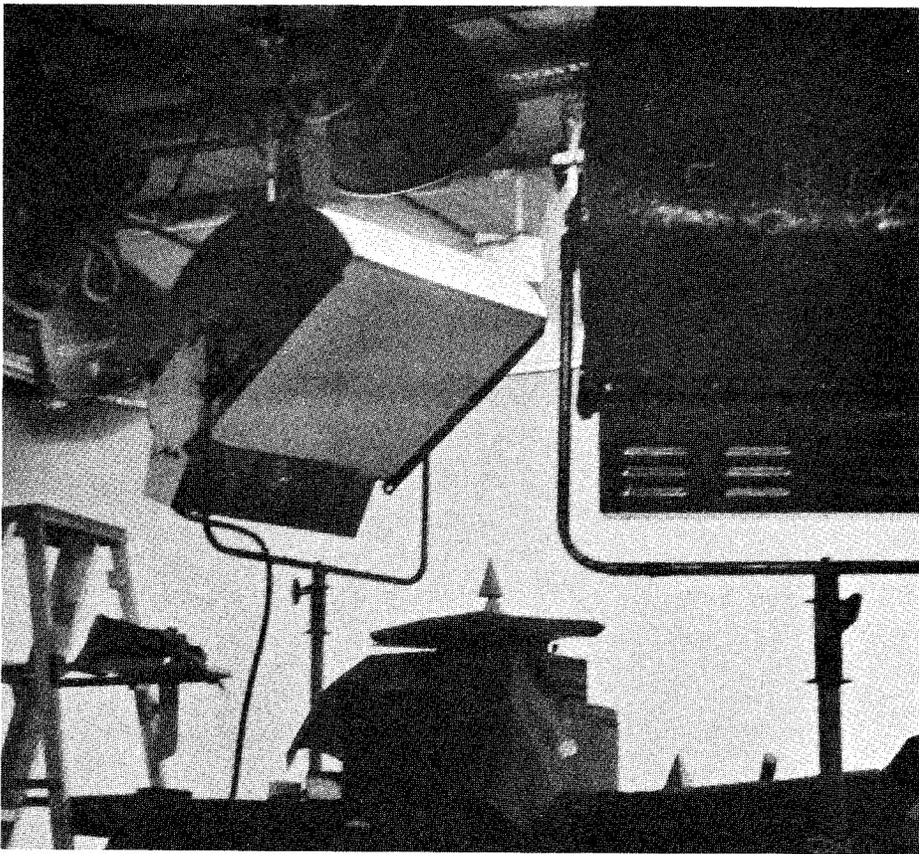


The Television Laboratory at wnet|13 news

October, 1973 Vol. 1 No. 2

The Shape of Things to Come



This tiny cone, set up for chroma-key, is the center of attraction during the taping of *Shapes*.

The hickory stick was once the schoolmaster's favorite teaching tool. Today, the modern teacher is armed with a selection of materials ranging from carefully researched games and toys to highly complex systems of video and audio hardware. Perhaps one reason for the increasing availability of such resources is an organization called CEMREL, Inc., a national educational laboratory based in St. Louis.

In June 1972, the Aesthetic Education Program, a subdivision of CEMREL joined forces with

WNET/13's School Television Service to investigate the possibilities of a television series which would help introduce aesthetics as a formal area of study in the primary and secondary grades. Hopefully this series will help integrate the teaching of aesthetics into the existing American school curriculum which has traditionally lacked a formal approach to the subject. With CEMREL ready to provide the research and informational material and the School Television Service contributing their programming ex-

perience (for twelve seasons they have provided 40 programming hours per week for in-school use), the next step was to find the right production facility and production staff to actually create a pilot program. It was decided that The Television Laboratory at WNET/13, with its collection of electronic video equipment so suitable to the project, would be invited to participate.

The decision was made to center the pilot program's subject matter around the concept of "shape" — an aesthetic concept which lends itself well to the various image-creating video equipment housed at the Lab's Studio 46. And the target audience would be primarily second graders — seven to eight year olds.

But how does one go about the difficult task of creating such a product and making it effective as well? The first step was to sort the huge body of researched material and mold it into an appealing and informative script. The Lab commissioned Clark Gessner, an independent writer who often contributes segments to *Sesame Street* and *The Electric Company* to script the program. Meanwhile, the search was on for the right director — a magic person who could squeeze from the studio's maze of complex gear and machinery the right balance of imagery and information to captivate an eight year old. The Lab's choice was Don Mischer, a versatile director (PBS's *Great American Dream Machine*, ABC's *In Concert*) who had just completed a highly successful educational pilot for the New York State
(Continued on Page 7)

The TVTV Story

We asked Top Value Television to write something for *VISION NEWS* and the following, in their own inimitable style, was the result. The excerpts come from their publication, *PRIME TIME*.

TVTV is a group of five, seven, nine or more people depending on the project we're doing. We have just moved to a new studio in San Francisco near S_____ and F_____ streets. (We don't want a lot of visitors.) It is a store front with 1,800 square feet. We took it over from a Phillipino couple who had lived and worked there for thirty years. They strung tennis rackets and sold tennis accessories for a living. Now they are moving back to the Philippines to retire. They took all the leftover tennis rackets and tennis balls with them. The rent is \$250 a month.

"We work alone, out of our homes, or cooperatively, as part of an informal network of people sharing experiences. We wanted to demonstrate that we could work efficiently without a rigid hierarchy."

We think we might want to move to Los Angeles next year because you can only live in San Francisco so long. Two of us came from New York while the rest have been living in northern California. Living in Los Angeles seems like something everyone should do once because southern California is the future.

We have four porta-paks right now but only two are really ours. One is on loan from another group we work with and we just paid \$150 to have it overhauled and the repairman claims it's as good as new. The second one which isn't really ours needs a new head drum which costs \$550 so it hardly seems worth fixing. We use a Sony AV3650 for editing and an AV8600 for playback. We have two Sony 11" monitors, an Ampex 23" monitor, a Sony 8" receiver, and a 15" Trinitron receiver. We used to have a Tivicon but we sold it and don't know if we want to get a new one. We just bought an AKG900E shotgun mike and also have three Electro-Voice microphones — a

635A, an RE10 and an RE11 — and a Sony ECM16 lavalier mike. We wanted to buy a wireless mike but they are too expensive and not all that reliable.

"Our low-cost portable video equipment has allowed us to explore what television can do uniquely. We have been able to work open-endedly and take risks which have often paid off in spontaneous, unusual television."

Our bank balance today, (September 18, 1973) is \$6,781.62 but \$5,000 of that is a loan from some friends. We are not a non-profit group and are trying to guarantee our overhead for a couple of years. It costs \$2,500 a month to operate including \$50 a week salaries. In New York, you can get more than that on unemployment when your grant runs out.

"Last year we covered the political conventions as TVTV. Two dozen of us shared living space in a big house and covered both conventions for \$32,000 complete (including pre and post production expenses). Everyone worked for no salary and expenses only, and loaned us their own equipment."

Because we need a car we are going to lease either a Datsun, a Toyota, or a Mazda. We'll probably choose the Mazda because the other two are hard to get right now and also Mazdas have rotary engines

which are the future. A project which we are editing now is called AD LAND. It is a tape about the people who make television commercials. We have taped the making of TV ads on-location at places like McDonaldland, ad men like George Lois and Jerry Della Femina, and ad stars like Mason Reese who was on the Dick Cavett show the other night. We have decided that TV ads tell you more about the fantasies of ad men than those of consumers. Our finished program will be time-base corrected and edited on a Sony 340U or an Ampex 1200. We plan to distribute it to broadcast stations as we don't see much point in cable television right now. Of course, we'll also sell it to universities and libraries.

"Production-wise we were successful. But from a distribution viewpoint the convention coverage project was disappointing. The fault was partly our own in that we didn't hustle the tapes aggressively, but we learned that cable operators simply don't have enough money for original programming, while broadcasters who are willing to experiment are the exception, not the rule."

Another project we're raising money for is called *PEACE BOMB EXPLOSION* which will be a documentary about *Millenium '73*
(Continued on page 7)

M_____ S_____ of TVTV using a S_____ Porta-Pak.



Profile: Nam June Paik, Creator of Global Groove

by Diane English

A maze of wire, cable and television innards, strange phantasmagorical shapes, undulating images, a Korean fan dancer, four American tap dancers, a Navajo Indian and a TV cello. This is not the latest installment of "Let's Make A Deal." It's Nam June Paik's Global Groove and as Dorothy once said to Toto, "Something tells me we're not in Kansas anymore . . ."

We are deep within the recesses of a building on East 46th Street where the young and infamous Television Laboratory at Channel 13 is discreetly housed, a stone's throw from the U.N. Down the stairs, into the basement and behind the double doors is probably the most sophisticated collection of video hardware in the country. And more than that, there is Nam June Paik and all his gadgetry about to embark on a new odyssey into the world of video.

Nam June Paik looks like a Korean Harpo Marx but in reality is the "father of video art," or as the *New York Post* called him, "one of the rare breed of artists who are also scientists, philosophers and engineers . . . a modern version of the renaissance man."

As we look in on the renaissance man one balmy day in April, we find him at Studio 46 with his pants cuffs dragging on the floor, three sweaters wrapped protectively around his sensitive stomach, and hair that looks as though he's stuck his finger into a wall socket. He could easily pass for one of his own creations. Nam June has been setting up for Global Groove since the early morning hours. He mumbles his personal mixture of Korean and English to no one in particular. "We have much problem. Much problem." He twists and turns the insides of a television set whose innards he has replaced with copper coil, coaxing it to produce the proper images. The set doesn't seem to want to behave. "It take me two days to do what always take two hours . . . much problem."

Once a student of John Cage,



Would you buy a used television from this man?

Paik made the headlines in the late '60's when he convinced cellist Charlotte Moorman to wrap herself and her cello in a giant cellophane bag and perform topless. Moorman was arrested for obscenity and Paik went on to invent something called the TV bra which kept Ms. Moorman out of the clink and Paik in the news.

Paik is digging into a "Dag Bag," his favorite accessory which contains all the miscellanea necessary for his existence as a video artiste. Knobs, tubes, wires, a pair of socks . . . then a curious-looking gadget which he inserts into the stubborn monitor. Suddenly a hypnotic maze of colors appears on the screen. Paik is delighted — like the Amazing Mr. Ballentine or the Banana Man — he's glad the trick worked.

Global Groove, like Paik, has a

history. The project had been floating around in a corner of his brain for some months, but Nam June needed sufficient time to prepare himself mentally or "get head together." Then one day a call came from Fred Stein, a television producer for the United States Information Agency, who had seen some of Paik's video dabblings on the coast. Stein very much wanted to spend several days with Paik, taping him at work. The material would be assembled into a mini-documentary for distribution by the USIA in 55 different countries.

Paik didn't hesitate to accept the offer. After all, if Uncle Sam has said, "I want you," the least Paik could do is create a Global Groove. A Production Assistant is handing out "scripts" to the involved personnel, none of whom are quite sure what to expect from Global

Groove. The script, written in Paik's own style, complete with doodles in the margin, is the first hint that this particular project will be one of his more "uninhibited" works...

"Two TWA jets will take off from breasts of Lady. If two dancers agree, they can wear same color bikini and wild Paik/Abe synthesizer patterns (also op-art patterns) can be keyed into there... Who is light man - will be follow me in forgetting routine lighting?"

The lighting director, technicians, engineers and cameramen have arrived. Most of them have never visited Studio 46 before. "I'd thought I'd seen every imaginable set-up" said one video man, "but this is incredible." The cast has also arrived and are busy rehearsing on the studio floor. Stagehands are

building and sweeping around them and the lighting director, trying desperately to make some last-minute adjustments, is bumped from his ladder by a woman madly twirling through the studio, fans and skirts flying. "You've got to understand" says Lab Director David Loxton, "we don't do things in the normal way here."

Fred Stein and his crew have finally arrived, ready to tape Paik taping Global Groove. Paik's crew is introduced to Stein's crew and after the inevitable Watergate and Sony jokes are out of everyone's systems, plans are laid for the day's shooting.

At 10:00 a.m. shooting is under way. Paik is in the control room with supervising engineer and right-hand man John Godfrey. They are probably the only two people who know what Global Groove really is.

Aside from being an exceptional engineer, Godfrey is probably one of the few people who can understand what Paik is saying.

Out on the studio floor the Korean fan dancer in full ragalia moves through a carefully choreographed dance. As the cameras pick up her image and feed it through the cable, Paik and Godfrey filter it through Paik's own invention - a video synthesizer - where it is recolored and reshaped. The result is dazzling. The dancer seems to be floating on backgrounds of pure color which change with the sounds she is making. "Fantastic! Fantastic! You are genius!" says Paik to Godfrey. "Genius" is one of Paik's favorite words.

At 3:00, Charlotte Moorman arrives, complete with a TV cello which takes several hours to assemble. The cello is another Paik invention - 3 monitors shaped like a cello which "play" video feedback as Charlotte pulls a bow across its special strings. She will play a duet with distinguished "straight" cellist Alan Shulman, whom Paik refers to in the script as "handsome male cellist."

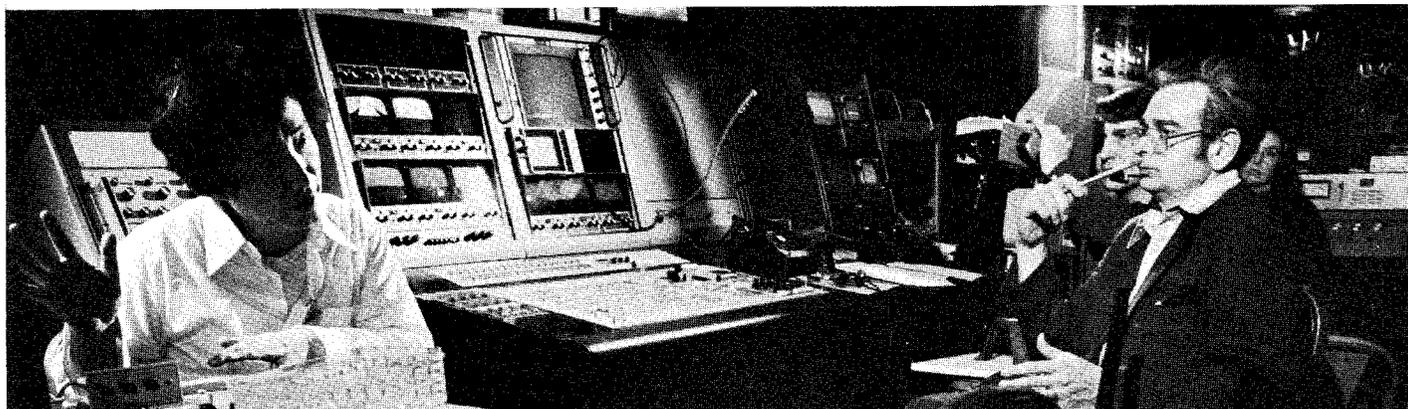
After the usual cellophane bag jokes are over, the cello is assembled and Global Groove is back in operation again. "He changed the cello for the first time since the year 1600" said Charlotte as she straddled the bizarre-looking instrument. "He changed my life." On that note, Mr. Shulman launched into a melodious "Bach," unruffled. As he played, Paik transferred his image into the monitors of Charlotte's cello while the cameras moved in and out, making it difficult to distinguish between the real and the unreal.

Production continued for two long days throughout which Paik's enthusiasm for his work never waned. Global Groove was on tape, ready for editing, and he was happy. Stein had Paik on tape and the USIA was happy. Everyone, even David Loxton, who for two days had referred to Paik as "that insane man," seemed pleased and satisfied. All except the audio man. On his way out of the studio he muttered, "My wife is going to ask me what I did at work today... What am I supposed to say?"



Global Groove in control room 46. Left to right: Nam June Paik, Charlotte Moorman, John Godfrey.

Global Groove and the Video Common Market



Fred Stein of the USIA interviews Paik during break in Global Groove taping.

by Nam June Paik

Global Groove may be a dazzling visual delight, but there is more to the program than meets the eye. Nam June Paik, creator of Global Groove, wrote this essay in 1970 to propose a very new kind of television.

The Treaty of Rome (1957) was preceded for a decade by vocal exhortations of prophetic statesmen like Robert Schuman, Jean Monnet or Hallstein, and tedious, painstaking and prolonged negotiations by the economists of six European countries. Many times the process was termed hopeless, utopian or academic. But the result, the European Common Market, a long dreamed of free trade zone, surpassed even the most wild imaginings in terms of growth and prosperity. England's trouble is a well-known fact.

Videoland on this Spaceship Earth resembles the divided state of European countries before 1957. Many TV stations around the world are hoarding videotapes totaling thousands of hours and asking impossibly high prices or compliance with complicated procedures to obtain some commodity for which they have almost no prospect of selling. Or Videoland, a so-called communications media, is so discommunicative with each other that practically no one knows what to buy, to import or export. Should video culture stay as divided, nationalistic and protectionistic as

the block economy of the Thirties, which amplified the depression, instigated Fascism and helped promote World War II?

World peace and survival of earth is Public Interest Number I and, needless to say, Public Interest Number I must be Interest Number I of Public Television. What we need now is a champion of free trade, who will form a Video Common Market modeled after the European Common Market in its spirit and procedure; this would strip the hieratic monism of TV culture and promote the free flow of video information through an inexpensive barter system or convenient free market.

McLuhan's premature high hope for the Global Village via TV is based on an obscure book, *The Bias of Communication*, by H. A. Innis (1951) which traced the origin of nationalism to the invention of movable type. But, ironically, today's video culture is far more nationalistic than print media. You simply cannot escape Camus or Sartre in a book store. But do you remember seeing a production of French TV recently? Most Asian faces we encounter on the American TV screen are either miserable refugees, wretched pioneers or hated dictators. But most middle-class Asians are seeing essentially the same kind of clean-cut entertainment shows on their home screens as most American Nielsen families. Did this vast information gap contribute to the recent tragedies in Vietnam? And how about Russian TV? They might not be that bad if they ran such bour-

geois soap operas as *The Forsythe Saga*, and I am curious how their Huntley-Brinkley-vich talk the pravda (truth) every evening. Understandably, negotiations for the Video Common Market will be as tiresome and frustrating as those for the European Common Market. But its huge reward will be not only philosophical. Faster rotation of capital is also a supreme requirement for cost-efficiency in a cultural economy. A new paper money created by the International Monetary Fund to check the gold outflow, indicated by the Special Drawing Right or SDR, would serve as a model for the proposed Video Common Market. (I suggested this in my Stony Brook report, in February 1968, before SDR was approved.)

Jazz was the first tie between Blacks and Whites. Mozart was the first tie between Europeans and Asians. Beethoven was the last tie between Germans and Americans during World War I. Currently rock music is the only channel between young and old. But the power of music as a non-verbal communications medium has been wasted as much as were the vast resources under the ocean. Therefore, if we could assemble a weekly television festival comprised of music and dance from every nation and disseminate it freely via the proposed Video Common Market to the world, its effects on education and entertainment would be phenomenal. Peace can be as exciting as a John Wayne war movie. The tired slogan of "world peace" will again become fresh and marketable. ◀▶

Lab Notes:

David Loxton, director of the Television Laboratory is one of the 35 people selected to participate in OPEN CIRCUITS, the first international meeting devoted entirely to "the exploration of the aesthetic potential of television." It will take place at the Museum of Modern Art on January 23-25, 1974. The meeting will include screenings of "the best and most provocative art yet made for television," audience-speaker dialogues and planning sessions for a major international video exhibition. A book will be published documenting the meeting's dialogues and essays and the closed-circuit exhibition of tapes will be offered for distribution around the world.

The National Endowment on the Arts has awarded a grant to *Stan Vanderbeek*, internationally known filmmaker and video artist, to create a major new work at the Lab. Stan's residency is slated to begin in December of this year.

Artist-in-residence *Bill Gwinn* recently returned from a month's visit to the National Center for Experiments in Television in San Francisco where he was once a resident artist. Bill is presently completing at the Lab "New York, New York, New York" an hour long video tape treating New York City as a poem. It combines and composes super 8, 16mm film, half-inch, one-inch and two-inch video tape.

Ed Emswiller is presently editing his latest work, "Pilobolus and Joan" made possible by a grant from the National Endowment on the Arts. The script, based on a short story by *Carol Emswiller* features the unique dance group Pilobolus (*Jonathan Wolken, Robby Barnett, Rob Pendleton and Lee Harris*) and singer-actress *Joan McDermott*. The hour-long program was taped on location in Vermont, Connecticut and New York and is Ed Emswiller's second major video effort following the highly acclaimed "Scapemates."

Peter Crown, (instructor of psychology at New York Medical College) and *Bill Etra* (inventor of the Rutt/Etra Synthesizer) have embarked upon an experiment called "Direct Human Interface with Video Synthesizer." Using FM Telemetry equipment developed in bio-medical research Crown and Etra monitor the movements of a human being via direct radio signals which are then fed as voltage inputs into the video synthesizer. When the movements of a dancer for instance, are interfaced with the synthesizer a whole new field of expression is opened up.

The WNET Television Training School, a unit which offers minorities instruction and training in film and television production, will be holding classes once a week in the Lab's Studio 46. David Loxton and the Training School's director Mrs. Jeri Feagans have arranged the venture which will offer hands-on experience to members for one semester. WNET's engineering department will also be providing personnel to conduct the classes.

Bill and Louise Etra the Lab's official representatives to the Muses de Arte Moderno's month long video exhibition in Mexico City recently returned with positive impressions. The conference, the first of its kind in Mexico, was well attended by spectators and artists alike. Language problems were overcome by the concentration on non-verbal tapes. Works by most of the well-known international video artists were screened including works by *Ed Emswiller, Douglas Davis, Nam June Paik, Stan Vanderbeek and John Reilly*. But according to the curator of the museum, the big hit of the conference was a short piece by Lab engineer *John Godfrey* called "Car-Tunes." ◀▶

(Continued from Page 1)

Department of Education.

The traditional series of staff conferences between CEMREL staff members headed by associate producer Blythe Cuyler and Lab staff headed by Producer David Loxton bridged the gap between planning and production and tackled the various conceptual problems: Should the narrator be male or female? How much electronic gadgetry should be used? Is there a balance between art-objects and everyday-objects?

Under the title *Shapes* the program moved into Studio 46 late in June of this year. The Lab then began a series of experiments on 1" tape to determine which production techniques would be most effective in conveying the concept of shape while also developing the pilot's own look. *Shapes* eventually evolved into a dazzling mixture of film, tape and still photography with its own particular style. For instance, as the program opens, the outline of a cat is being etched on the screen by way of a Telestrator (a piece of equipment which allows real-time electronic illustration). A freeze-frame image of a real cat is then chroma-keyed into the outline and "brought to life" so that the cat and its shape walk across the screen together. In another sequence, the Rutt/Etra synthesizer was used to generate groups of geometric shapes which multiply and divide themselves to highlight the concept of "shapes-within-shapes." The Paik/Abe synthesizer created abstract and amorphous images or "the shapes we find in our imaginations" and added pure rather than mixed colors.

Shapes will soon be screened by test groups of second graders and their teachers in St. Louis and New York City. Their responses will then be evaluated and used as guidelines in the production of future programs. Eventually, CEMREL and WNET/13 hope to produce two instructional series' of thirty programs each — one for the primary grades and one for the secondary grades. It's a long way from the hickory stick. ◀▲

(Continued from Page 2)

an event scheduled for November in Houston's Astrodome. It will be a three-day gathering of the followers of Majarajji, a 15-year old Indian boy who claims to be the "Lord of the Universe." We plan to work in color for the first time using the Akai camera and probably an INC VCR100 cartridge recorder. P_____ from Videofreex said he would test out the system for us. We'll also use porta-paks for black-and-white. Another project we're working on is called *PRIME TIME* and that will be a fantasy production about how the next 25 years of TV will look and how it will be produced. We're doing a treatment right now and hope to get Steve Allen to play himself as he will be in the year 2000. We're talking to KQED about doing a series next year called *FREE LUNCH* which would be interviews with interesting San Francisco people at the local restaurant of their choice. KQED says they're interested but you never know with public television.

We have a nice idea too for the Bicentennial Celebration but it's premature to talk about it. In addition to our video work we're doing a paperback book for Links Books about the future of electronic communications. Because so much of porta-pak TV has been so theoretical we want to get a scan on what really is going to happen and how we can influence it. As a supplement to the book we're doing a special report on where alternate TV is at right now, with emphasis on new video technology and how it can be used.

"We have mutated video technology to our own ends. Rather than abandon technology we have explored ways to use it which favor decentralization instead of hierarchy."

We have a theory about television but it's not worth going into right now. Other people believe it's an art form maybe like painting. And G_____ S_____ says we'll never be able to support ourselves doing it no matter what it is. We're more optimistic. ◀▲

vision news

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Getting Technical: The CVS-500

by John Godfrey, Supervising Engineer at The Television Laboratory

The newest addition to the Lab's Studio 46 is just a little bit bigger than a bread box — but much more versatile. It is perhaps the solution to a problem which has plagued television people since the introduction of 1/2" and 1" helical scan video tape, and that is how to effectively convert these tape formats to broadcast standard. The new piece of equipment is the CVS-500, a new breed of time-base corrector manufactured by Consolidated Video Systems. The proper name for the recent addition to the family is "digital video signal corrector" and before launching into an explanation of what that means, it might be a good idea to briefly outline the developments in the evolution of time-base correctors up until now:

The first time-base corrector, manufactured by RCA, appeared in the early sixties to deal with head delay, quadrature, and mechanical instabilities which occur during the process of tape transfer from one reel to another over a long tape path. This first system had a correction capability (or "window") of $\pm 1/2$ microsecond.

Closely following this RCA machine was a very similar time-base corrector manufactured by Ampex.

In the early '70's Ampex introduced the AVR 1's "Buffer" which worked to correct instabilities up to 1 microsecond per line over 32 lines. Although this system could take 1" tape that had been fed through it for correction, the window was still inadequate for edits or tapes having errors worse than one microsecond per line.

Last year, Television Micro Time introduced the first time-base corrector, with a window of ± 2.2 microseconds, capable of converting 1" (wide-band color) tape to 2" tape with a minimum of error.

But as time waits for no one, this year CVS introduced the CVS-500, the newest time-base corrector with a window of ± 95 microseconds per line. It can take not only 1" wide-

band color but also 1/2" black and white and convert either format to a broadcast signal. A newer development to appear late 1973 or early 1974 will be the CVS-502 which will handle 1/2" and 3/4" hetrodyne color tapes.

The basic problem in converting 1" to 2" has always been that 1" tape does not have a horizontal head reference as does the quadruplex system. Therefore, in transferring formats, horizontal instabilities occur. One way to correct the instability is to supply video at station horizontal reference (while also correcting color instabilities to 2.5 nanoseconds). This process can work, but as seen with the earlier time-base correctors, it is expensive and not completely efficient.

What CVS has done is change the video to *digital* information. By an analog-to-digital converter (A/D) the video is changed to digital information, i.e., on-off pulses. Since it is easier and less expensive to delay a pulse than a video signal, the 500 can delay the pulses over a wider range, then convert the digital information by a shift register and D/A converter. The information will then coincide with station sync for use through a switcher with live information on to 2". The video

now becomes as useful as any other source.

As stated before, the CVS-500 can convert 1" wide-band color tape to 2" tape but it must be *non-hetrodyne* color (or edited tapes must not come from the hetrodyne color output of the playback machine). In addition, black and white 1/2" tape, provided that it is put through a proc-amp to add broadcast sync, is also convertible to 2" tape. Of course, it cannot be expected that 1" or 1/2" tapes of originally poor quality can be converted to 2" with the same good results — "poor quality" meaning that there are severe mechanical problems with record or playback machines or severely maladjusted electronics.

With time-base correction systems having advanced this far and evidence that further evolution will continue, television as we know it now may be due for some changes. Equipment of this type adds a new dimension to the alternate video movement as format incompatibilities decrease. And network television, hampered by the immobility and overhead of 2" equipment is able to take advantage of the lighter and more inexpensive systems. ◀▶

