



Quite without knowing it, the cable television industry has provided the century's most significant step toward flexibility in media communication.

We are now entering an era where television will help people solve a wide variety of communication problems, not simply provide professional entertainment.

The broadcast television industry, in its quest for advertizing revenue, has written the rules of television programming to suit its own dollar dominant ends. Though the public may own the airways, we have no access to them; and the programs we watch are geared to the least common denominator among us. As a result,

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Portable, Half-inch Production: A Note on Costs

television provides us almost exclusively with technically high quality canned bland.

Networks justify their programming on the basis of consumer preference, citing surveys that show more people want to watch situation comedies than anything else. The network surveys are inaccurate, however, because the respondent is not given a real choice. Asked if he prefers situation comedies to cultural events, he replies honestly, "yes". He is not asked if he would like to see his children playing in their school, or his neighborhood association meeting with his Mayor to discuss rising crime in his area. In short, he is not allowed to think of television in terms of local video communications.

Cable television is uniquely able to change this, but since most cable systems now in operation were installed primarily to improve reception of regular broadcast programming, cable has made few inroads into the networks' style of programming. A few cable systems and community groups are now beginning to realize the potential of cable casting. The public access channels in New York City, for example, are now carrying upwards of 30 hours of unsolicited community programming per week.

Cablecasting—as opposed to broadcasting—is inexpensive. Once the cable is laid, the cost of activating and using an additional channel is minimal. Further-

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more, there is no need to appeal to vast audiences through technical gimmickery and high priced entertainers. A program devised for small specialized interest groups (women's liberation, the elderly, a civic group, an ethnic group) need only reach that group to be successful. If the content of the program is valid, the fact that there are no stars or that the picture is occasionally grainy is inconsequential. Cable, of course, also opens the audio visual field to new talents such as unknown playwrights, poets, lecturers, teachers, dancers and composers. Fortunately, low cost equipment to experiment with this new kind of programming is now available.

By making more channels available and by drastically cutting program distribution costs, the cost of bringing programs to the public by cable is about one tenth the cost of broadcast TV. In addition, low cost equipment reduces costs by another order of magnitude, resulting from the use of one-half inch video tape equipment instead of one or two inch tape currently in broadcast use. The half-inch system produces slightly lower quality visual images, but the cost difference is immense.

There are six basic factors which determine the cost of half-inch programming for cable: equipment rental or purchase; tape purchase; camera crew; program director/producer; promotion; and cable time. Each of these categories, with the possible exception of tape—the only consumable—can vary from zero to significant cost depending on the circumstances.

Equipment Costs

The basic half-inch equipment rig consists of a port-a-pack (camera and portable battery powered deck) and ancillary equipment such as a long lasting nickel cadmium battery, a hand held microphone (or two, with a sound mixer), lights, AC power take-off, assorted extension cords and cables, and a monitor. The above equipment, assuming a small monitor, costs about \$2000. With this equipment, one can produce shows up to one half hour long, with no electronic editing, but with a limited number of physical splice edits. In order to edit electronically (i.e. to produce a second tape by transferring electronically the impulses from the first tape or tapes to the second tape), a second tape deck is necessary. Tape decks cost anywhere from \$700-1000. Assuming one spends \$2000 on equipment and its useful life is two years, the monthly amortization is about \$80.

Rental charges for equipment vary, but the following rules of thumb apply: for one day's rental, 5% of the value of the equipment; for week's rental, 15%; for a month's rental, 30%. That is to say, it would cost \$100 to rent \$2000 worth of equipment for one day, \$300 for a week, and \$600 for a month.

Given these figures, it is fairly easy to determine the trade-off point between buying and renting equipment. If, for example, one expects to do a reasonable amount of shooting, but little electronic editing, it is reasonable to buy the port-a-pack, but rent the second deck. Since half inch equipment is still in the developmental stages, it may not be prudent to buy the first models. The

equipment probably will improve significantly during the next several years. Experience of people who have used the available port-a-packs for continuous, hard, day-to-day work has shown they do not hold up well with heavy use. Sony has been the leading manufacturer of half-inch equipment to date. However, several other manufacturers plan to produce comparable equipment.

Half hour tapes list for \$15, and can be bought in large quantities for as low as \$12 each. Hour tapes can be bought for as low as \$23.70 each, although they list for over \$30. There are several brands of tape, and at least Sony, Memorex and Scotch are of high and equivalent quality. Although tape is reusable, after six or seven uses it begins to show its age.

Camera Crew

There are two questions when it comes to the camera crew: how many crewmen and how much experience. It is said that half inch tape is so flexible and so easy to use that anyone can just pick up a camera and shoot. Not true. It is flexible, it is easy, but if you just pick up a camera and shoot, the results are likely to make your head ache. It is difficult to hand hold a camera and keep it steady, to anticipate where and how the action is going to move, to know when to zoom and pan effectively and so forth. Skill in these activities comes only with practice. Although it is easy to play with a camera, it is much more difficult to produce a coherent segment of tape. Another problem is exercise—no matter how light the camera seems, it gets very heavy after about 15 minutes of constant shooting; until new muscles are strengthened, the picture becomes less and less steady as time goes on.

The answer to how many are needed on the crew varies, needless to say, with the complexity of the assignment. Sound is critical yet uncontrollable except through the placement of the microphones. For this reason, any situation which is not totally static requires two people—one to handle the camera, the other to handle the sound and help the camera person move around. If there is plenty of set-up time, and if each crew member knows how his colleague works, two people can handle the job. In this case, the director/producer is one of the two crew members himself. As he adds cameras or microphones, he must add crew members as well.

Experienced half inch video operators often can be found in college film departments, where students with video tape experience often are eager to earn extra money. As crew members, students usually are paid from \$25-40 per person per day. Alternatively, community groups who want to do their own programming can train some of their own members to use equipment, and thus cut down on camera crew costs.

Producer/Director

The producer/director is an extremely important person in the production of any show, but like the camera crew, he can be an unpaid member of the group who do the programming. If he has to be paid, there is no rule of thumb to determine what payment should be.

Because of the problems with editing half inch video tape, the producer/director's main responsibility is to plan his production in order to minimize the number of edits that have to be made.

Promotion

Promotion is one of the biggest problems facing cable TV today. Even cable operators have trouble listing their programs in newspapers' TV listings. To meet this problem, many cable operators dedicate one channel to a continuous listing of the programs. Often, however, these channel listings do not include the programs on the public access channels. The Cable operator should be encouraged to list public access programs on his guide. Since the listings on television are shown only during the day of the program, however, listeners are afforded no chance for advance planning. Free blurbs in newspapers are often possible if the subject is of interest to the paper or to the general public. Otherwise, programmers must rely on word of mouth or flyers to promote public access to programs.

Cable Time

Both New York cable companies have agreed to cablecast any program free of charge, provided it is entirely non-commercial (not even a "This program was made possible . . ." commercial is permitted). Other operators charge, sometimes for the use of the channel, sometimes for the use of the equipment required to play the show. The charge is usually small, but could be as much as \$25-40 per hour. Sterling, which operates a cable TV system in lower Manhattan, charged \$10 per hour for a half inch deck, but discontinued the charge in November, 1971.

Studios

If a group is willing to be limited by the restrictions of working in a studio—no outside shots, mostly talk-show—this format might be the least expensive way to make a program. In New York, Teleprompter offers a studio during regular office hours with one camera and one cameraman, and with lights "as is" gratis to all non-commercial users. Automation House, also in New York, provides its studio for \$25/hour. Sterling charges for its studio, and Teleprompter charges for more elaborate productions.

There are often unused or under-used studio facilities in most towns. The first place to check is the local high school system, then any local colleges or universities, and finally the local government. Approached correctly, these groups are generally more than willing to have their facilities put to use.

The main attraction of portable half-inch equipment is that it makes a studio unnecessary. Indoor and outdoor scenes can be taped without inordinate expense or inconvenience.

Editing

One of the main shortcomings of half inch equipment is the difficulty of using a copy of an original tape on the cable. When an image is transferred from one tape to another, the resulting "second generation" tape is of slightly inferior quality. Consequently, a second generation tape is unreliable for cablecasting. In practical terms, this fact means that editing is severely limited in half inch production. In fact, if one is to preserve first generation tape, there are only two kinds of editing allowed: in camera editing (i.e. shooting only what you want to show and in the right sequence), and physical editing (splicing). In camera editing is recommended, but is not easy to do. Physical splicing is relatively easy, but can be damaging to the tape deck heads and sometimes produces "glurbs" on the tape and thus should be limited.

A third method of editing is possible, but is more expensive and difficult. Instead of dealing strictly with half inch, the editor can transfer the material to one inch tape, edit on one inch equipment, and then transfer the final version back down to half inch. The tape loses quality (two transfers) but the edits are clean, and the tape will run as if it were first generation on the cable.

Special Effects

Half inch programming should be seen as an art form in and of itself, and should not try to imitate the much slicker one and two inch systems. For this reason multi-camera efforts, efforts requiring special effects generators, and techniques such as double exposures and fancy pans are irrelevant to the basic mission of half inch programming. Newcomers to the medium should avoid special effects totally, and experienced operators should use them only with extreme caution.

A Concrete Example

It might relieve the reader to know it is possible to produce a series of programs using half inch equipment strictly for cable casting. A program called *The Elders* was produced as a series of twelve shows ranging from 40-60 minutes in length dealing with the over sixty-five population of Manhattan. They were cablecast on the two Manhattan cable systems—Teleprompter and Sterling—from October 5, 1971 through December 3, 1971. The series was done entirely with one half inch equipment, with a two person, N. Y. U. student crew, and was taped in day centers and communities throughout Manhattan. All editing was physical (splice) editing. Exact expenses were as follows:

<i>Equipment rental:</i>	for 13 days' use of a shooting rig, 8 days' use of a large half inch deck for editing, and two days' use of viewing equipment	\$800.00
<i>Tape:</i>	36 half hours, and 12 hours (the 12 hours were for copies of the originals)	\$761.00
<i>Camera:</i>	36 person days @ \$30.00/day/person	\$1,080.00
<i>Transportation:</i>	car mileage, taxis, buses, subways etc.	\$50.00
<i>12 empty reels:</i>	at \$1.85 per	\$22.20
<i>Promotion:</i>	flyers, postage, etc.	\$50.00
<i>Estimated use of telephone:</i>		\$10.00
<i>Estimated use of secretarial time:</i>		\$40.00

The approximate total of all costs exclusive of the producer/director, then, is \$2,800.00 for 12 shows, or \$233 per show.

Since the daily rate of a producer/director is extremely variable, his cost should be assessed first in terms of numbers of days rather than dollars. It took about 45 days to organize the series, do the shooting, edit the shows, and distribute the tapes. About half of this time was spent in production. The other half was spent organizing the shows by visiting centers and talking with the directors and people there to determine if they wanted to participate, and if so how, when and where. The ratio of one day of organization for every day of shooting or editing is fair unless the shooting is done in only one location and with one group of people. Assuming the producer/director will earn somewhere between \$50 and \$100/day, his cost for twelve programs will run between \$2,250 and \$4,500, or an additional \$185 to \$375 per program. Total costs on a per program basis, of nearly one hour per program, assuming nothing is provided free of charge (no free equipment, no free time) can be assumed to fall between approximately \$400 and \$600.

Although there are clearly some economies of scale (especially with regards to equipment rental), a single program probably will cost less than the figures above simply because the producer/director may well volunteer his time, thus offsetting the high equipment costs.

Conclusion

The Elders was produced with a grant from the Center for Analysis of Public Issues and the Fund for the City of New York to determine the difficulties involved in producing such a series, and to see how much it would cost. As a whole, the venture proved less difficult and less expensive than anticipated. The main problem was promotion informing the public inexpensively of the programs' existence.

The costs detailed above represent an upper limit for this kind of programming. Equipment can often be borrowed or obtained from video groups for less money, and personnel costs can be reduced greatly through volunteer labor. In many cases the only out-of-pocket costs that need arise are tape costs, which can be as low as \$30-40/hour of finished tape.

There is no question that the technical quality of half inch video tape programming is inferior to that of the network shows. The difference is unimportant, however. In the balance, the relatively low cost and the innovative potential of half inch programming make it an exciting, promising medium.

