for $ disappears.

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S = -H
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S = -H
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Earning a living is out; spaceship Unicorn Earth is a global commune upon which we all must learn to live. To do this we must make new agreements. The constitution was an agreement that grew out of the first American revolution. A revolution that Philadelphia was deeply involved in, particularly in regard to financing. Now we face the second American revolution.

"Revolution is a turning; the imposition of a new head upon an old body politic. It is an old game."

Revolution is out. Transformation is in. Transformation involves the entire environment and includes the very form of man's being.

```
S = -H
```

"You are co-opted when the adversary puts his goals on your power; you are not co-opted when your power allows you to exploit his means (or contradictions) in behalf of your goals."

Ecological concern is potentially the most radical mode of confronting our lives, for it forces us to totally rethink our relationship to our environment. It includes all the old linear concerns—the war, civil rights, black power—in an umbrella that will naturally be controllable.

"The association of unusual physical conditions with a crisis in evolution is not likely to be pure coincidence. Life and its environment are interdependent and evolve together."

Simultaneously, the new environment is potentially the most radical mode of confronting our environment. It forces us to take into account all the old linear concerns—the war, civil rights, black power—in an umbrella that will be controllable. From this interaction, new environments will evolve.

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"Born under the appearance and the sign of Chance, it is only through reflective purposiveness, slowly acquired, that Life has found its hope to raise itself yet higher by auto-evolution, in the twofold direction of greater complexity and fuller consciousness."

"It is probably justified to say that any system formed by reproducing and interacting organisms must go on to develop a kind of assemblage in which the production of entropy per unit of preserved and transmitted information is at a minimum. The structures that endure through time are those most able to influence the future with the least expense of energy. The process of succession is equivalent to the process of accumulating information."

Chaos or entropy is the natural pathway of energy. The tendency of things to eventually come to a stop—"The heat death of the Universe."

"At a first approximation, it to begin with we try to observe it from a purely experimen-tal standpoint, the human amounts to no more than a particular fragment of matter brought locally to a state of extreme complexity or (which seems to be only another aspect of the same phenomenon) extreme 'corpuscularity.' The effect of its elabora-tion being to bring about the positive pre-dominance, on a reflective level, of the pur-poseful operation of individual centres of action over the workings of hazard and large numbers."

"The essence of our evolutionary progress from amoeba to conscious man can be described in three steps:"

1. Learning—perspective to store and recall information—a trait that can be found far down the phylogenetic tree.
2. Reflection or consciousness—knowledge of learning—a trait that divides man from the other animals.
3. Meta-consciousness or non-reactive states of mind, called 'clear' or 'leptoid' and any number of other names in systems too manifold to name—knowing how to know—total control of all the energy/information available to the being—the correct use of the human biological—computer called a brain. It is a stage of awareness reached by few in human history, but it must become the goal of everyone if we are to survive on this
bear of planetary consciousness, must learn to be the enzyme of the biosphere: the protector of energy/information instead of the despoiler.

“Anything that accelerates change and energy flow in an ecosystem causes a reduction in potential maturity.”

Ramon Margalef, Perspectives In Ecological Theory

Facing the swiftest and largest transformation in human history, we must learn to effect the change without destroying the accumulated store of energy/information that is our legacy.

The recent wave of volcanic eruptions and man made oil spills parallel each other. They are both indicative of a crisis. Man at the crossroads. On the cross. Stretched. A tension that must shortly be resolved.

Presently, all orders are pre-paid, certified check or postal money order, with COD shipping costs and 3-4 weeks delivery.

We provide, on a special order basis, units with any of the above features designed for simultaneous operation by two or more people, or units with specially designed feedback system. Special requests welcome.

About 20% of the U.S. population has no measurable alpha rhythm thus rendering an alpha conditioning device useless. Although a continuous feedback device is still useful as a meditation aid, the binary units would be of no use to such persons. If you purchase an ETC other than ETC I, for individual rather than group use, be forewarned of this possibility. You might consider having an EEG prior to purchase to determine whether you have measurable alpha waves.

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“In this system there is only the movement of information.”

The Late John Brockman

Reprinted from Earth Week 70, a publication of the Philadelphia Earthweek Committee.

Students of Za-zen, a technique of Zen meditation attain the sustained ALPHA state while meditating, as measured by an EEG. The same is true for yogic and transcendental meditators. Children up to the age of three or four years, while awake, are in the alpha state most of the time.

Electronic Technique for Centering, ETC, is a self-instructional tool which when conscientiously used may enable the student to attain the sustained Alpha State.

When “meditating” the brain electrically changes from a normally noisy, low volume signal to a high, volume, resonant pitch. This pitch, called the alpha rhythm, in advanced stages of meditation lowers in tone until it becomes the Theta rhythm. ETC, by means of pads placed on the surface of the head which act as antennae, receives these resonant pitches and changes them to an audible tone; thus the feedback occurs which is the basis for learning. By concentrating or “centering” on the presence of the audible tone one learns to sustain the alpha state. Once recognized and under self-control it can be reached without the use of ETC. ETC is ideal for group use since it is usually used only briefly once a day per person.

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The convoluted wording of legals became a systematic way to confuse and limit our freedom. This process has led to a situation where we are bound by rules and regulations, yet still managing to find ways to circumvent them.

Man the organizer of chaos, creating negative entropy. In this universe, the only way to survive is by adapting and evolving. The future is unpredictable, and we must be prepared to face any challenge that comes our way.

From a purely experiential standpoint, the human species has a unique ability to learn and adapt. This learning process is essential for our survival and is a trait that divides man from other animals.

The essence of our evolutionary progress from amoeba to conscious man - can be described in three steps:

1. Learning - the ability to store and recall information - a trait that can be found even in simple organisms.
2. Reflection - consciousness - knowledge of learning - a trait that divides man from other animals.
3. Meta-consciousness - non-reactive states of mind, called 'clarity' or 'emptiness' - any number of other names in systems too manifold to name - knowing how to know.

The future of planetary culture (invention, innovation) is directed by consciousness. Man aware-a force-in an umbrella that will enable us to protect our environment from potential harm.

Information controls the future. Computers!! The old calculus of gain and loss is replaced by negative entropy in which concentrations of information reverse the trend toward disorganization. This is the path man has to take if he is to both use and to escape from his previous scientific insights. In this way, the understanding that he acquires of the universe he lives in, man in the universe comes to be exemplar and executor of the highest exercise of negative entropy.

“Evolution has shown that whenever the need arises the art develops.” - Buckminster Fuller

For any system formed by reproducing and interacting organisms must go on to develop a kind of amalgamation in which the production of entropy per unit of preserved and transmitted information is at a minimum. The structures that endure through time are those that most able to influence the future with the least expense of energy. The process of succession is equivalent to the process of accumulating information.

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At a first approximation, if we try to observe it from a purely experiential standpoint, the human species can be considered as simple organisms with the ability to learn, adapt, and evolve. The evolution of life on Earth is a process that has been ongoing for billions of years, with each species adapting and evolving to fit its environment.

There are limits beyond which action over the workings of hazard and large numbers is impossible - the effect of its evolution is to bring about the positive premonition of a reflective, purposeful level of the purposeful operation of individual centres of action over the workings of hazard and large numbers.

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**PSIONICS**

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**ETC 101** is continuous feedback only. The others are continuous and binary.

**ETC 101**
Compact "transistor radio size." With earphone the student may listen to his brainwaves amplified and rendered audible by the circuitry. Alpha or Theta waves become easily distinguishable from the normal brainwave. Uses two 9-volt cells. $75.

**ETC 202**
A deluxe student model. All the circuitry is molded into a set of cushioned headphones which insures undistracted listening. Student may vary the controls so that the sound is heard only when the chosen amount of Alpha-Theta is present. Uses four 9-volt cells. $150.

**ETC 303**
Experimenter's model for increased versatility. With this model the experimenter may connect various sensory apparatus such as a light, record player or strobe to the Alpha-driven switch. These may be switched on or off and the switching on-set and off-set delay times varied. Includes headphones and output jacks for recording. Uses 20 "C" cells. $350.

**ETC 404**
Includes, in addition to the features of ETC 303, a built-in tape recorder and Ni-Cad rechargeable batteries with charger. With this model it is possible to record Alpha sessions and play prerecorded tapes for use as switched stimulus. Portable. $650.

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You may want to read the following:
*Altered States of Consciousness* edited by Charles Tart.
*"Conscious Control of Brainwaves" in Psychology Today April '68.
*"Physiological Effects of Transcendental Meditation" Science March 27 '70.

Contact: Psionics, P.O. Box 1919, Boulder, Colorado 80302.
**FEEDBACK**

**MEDIA ACCESS CENTER**
A DIVISION OF PORTOLA INSTITUTE

We grew out of a kind of unending nuclear reaction of ideas which we had to put a handle on. The germinal idea, last winter, was a community video center serving the information needs of its users. We decided to set up a model center for high school students, and funding permitting, the Scripps Center High School Video Workshop will be in full operation this year as part of Portola Institute.

Working with the tools, primarily Sony portapaks, we discovered how simple, how powerful, how widely students, and funding permitting, the Scripps Center decided to setup a model center for high school centers serving the information needs of its users. We are learning about the electronic image with Brice Howard and his associates at teachers' workshops. We are learning about the electronic image with Brice Howard and his associates at teachers' workshops. We are learning about the electronic image with Brice Howard and his associates at teachers' workshops. We are learning about the electronic image with Brice Howard and his associates at teachers' workshops. We are learning about the electronic image with Brice Howard and his associates at teachers' workshops. We are learning about the electronic image with Brice Howard and his associates at teachers' workshops. We are learning about the electronic image with Brice Howard and his associates at teachers' workshops. We are learning about the electronic image with Brice Howard and his associates at teachers' workshops.

Allen Rucker, Richard Kletter, Shelley Surpin, Pat Crowley, Box #2539, Menlo Park, California 94025

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**PHIL NOYCE**
WAHRONGA, AUSTRALIA

Hello Earth People:
We've got portable video equipment and have set up an Alternate Cultures Reading Room. I'll be focusing on Alternate Media, Software, and information systems in an independent study course this semester.

Link INFO-TO-ACTION-TO-CONSEQUENCES
Contact at: State University of New York, Binghamton.

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**JAY RUBY**
TEMPLE UNIVERSITY, PHILADELPHIA

Several people have written to us requesting information on the anthropological use of videocassette recording equipment in the field. To our knowledge, portable videocassette recorders (VTR) have been employed by only a few social scientists in the field—Neil Edington (Harvard Medical School) in the "bright lights" regions of Boston, Joseph Schaeffer (Columbia) in the Bronx, and Karl Heider in New Guinea. Heider is in the field now and has written the following response to our inquiries about his VTR experiences:

"... in short, VTR is ideal for some sorts of research, although probably no one will make presentation films with it. We (Eleanor R. Heider and I) are using it in the field (West New Guinea) to record mother-infant interaction and facial expression responses to projective tests. With Ekman's system of angiography expressions we hope to get data which will supplement the grosser behavioral and verbal data. It is too soon to evaluate the results of these particular experiments, but there is every reason to be optimistic about the use of VTR in the field."

The Sydney Filmmakers Co-op Ltd., 88 Fox Valley Rd., Wahroonga, N.S.W. 2076 Australia

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**RICHARD GREEN**
URBANA, ILLINOIS

... we are students and ex-students at the University of Illinois who formed a film collective to make Super 8 newreels. We chose Super 8 over 16mm because it's cheap; we can do our own processing and sound stripping, and we don't have to worry about pigs smashing our cameras since they're replaceable. As on most other campuses, we don't know exactly what is going to happen here this year but we're sure it will be worth recording. With Super 8 we hope to be able to produce sound newreels overnight for showing to the community and in dorms and classrooms. Many of us have been interested in TV and VTR's for sometime and we did some experimenting on Shibaden ½" equipment last spring. This past summer we proposed to WILL-TV, the local NET station, that they allot us (through the student government which we're in sympathy with our goals) prime time for a half-hour weekly program. We wanted an hour but decided we'd work up to that. Our proposal described a deliberately vague format which included news interviews and debates, programming on local events, and co-op events, and artistic events.

The station originates almost no programming and is ignored by the student community. It has a broadcasting capability of a 75 mile radius which means mostly farmland and a part of a Champaign-Urbana which is about 100,000 strong. The station doesn't have color but will by next year. There's not much action.

Our Student University Student TV is still operating, but there's not much action.

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**JOE HRYVNIAK**
BINGHAMPTON, NY

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**STEVE CHRISTIANSEN**
ANTIOCH COLLEGE, YELLOW SPRINGS, OHIO

Five years ago, Antioch was bestowed with a remote control video project equipped with Ampex 2" VTR, 4 camera console, kinescope, etc.; primarily for use in group process situations and making films of same. It has only been in the last year that we have purchased portable equipment, and ½" now seems to be our primary format. We have 2 portable Shibadens and 6 ½" playback units—our editing capability is semi-electronic—acceptable but not super clean.

A lot of video energy has gone into some classes using multiple-media format (Future is Now) via telebeam projects, or an intracampus news program, broadcast via cable, to several places on campus. Some people have been interested in video tape displays, signal generators, etc. We have a lot of video activity although they aren't all in video in the traditional sense.
At this stage, we think our chances are fairly good for getting the program. Even if we don't, we will continue our study and experiments, confident that it will have social-political applications in the near future.

We really need our own equipment. VTR's abound on campus here but most of them are locked in closets and used in very limited ways. We would especially like some of Sony's 1/2 videocassette for interview purposes. The Shibaden's weren't very portable and we no longer have access to them. Any advice you might have on taking equipment from industry and foundations would be appreciated. We can use the auspices of the University of Illinois for this purpose although they won't give us any money. If we do, we get our program, we want to keep political groups to use the medium with 1/2 system for public as well. Limited, we want to be as non-professional as possible, allowing different groups as much responsibility for the structure and content of programs concerning them as possible.

This area (U. of I.) has a lot of potential—there are a lot of far-out people here in the computer sciences and electrical engineering. There is a computer system here now used for education that employs plasma screens on 4000 terminals that can be operated simultaneously over telephone cables. We are trying to bring people in different disciplines for study of communications technology.

Some members of the film collective have been to both Madison and Ann Arbor recently. Things are going to be very heavy in both places. We'd like to see Super 8 and/or video tape events started at both campuses so information could be exchanged for broadcasting or showing. If you know of people who are already working in these media, we'd like to know about them.

Contact: Richard Green, 1006 W. Main St., Urbana, Ill. 61801.
BROADSIDE - THE FREE VIDEO PRESS

...for $1.00 + 25¢ for postage and handling, they will mail you a 15 minute, ¾" videotape magazine for playing on standard video playback units. Write to: Broadside, P.O. Box 65, Cambridge, Mass. 02139.

"...The idea for the Free Video Press originated in David Silver's television workshop at the Alternative Media Project, held in June at Goddard College. The aim of that workshop was to create an alternative television network, using the Sony reel-to-reel ¾" system. The idea is to keep people—non-gifted people—out of control of production.

Groups like Raindance and Videofreex in New York have been doing exactly this for some time. What is unique about Broadside Free Video Press is its magazine format and its decision to produce quarterly issues. Only 100 copies of Volume 1, Number 1 were produced.

...the two best items on this initial tape sampler are an interview with David Omar White and a piece of abstract animation by George Korzibsky. Both were made at the Video Tape and Film Workshop, produced in the hands of the people. Stops will include high schools and colleges, museums and cultural institutions, commercial and community groups. Each stop would have workshops, shows, productions, and consultations.

If you are interested in using the media bus or in its use or if you have information which would be helpful to this project, please contact the Videofreex at 212/925-7286.

GUY PIGNOLET - ITHACA, NY

MEDIA BUS
NEW YORK CITY

A MEDIA BUS to be funded by the New York State Council on the Arts is now in the planning stages. It will generally be a traveling videotape and film workshop, with production, unit, and library. The van will be used to turn people on to the medium, give them initial information about using it, channel them to media resources for further uses, and connect them with others who are using the media for exchange information. It will have aboard the necessary hardware and software to get TV into the hands of the people.

If you are interested in using the media bus or in its use or if you have information which would be helpful to this project, please contact the Videofreex at 212/925-7286.

Early 60's: 30,000 miles hitch-hiking in Europe.
1964: French Navy, Hydrographic Engineer, Senegal, Mauritania, Gabon.
1965: Schlumberger, Kuwait Oman Abu Dhabi, Field Engineer.
1966: Iran winter experimental rig. Altitude 11000 feet. Dec. & Jan. 3 week in USSR.
1967: Nigeria, etc.
1968: Center Manager, VTR, North Sumatra.

VTR was coming of age (costt). Some feeling on the guts level that it might have some fantastic possibilities. Buy minimal equipment on my own bread. (Top manager says: will probably come some day, but not yet). Wanted to educate local staff with VTR. Found VTR was educating me and everybody who was touching the camera.


1970: More of the same. Set-up in Ithaca for PhD in BPA, life and other research. Here I am, Where am I?

24

VIDEOFREEX
NEW YORK CITY

Videofreex is a dozen people who dig to make videotapes. We have a large production facility capable of producing 1/2 inch videotapes. We do a lot of mobile work using single and multiple camera systems. We are using Sony AV portable and studio decks for taping and an IVC 860C (one inch) deck for editing. In addition, our studio is outfitted with a gen lock (making possible mixing taped and live material on a 1/2 inch level), a video and sync proc, video and audio mixers, and complementary video and audio equipment.

We are presently showing our tapes at informal viewing sessions Friday nights at nine o'clock at our studio at 98 Prince Street, N.Y.C. . . . but we are interested in additional presentation outlets. For further information about making tapes or showing tapes, call Videofreex at 212/925-7286.

CHARLES BENSINGER
LOS ANGELES

Basically, what I am trying to accomplish here in Hollywood is the creation of an access route into the professional TV establishment for young artists and technical types interested in evolving the medium.

The studio establishment here is of course very tight and structured, but there is a wealth of technical knowledge and equipment in the area.

So in March, I founded a workshop called Video Technology Laboratory, in conjunction with a $3 million color facility called Hollywood Video Center. A series of informal sessions were held over a 4 month period of time, and some of the best professionals in the industry discussed video operations and worked with our students in "hands on" classes.

Much enlightenment was gained by a very enthusiastic group of young people, and they have become permanent video fanatics. Several experimental tapes in 2 inch color were produced during this time.

Specifically, I have been consulting with the California Institute of the Arts and have persuaded them to install a color video tape system this fall. I have collaborated with two artists, Andrea Brown and Janet Webb, in the production of a videotape theatre-audio environmental piece for the EAT Art and Technology festival at USC last spring. For this event, we managed to enlist the assistance of the Sony Corp. here in L.A.

A 2-way video-audio dual lecture discussion experiment was also constructed in collaboration with Allen Kaprow and EAT.

I have also been working with Computer Image Corporation of L.A. and feel the joining of the computer and video on a comprehensive scale will provide us with the ultimate tool, allowing infinite possibilities.

Unfortunately, the kinds that actually work with and apply this scale will provide us with the ultimate tool, allowing infinite possibilities and feel the joining of the computer and video on a comprehensive scale.

Specifically, I have been consulting with the California Institute of the Arts and have persuaded them to install a color video tape system this fall.

I am also involved in an organization called CREATIVE IDEA COORDINATION, with an individual named Joe Klamon. Together, we are attempting to open new TV markets and develop a structure for creation and distribution of video cassettes. Also, Creative Idea Coordination is an artist's clearing house which will encourage ideas and projects in all media as well as provide distribution for television.

...some comprehensive information on partial activities and tech machinery with which I have contact.

ELECTRIC EYE
SANTA CLARA, CALIFORNIA

Electric Eye is an experimental video group that works with half-inch, black and white video equipment. It consists of five regulars working in Santa Clara and has irregular agents in Rome, New York and France.

...Our current offering is the Philo T. Farnsworth Video Obelisk. This effort consists of a double-tracked, eighty gigabyte video show which is played on a stack of seven television monitors varying in size from nine to twenty-two inches. Every Thursday night the Obelisk flickers at intersection, 758 Union Street in San Francisco.

The Obelisk is a tribute to Philo T. Farnsworth, the man who invented television at 202 Green Street in San Francisco. The actual content of the Obelisk is a lead article on Philo T. Farnsworth II as told by his son Philo T. Farnsworth III. The show continues with such portions as video feedback; an exclusive and deliberately slanted interview with Richard Nixon; Dick Gregory in his role as the "Scholar in Residence"; The Top Ten Vibrations of the week; various juxtapositional inquiries into the state of commercial television; a look at the future of Electric Zen in America and much more.

The show concludes with a touch of jolly nihilism.

PHIL GIEZETEN
SAN FRANCISCO

DEJA VU

Kurt Vonnegut conceptualized in his book "Cat's Cradle" an Eßersonian idea involving a kind of Karios or mind pool of mutually sympathetic energy synergized by its combined and interlocking relationship. That energy now links a number of people together in the cosmic and self-conscious realization of man as an alien being on earth. In his work "General Semantics" Korzibisky describes man as a third and completely different earth bound life system—different from plants—different from animals.

Was Darwin wrong??? Can anyone believe any longer that man is an earth evolved descendant of some anthropoid? Anyone but science? Tom Tadlock mentioned to me that as aliens to the planet it is our responsibility to build structures sympathetic to our present situation rather than attempt to technologize every inch of the planet.

IS FULLER OFF COURSE? Will the World Game enlighten and enrich man's cosmic being?

Charles Ankh (strong life) is a celestial being without human form (though I have since made contact with a similar being in human form) who appeared to me shortly after my first and second experiences of contact.

Latent to this phrase is the semantic inference that man's origin is extra-terrestial, therefore alien to the planet where he must attempt to transcend the planet.
ACTIVITIES

Video Technology Laboratory
7080 Hollywood Blvd., Suite 114, Hollywood, Calif. 90028

We held six week workshop sessions from March to June '70, worked exclusively with 2" high band color broadcast equipment--$3 million facility called Holly-

wood Video Center. Steve Allen, Virginia Graham, John Seabrook, myself were producers of a number of the features in the best of the Hollywood press, underground ele-

ments, and the Ad contingent. Some experimental tapes were produced by class members under my supervision. Unfortunately, I do not have access to these tapes, since they were the property of the studio until I can afford to ransom them back. The brochure, con-

tent and structure of the course breakdown is my own design and invention. I found we departed some-

what from this initial plan, since we were required to deal with an extremely wide range of people and subjects. Some sessions were too technical and some not too relevant to certain student's needs.

The course eventually became an 80% workshop sit-

uation, which is the only way it can be truly effective, in my opinion. We encountered extreme hassles al-

ways from the studio, technical people, especially the unions, and the Madison Ave. people also. However,

it was an extremely enlightening though brief experi-

ence for all of us. Some of the "hard core" members

would join in the next control room and freak out on the video switches until 3 or 4 AM. Thus, it was an invaluable experience and forever ingrained in our minds what to work for and where it is. We shall return!

Viewer Sponsored Television
1939 Westwood Blvd., Los Angeles, Calif. 90024

I have met with them and they are verifying hard work-

ing, extremely dedicated group of individuals trying to put a truly free controversial station on the air. I

think their chances of success are fair. But if they suc-

ceed it will be a whole new ballgame for the public.

Excerpt from Proposal:

What is Viewer Sponsored Television?

Viewer Sponsored Television (VSTV) is a unique approach to Public Broadcasting which (1) focuses on in-depth public affairs programs that go beyond the "safe" and popular and points of view and (2) empha-

sizes close cooperation between socially concerned media professionals, community activists and the viewing public.

The Foundation is non-commercial, non-endowed and tax-exempt. Its Board of Directors, elected by the viewers, represents a broad spectrum of the involved community, including minority representa-

tion. It seeks to operate Channel 58 in Los Angeles, the last unused channel in a major U.S. city.

The VSTV concept is to be made available to community member groups in need of a medium to express their interests. The Foundation is non-commercial, non-endowed and tax-exempt. Its Board of Directors, elected by the viewers, represents a broad spectrum of the involved community, including minority representa-

Excerpt from brochure: THE ODETEC APPROACH

In a typical application, a time lapse video tape recorder records one television picture each second. Later, the recorder plays the tape back at rates much higher than one picture a second, for example, at 30 frames per second. Because of the increased rate, time and motion become compressed or speeded up. Advantage lies in the tremendous sav-

ings of time for the viewer. With a time lapse rate of one frame per second, a viewer watches twenty-four surveillance hours in only 48 minutes. Or, he can replay tape at exactly the picture taking rate. Even slower, if desired. Variations are unlimited.
NAM JUNE PAIK CALIFORNIA/NEW YORK/BOSTON VIDEO SYNTHESIZER PLUS

Shuya Abe and I am stranded in Los Angeles without car... We miss New York's dirty subway... John Lindsay is a great man, who charges on 30c for a refrigerated ride... Abe-san said we are Darma-monk... Darma was so diligent for 9 years in sitting and meditating that he did not even go to men's room... The accumulated shit eventually melted away his limbs and Darma became to be loved as a Buddha without legs... This leg-less man's wireless transmission is all what TV is about today... and in coming carless society.

JoL WEINTRAUB NEW YORK CITY

INFORMATION EQUALS REVOLUTION

There exists right now the most powerful information network ever created by man on the planet. I am talking about television. It is controlled by establishment creeps, who are using it to keep the masses in a state of moronic amnesia. But their grotesque Disneyland of the mind is being threatened by underground video and the creeps are getting nervous. Information about a new way to live is being withheld from the masses. Information already on video tape, ready to be shown in millions of homes. Information that is useless unless it gets into peoples heads.

The pressure is building. Information pressure. The quantity of vital relevant video tape waiting to be blasted open the stereotyped frontal lobes of the sleepwalkers is turning network programming into a cosmic joke. This is a warning ABC, CBS, NBC: THERE IS A CRITICAL LIMIT TO HOW MUCH BULLSHIT THE UNIVERSE CAN ABSORB. YOU HAVE PASSED IT. THE UNIVERSE WILL RETALIATE.

Where is our underground video network? The tapes are ready to be shown. The viewers are waiting, dying of boredom. The technology to do it at a feasible price, with cable TV or even UHF, already exists. EVEN THE MONEY IS THERE, IN THE FORM OF $250,000 IN THE VAULT AT THE NEW YORK STATE COUNCIL ON THE ARTS, AND MORE FLOATING AROUND WARNER BROTHERS. WE DON'T NEED MORE HARDWARE. WE DON'T NEED MORE VIDEO, CAMERAS. GOD KNOWS WE DON'T NEED MORE TVS.

WE'RE READY AND WAITING. WE DEMAND VIEWER SPONSORED UNDERGROUND VIDEO. WE DEMAND THE RIGHT TO SPEAK, TO BE SEEN AND BE HEARD. WE'VE GOT THE INFORMATION THAT CAN SAVE THIS PLANET FROM DESTRUCTION. WE DEMAND A NETWORK OF OUR OWN.

ALBIE THOMS LONDON

I left Australia about a year ago and have been on the road with my experimental feature film MARINETTI. In my travels I have met many video freaks and realise that the time is right to get back into the video scene.

I am working for OZ magazine, which has done much to liberalise printing techniques, etc., and am helping the editors start up INK which will be a weekly underground paper. It is hoped that the news that is gathered for INK will be distributed via sound & video tape as well as newspaper & we are planning cooperation with TVX in realising this objective. Our eventual aim is a weekly video-tape as well as the paper. Anyway, you shall be hearing further from us about that... Meanwhile, we are getting it together for a free news service for the community that is assembling for the Isle of Wight festival and we will...
Woody Vasulka
Richard Owenberg

Environetic Synthesis

Our concerns and objectives in working with video tape to date have involved electronic experimentation with the media and their relationship to other environ-ecological techniques, striving constantly to present new sensory interrelationships within human life functions.

Current and proposed projects:

Video-Moog—dancer feedbacks (live movement creating visual, creating sound, creating movement, etc.) Self-regenerative feedback interplay.

Video Synthesizer (computerized visual analysis, breakdown, and storage for creation and recreation of images) To work on visual output as does the sound synthesizer in the creation of audio output.

"Cyborg" Environetic organic investigations and presentations. (Audio-video systems triggered by brain wave-alpha rhythm-readings through proper nonrandom conversions). To study human control of purely contemplative creative processes.

Patron: The Rt. Hon. LORD HARLECH, P.C., K.C.M.G. Sponsor: LORD BURGH

Institute for research in art and technology Ltd

Trustees: J.G. Ballard, Dr. Peter Reyner-Bamham, Dr. Christopher Evans, Richard W. Evans, Christine Stewart-Munro, Joe Tilson.

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Contact us at: 1 Robert St., London, N.W. 1, England

Experiments with video tape loops

Juliette Mondot

TVX London

This fall TVX will be introducing Electric Newspaper, a monthly Magazine published in videotape form. We aim to sell sufficient copies to distributors to enable us to cover production costs, and distribute a large number of copies at cost of tape stock, to colleges, arts, video, educational clients, etc.

We will shoot and compile the first edition, and subsequent editions will contain a large % of contributions from other people and groups working with video, both in this country and abroad. (Expected date of first edition around October, '70.) Electric Newspaper will also operate as a live information/distribution/news/message service at pop festivals and other large gatherings, using projection screens and monitor chains. This section of activity is to be run in conjunction with BIT Information service and Friends Magazine.

TVX please, a ''/2" Sony video documentary on it can be obtained from a ''/2" Sony video documentary on it can be obtained from Kenmore, New York, 14217.

Our style of involvement ranges from the existen-tistic to the highly disciplined depending on the client's needs and how we react to them. They might include:

1. diagnosis of communications problems—which is the real problem, whether is its locus (personal, inter-personal, intergroup, role or subculture-related, etc.)
2. design of communications environments, including use of space, time, physical setting, media technology and social setting.
3. planning and running cross-cultural communications workshops, particularly ones designed to con-front generational and value system differences.
4. utilization of media communications aids for short term feedback and small-group connection, particularly videotape, slide shows and super-8 films.
5. preparation of written, videotaped and filmed documentary reports of study projects—for broader circulation.
6. training in communications, on all levels. Our normal operating mode is to secure the maximum possible involvement of members of the client system in whatever project we are engaged in. We reach on several levels: explicit and thought exposure of the client to our life style. The latter is sometimes very painful but more often than not, existentially free, joyful, easy but yet somehow very efficient.

As for most consulting organizations, our fees are based on the time devoted to a client's project plus out-of-pocket expenses. Our overhead rate is quite low and we provide our own videotape and media equipment. Although our original base has been Buffalo, New York, two of our members are current-ly in New England, one in Southern California. Our area of travel is global and we draw up a team out of our membership and associates to meet the needs of the particular problem at hand.

Further information on the Leiceter Community can be obtained through writing Vince Giuliano, 104 Leicester Rd., Kenmore, New York, 14217.

NATIONAL CENTER FOR EXPERI-MENTS IN TELEVISION AT KQED

SAN FRANCISCO

The National Center is a unique institution conducting theoretical and applied research into television as an instrument of personal and social growth, a learning and therapeutic tool, and a fine art. The Center's main products and services are experimental videotapes made by gifted visual artists; research projects investigating psychological and cultural implications of television; an intern program which brings to the Center talented staff members from public television stations throughout the country.

The Center encourages visitors as a part of its effort to share its concepts and imagery with as wide an audience as possible. "Monday Nights at the Center" provide an opportunity for young experimenters and artists in videotape from nearby campuses to present and discuss their work with the Center staff.

The Center was established in April 1969, when KQED for its establishment in 1970, the Corporation renewed and increased its funding with a $150,000 grant. In addition, the National Endowment for the Arts awarded a matching grant of $50,000 to the Center to begin its fellowship program.

"Monday Nights at the Center" provides an opportunity for young experimenters and artists in videotape from nearby campuses to present and discuss their work with the Center staff.

The Center was established in April 1969, when the Corporation for Public Broadcasting made a grant of $100,000 to KQED for its establishment in 1970, the Corporation renewed and increased its funding with a $150,000 grant. In addition, the National Endowment for the Arts awarded a matching grant of $50,000 to the Center to begin its fellowship program.
**MICHAEL HASTINGS**

**TORONTO**

... has written "They; Not We" a pagan fantasy sermon for television

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**MARCO VASSI**

**NEW YORK CITY**

**RAPPO: WHY AREN'T YOU FUCKING?**

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**KIRA GALE**

OMAHA, NEBRASKA

Gene Youngblood describes the work of Dr. Paul Bach-y-Rita at the Institute of Medical Sciences in San Francisco as "video-braille". It is a poor choice of words because the exciting thing about Dr. Bach-y-Rita's work is that it is not braille.

When the t.v. picture is "printed out" on the skin of a blind person's back, the blind subject actually SEE's the picture in his vision center.

My husband teaches neuro-physiology at a medical school, and he teaches the current theory of "coding" for sensory information. It used to be believed that if you were touched on your leg, a "touch" nerve carried this information up to the brain. The coding theory says, instead, that the nerves are not specific for one sense or another and that they carry coded messages up to the brain where they are read out.

So, in the case of Bach-y-Rita's experiments, it happens that the brain converts the pressure message of the 400 solenoid stimulators into a visual message, when the subject has practiced for enough hours. With ten hours of training, a blind person can see simple objects and movements; with twenty hours training some blind subjects have been able to differentiate overlapping objects.

The implications of this theory are wide-ranging, beyond the hope it holds out for all sensory-deprived persons (the blind can see, the deaf can hear with electronic "substitution equipment"). Perhaps this is a clue to the action of I.D.S., that it relaxes the brain's channels for de-coding messages. That when you listen to music, the brain goes and sends it to the eye & ear instead of the ear alone, if the person is on acid.

There is the possibility that with intensive training, without the aid of drugs or hardware, a person could look at a painting and hear its music.

Readers interested in learning more about this should contact Dr. Paul Bach-y-Rita, The Institute of Medical Sciences, Pacific Medical Center, Clay and Webster Sts., San Francisco, 94115, for reprints.

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**VENICE FILM FRICASSEE**

VENICE, CALIFORNIA

ENVIRONMENTAL COMMUNICATIONS IN ASSOCIATION WITH THE LOS ANGELES FINE ARTS SQUAD (2 West Coast L.A. based groups concerned with media and environment) WILL PRESENT THE 1ST ANNUAL VENICE FILM FRICASSEE—An Environmental Outdoor media festival open free to the public from dusk till dawn November 26-27-28, 1970. The festival will take place on a large vacant lot in Venice, California and will consist of 16mm, super 8 and 1/2" videocassette. The films will be projected on huge walls and video tapes will be shown both on TV monitors and projected on walls with video systems equipment supplied by Odetics, Inc., an Orange County electronic systems equipment company.

The L.A. Fine Arts Squad is a group of young artists involved primarily with huge outdoor paintings—articles have appeared on them recently in Life and Newsweek.

Environmental Communications is an interdisciplinary group involved with all forms of media in documenting and communicating the quality of life in the environment and how it relates to man. They have been distributing slides to University Architecture, Planning and Art departments in the past and are presently embarking upon the distribution of films and video tapes.

For further information and entry blank for festival write: Venice Film Fricassee, 62 Windward Avenue, Venice, California. 213-392-5071 (David Greenberg, Bernard Perloff)
To look clearly at the condition of mankind, to see the full dimensions of our lives in the face of total species annihilation. The maddening heat of dawning truth, then all discussion of the human race has passed an ecological turning point and is now doomed.

No intelligent discourse may take place which launches itself from relaxation of aimlessness. Ritualized confusion reigns.

Women are conspicuous by their absence or relegation to minor tasks. One sees no black faces; the gap have not been involved. Several Wall Street advisers are on the scene. No plants, four-footed animals, or toys. The rationalizations are all avant-garde, caressing each nuance of the current hip rhetoric. There is neither the focus of aim, nor the relaxation of aimlessness. Ritualized confusion reigns.

**ME:** What about Fuller?

**GILLETTE:** He accounts for everything except rage. The one thing he doesn't mention in his raps is that millions of people are running around killing each other all the time, and that it's got nothing to do with distribution of food or the excellence of toilet bowls.

**ME:** What is the state of alternate television?

**GILLETTE:** It is wanting.

**ME:** Wanting what?

**GILLETTE:** Quality of content. (Pause) A lot of people have finally got the idea, but except for four or five video artists throughout the entire country, there is no infusion of consciousness through tape. There is no one with a comprehensive vision of tape as art.

Two casualties of the early video wars chatting about the state of the scene while driving down easy twenty-third in an open convertible on a captivating September afternoon. A butterfly wings its way between two buildings and no one stops to be amazed. The I Ching says, NO BLAME. Agnew is the crystallization of the essence evil in the nature of civilization. He is the price we pay for telephones and LSD. He is absolute duds. The real politik he represents is an international clique of stone-age monkeys chattering insanely in the dark. They have crucial control over the survival possibilities of the species and perhaps of all life on earth. But like the rest of us, Spiro is jes' doin' the best he can. One accepts him or eliminates him. One does not attempt to come to terms with him.

But what of the more subtle phenomenon, such as Bucky Fuller, our very own dya mom guru. A utopian fundamentalist, an ecological John the Baptist, the Marx of the electronic ecstasy, he is supposed to know better, he is supposed to be on our side. But he understands everything about technology except the people who have created it.

He eats meat three times a day, and he travels a lot, and his wife is doing straight Krupskaya. He has a glittering array of mediocre metaphors which attempt to mask the fact that he is basically an elitist engineer. His utopia is the humming anthill and the happy bee hive. He is really a Closet Clear, a secret admirer of L. Ron Hubbard's. He tells nicest stories about how he was nearsighted as a child, joined the Navy, and found God to be Comprehensive. He and Krishnamurti used to go down on each other, but both still understand everything about technology except the people who have created it.

What hope can there be when "one of the foremost thinkers of the century" still operates on the assumption that reason has any bearing whatsoever on the nature of reality? Who doesn't seem to appreciate that technology is the materialized projection of thought, and that thought is merely an uncanningly wrought evolutionary tool and has the most meager of roles to play in this passion called living?

Please, let us wake up totally, immediately, and let love flood our being. This existence is all we have. How dare we make it subservient to the endless, inane, self-cancelling activity of seeking profit? What sense of impunity do we allow ourselves to become shallow, unserious? At the brink of apocalypse, do we continue to refuse to admit and share the horror, the terror?

Raise up your hearts, children, and clear your minds. The lowest thing in this here universe is an animal who stood upright and lost his dignity. Be strong enough to be gentle, be gentle enough to be cruel, be alert enough to survive with beauty.
from the demand for competition...the life of parasitism is not as...

“The parasitic life has greatly reduced the danger from predators, and...

HOMESKIN—A VIDEO COMMUNE & TRAVELING RADIO
A REGULAR ROLLING EVENT SPIRIT FAIRE FAIR TRUCK RACE & TRAVELING RADIO
1) We all spend a day a week food-gathering.
2) Come to a central place (which changes), spread it out, check out everybody else, & take what you need.
3) Lay in the sun.
4) Praise those who surprise & delight you with their vigor & imagination, especially if you’ve never seen them before.
5) Flirt.
6) Gossip.
7) Badmouth lame gatherers & deadbeats.
8) Fix trucks well enough to do it again.

AN OPEN LETTER TO THE NATIONAL CITIZENS COMMITTEE FOR BROADCASTING
We are writing you because we believe that your organization is guilty of a glaring mis-assignment of its priorities. In an open letter of your own, published on October 4 in the New York Times, you openly and pointedly invited representatives from CBS, NBC, and ABC to attend today’s conference at the Hotel Americana, even though you admitted that the three networks were doing very little to provide enlightened television in this country.

Yet you yourselves have failed to extend cordial or even perfunctory invitations to the most liberated and enlightened segment of television today, namely the new videotape community, and the artists and critics of the Art Workers Coalition who realize the potential it holds for the future of this nation.

We are correcting this oversight on your part by coming to the conference anyway. We intend to distribute this leaflet, take part in the various panels and events, and to discuss with your members the growing crisis in this country.

We believe that the presence of Thomas P.F. Hoving as chairman of your conference is part of this growing crisis. We recently negotiated with the Metropolitan Museum over the ground rules of a public hearing held last week and discovered that Mr. Hoving felt that both the museum and our group should supply “press observers” for this event. We discovered that what Mr. Hoving meant by “press observers” was in fact people to “correct” reporters in writing their stories and to “correct” cameramen who pointed their cameras in the wrong direction. Having also forbade his staff from attending this hearing—those curators who did, try to attend were ordered away by museum guards.

We believe that Thomas Hoving and Spiro Agnew are the same problem—the difference between them is only one of degree, not of quality. Both are trying to stifle discussion of important cultural problems at a time when our nation’s future desperately requires it.

We hope such discussion will take place during this conference. We will do everything in our power to make it take place.

J. KEARNEY NEW YORK CITY

Networks
J. Kearney
A day of television programming as it may soon be
6 am MORNING PRAYER holy men, chanters, musicians mantras, sunrise celebrations from tribes around the world
7 am ORGANIC FARMER tapes made at farm communities
8 am FOLK MUSIC known and unknown musicians taped in parks, concerts, boats, schools
Noon POETRY, lightworks, talks with wise men
1 pm FREE UNIVERSITY teaching of skills
2 pm COMEDY SHOW beat the reaper, monologues, old films, cartoons, politicians
3 pm JAZZ, BLUES or COUNTRY MUSIC on locations
4 pm CINEMA independent film-makers
5 pm THEATRE independent theatre groups
6 pm CHILDREN’S PROGRAMS especially
8 pm WORLDVIEW man in his environment
9 pm ROCKGROUP live; split screens; international Midnight CINEMA features of highest quality

4 am SEXUAL ART set to music
This is my idea of a balanced day of television programming. There could be occasional “spots” such as experimental one minute films to add more variety. A series of 10 or 20 such broadcast days could be taped and circulated (copied) around the world, shown through various private facilities. Then there’s always the unpredictable situation with cable, educational, school, and satellite TV. Foreign networks or American public or commercial TV might even be interested, but of course their ads would have to be replaced by messages of some value to humankind.

The most promising development in V-T thus far to me are the pirate tapes from events like the Isle of Wight and the Video-frees balloon-screen. The worst rumor I’ve heard is that a major network soap opera is going to try to solve it’s problems by—you guessed it—“stay tuned for T-GROUP, next on . . .”

HOMESKIN—A VIDEO COMMUNE SAN FRANCISCO
“The parasitic life has greatly reduced the danger from predators, and from the demand for competition... the life of parasitism is not as hard on the parasite as the free life is on the free-living animal.”
Parasitology, E. & G. Noble

A REGULAR ROLLING EVENT SPIRIT FAIRE FAIR TRUCK RACE & TRAVELING RADIO
1) We all spend a day a week food-gathering.
Buy, beg, steal, rustle, cultivate, hunt, pick it up off the ground or out of garbage cans.

2) Go for weight.

3) Come to a central place (which changes), spread it out, check out everybody else, & take what you need.

If anyone disagrees with you, decide it on the spot.

Do you need it?

3) Get loaded.

4) Lay in the sun.

5) Badmouth lame gatherers & deadbeats.

6) Praise those who surprise & delight you with their vigor & imagination, especially if you’ve never seen them before.

7) Flirt.

8) Gossip.

9) Fix trucks well enough to do it again.

NEW YORK STATE COUNCIL
Subject to final program approval, the Creative Artists/Public Service Program, sponsored by the New York State Council on the Arts, is now accepting applications for grants from individual artists.
The first deadline for receiving proposals is November 20, 1970. However, there will be a second deadline for submitting grants in this category.
Special consideration is given to the public service aspect of the proposal. We also understand that the more grants submitted to a particular division, the more money allocated to that division, i.e., the more grants received having to do with the use of media and its public service or community applications, the more money available for everyone.
For more information write to: Cultural Foundation—Creative Artists Public Service Program, 200 West 57th Street, Room 419, New York, N.Y. 10019, 212-566-2040.

TOM DeWITT
POUGHKEEPSIE, NY

JAZZ, BLUES or COUNTRY MUSIC on locations

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The purpose of the Center for Policy Research is to provide facilities for and an intellectual environment conducive to research leading to the formulation and reformulation of public policy, especially with regard to social, economic, and political issues. Policy Research’s chief aim is to serve policy-making bodies, including social movements and other groups of active citizens. The ultimate client of the Center is the society, and its needs guide the Center’s work.

The Center has developed a position on the public access to CABLE TELEVISION. It favors setting up a public authority that would operate all cable television, set rates, and allocate channels. The Center has also examined the proposed contract for the franchise for cable television in Manhattan. On the basis of research conducted at the Center, Dr. Amatit Elston testified at the CATV hearings of the Board of Estimates of New York City on July 23, 1970, and met with city officials, the press, and the presidents of the firms involved to explain the Center’s position.

Contact: 423 West 118th St., NYC 10027, 212-866-8510

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