R E P O R T R E S U M E S

ED 018 965 EF 001 547

8 MICRO-LINK VARIAN 2500 MEGACYCLE ITV SYSTEMS.

MICRO-LINK SYSTEMS, COPIAGUE, N.Y.

EDRS PRICE MF-$0.25 HC-$1.04 24P.

DESCRIPTORS- *EDUCATIONAL TELEVISION, *INSTRUCTIONAL TELEVISION, AUDIOVISUAL AIDS, ELECTRONIC EQUIPMENT, TELEVISED INSTRUCTION, TELEVISION,

THE 2500 MEGACYCLE INSTRUCTIONAL TELEVISION SYSTEM IN EIGHT AMERICAN EDUCATIONAL INSTITUTIONS IS DESCRIBED. (JT)

ED018965

8 MicroLink Varian 2500 Megacycle ITV systems

EF001547

What are schools doing with 2500 megacycle Instructional Television systems?

Who are the educators meeting this challenge?

The 2500 megacycle service offers televised instruction specifically designed to fit American education both physically and fiscally. 2500 megacycle Instructional Television offers multi-channel capability which is essential to meet complex scheduling requirements. It can be expanded to include new buildings in the coverage with a minimum of effort and expense. Control of programming and scheduling is always in the hands of the licensee, thus assuring full use of the system to meet local needs. Flexibility in programming and in future expansion, along with the element of local control tailor 2500 megacycle ITV to fit the physical and organizational demands of American education. Its relative low cost and its ability to make other areas of the educational budget function more efficiently make 2500 megacycle fit the educational pocketbook as well.

Here in brief are the stories of eight typical American educational institutions. Because of its size, organization, or location, each organization must mount an individualized campaign to achieve its educational goals. Each chose to employ Micro-Link 2500 megacycle Instructional Television as a major means of obtaining these goals. In making its decision to employ ITV, each organization came to realize the advantages of 2500 megacycle microwave distribution:

- ☐ *Local control to meet local needs.*
- ☐ *Low cost relative to other methods of TV signal distribution.*
- ☐ *Extremely high dependability and reliability. To date, Micro-Link/Varian equipment has nearly three million unit-hours of trouble-free service in the field.*
- ☐ *Four-channel flexibility to meet complex scheduling demands.*
- ☐ *A system which can originate programming of its own or bring in the "best" from outside sources.*

and this is how Columbus discovered America... first

ROCHESTER, NEW YORK

Rochester is a city of highly skilled labor and comparable affluence, whose people have always valued excellence in education and have taken the means to attain it. It was no surprise, therefore, that the Rochester Public School District was one of the pioneers in 2500 megacycle ITV. The educational leadership in the city saw this new medium for educational communications as the next logical step in improving its curriculum and instruction. One of the primary uses of the Rochester System is the dissemination of the many unique cultural and scientific advantages of the community to large numbers of students.

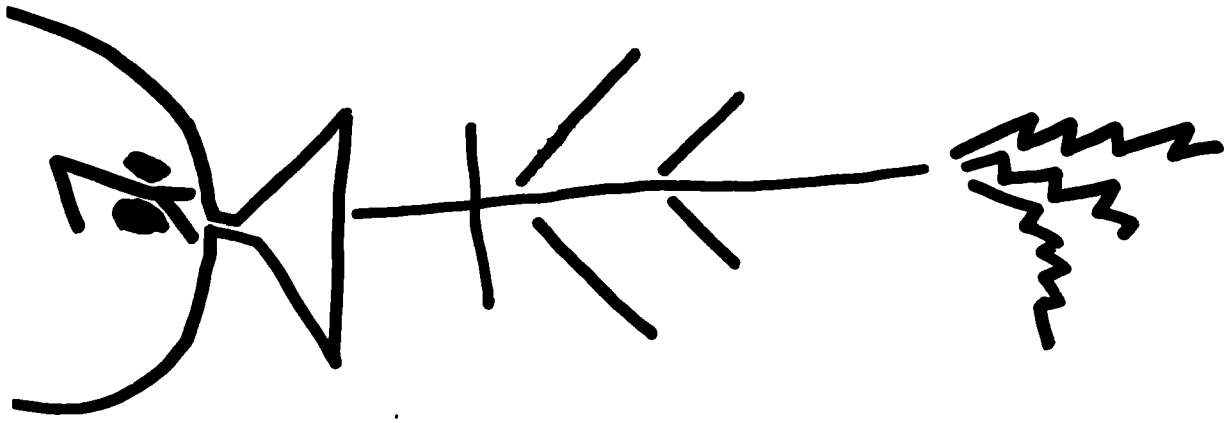
During the current school year, the Rochester City Schools will televise a series of programs dealing with the history of the Negro people. The school district feels that this series will make an important contribution towards the achievement of an improved climate of understanding between the races. Since violence builds on fear, and fear builds on ignorance, programming of this nature is urgently needed in our contemporary society — especially in urban areas. Without instructional television, the Rochester City Schools could not possibly have undertaken such an intensive and extensive dissemination of information.

The Rochester System is currently transmitting programs over three channels to 46,000 students in 52 city schools. At present, programming is being offered in the areas of elementary, secondary, and in-service teacher education. The basic programming is supplemented by occasional specials; for example, during the past year, televised interviews in the form of live press conferences by Governor Nelson Rockefeller and Senator Robert Kennedy have been presented. This year the Rochester Philharmonic Orchestra was videotaped in the school district's studios, and will be presented to all children in the district in three half-hour programs.

With the expansion of the instructional television program, Rochester had to increase its staff to meet the additional operating demands. A description of its current staff may well supply other school districts with a basis for planning.

Studio Personnel (Full-Time)

Executive Producer
Producer-Director
Director
Chief Engineer
Technician



Artist
Secretary

Studio Personnel (Part-Time College and High School Students)

6 Production Assistants
6 Cameramen
1 Artist
1 Typist

Field Maintenance (With reception equipment at 52 receiving sites and 1000 TV sets, field maintenance is a vital part of the system.)

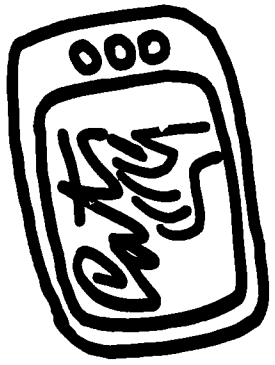
1 Field Maintenance Supervisor
2 TV Repairmen

HOUSTON, TEXAS

Spring Branch Independent School District, just outside Houston, Texas, supplies us with an example of what can be achieved by a Micro-Link 2500 megacycle ITV system in a typical suburban school district. In Spring Branch, educational goals are broad, yet well founded. The aim is to present a strong academic curriculum which will provide its students with a solid background for higher education.

Many of the district's students, after graduation from high school, continue their education at the college, junior college, university, or technical school level. In order to enable the school district's graduates to compete favorably for the limited number of seats available in institutions of higher education, the district's administration has consistently taken steps to upgrade and update its curriculum and methodology. It was in the spirit of this dynamic educational philosophy that Spring Branch turned its attention to ITV. After their experience of more than a year's programming, it is the feeling of the school administrators, the faculty, and the members of the school board, that Micro-Link 2500 megacycle instructional television helps the school district better achieve its goals.

Mr. Henry L. Thomas, Coordinator of Instructional Media for the Spring Branch Independent School District, outlines three major areas in which 2500 megacycle ITV systems prove valuable. The primary use is to bring instructional programming which has either been produced by the school district itself or obtained from some outside source, such as one of the national tape libraries, into the classrooms of the district. The



second aim is to achieve a greater efficiency in the use of the school district's film library. The third area is that by which some of the 250 highly educated specialists in science, law, government and similar fiields, who reside in the school district and volunteered their services to the district, may be brought to large numbers of students on a district-wide basis.

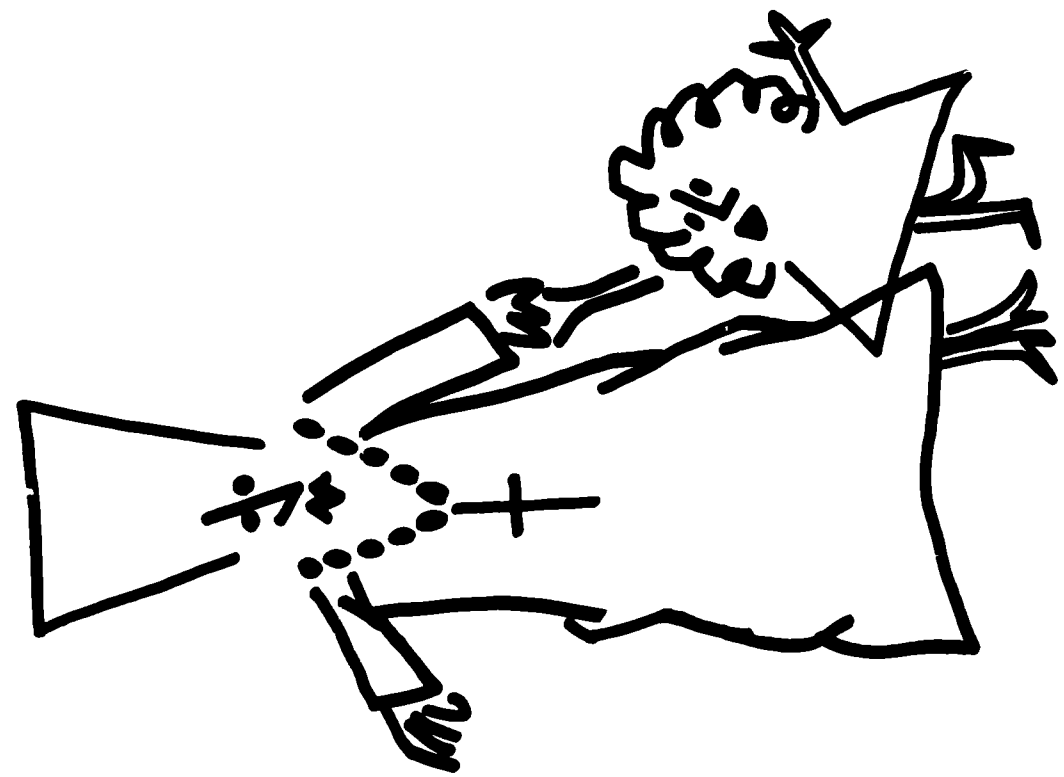
The scope of ITV programming in the Spring Branch Independent School District during the current school year includes two special music and art series in primary and intermediate art and music, special enrichment presentations in high school mathematics, a biology enrichment presentation, seven special language arts enrichment features, monthly intercom news broadcasts, and a complete correlated social studies film program for grades 5 through 12. The Spring Branch studios will broadcast continuously on two channels a total of 15 hours daily.

Some of the most exciting projects of the year will be a two-lesson mathematics program entitled "The History of Numeration," a new primary music series entitled "Melody Time," broadcast weekly, and several special in-service training programs. According to Mr. Thomas, "It is difficult to say whether any one project is most exciting, as each ITV presentation generates its own special excitement, first in the studio and secondly in the classroom."

DIOCESE OF BROOKLYN, NEW YORK

A city within a city! Brooklyn is one of the five county-boroughs which make up New York City. It is an urban area which shares all the woes current to city existence. Heavy population, high industrialization, poverty pockets, ghettoes, vertical dwelling, urban renewal, desegregation, head-start education — these are the facts of Brooklyn life.

One of the largest parochial school districts in the country is seated in Brooklyn. Last year, the Brooklyn Diocese turned to Micro-Link 2500 megacycle instructional television to help it meet the many challenges of urban education. The system is one of the largest 2500 megacycle instructional television systems in existence, transmitting four channels of programming to more than 200 schools scattered across the man-made terrain of Brooklyn and Queens. The system includes



a transmitter site and three repeater sites.

Beyond the challenge of installing an extensive microwave system in an urban area, the Brooklyn ITV story is really one of careful and farsighted planning. Starting two years before actual full-time programming began, the Reverend Michael J. Dempsey, Assistant Superintendent of Schools and Coordinator of ITV for the Diocese, initiated a training program for studio personnel. Some thirty individuals received extensive training through a combination of university courses and workshops. Under the direction of an Educational Television Consultant with extensive experience, the trainees advanced through various workshops in preparation for positions in three areas: on-camera teaching, production, and technical direction.

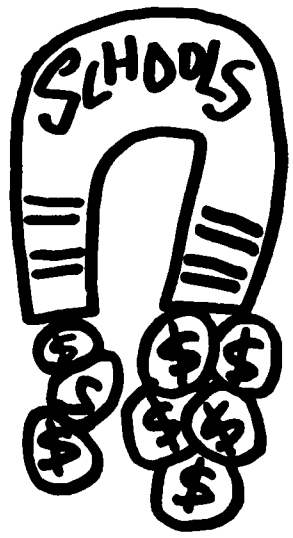
Long before actual programming began, serious effort was likewise made to involve, as far as possible, the classroom teachers in the subject areas planned for ITV programming. The intention was to guarantee that the programs produced were not only familiar to the ultimate users—the classroom teachers—but were actually determined in content by them.

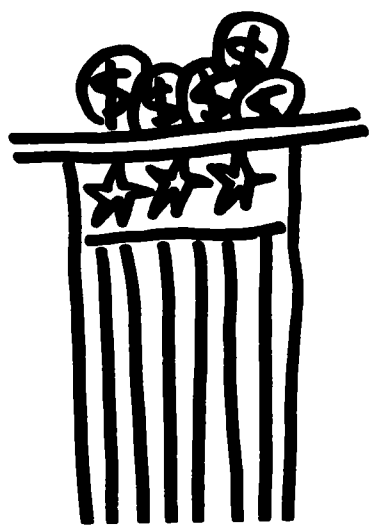
At another level, Father Dempsey involved the administrative personnel of the Diocesan schools in the instructional television project through a series of meetings. Yet another group of Diocesan officials, those in charge of the various Diocesan agencies, such as Catholic Charities, Cana Conference (marriage counseling), and Confraternity of Christian Doctrine, was acquainted with the potential of 2500 megacycle ITV through a combination of talks, demonstrations, and discussions.

The organization of Brooklyn's ITV System has consistently been characterized by careful planning. Concern for the future expansion of programming led the Brooklyn Diocese to install a triple-cable distribution system within each school — making it one of the few school districts in the country with such built-in expansion capabilities.

NEWBURGH, NEW YORK

The small-to-medium-sized city of Newburgh lies halfway up the Hudson Valley. The City Board of Education faced two divergent educational problems. It was faced at one and the same time by the challenge


SCHOOLS

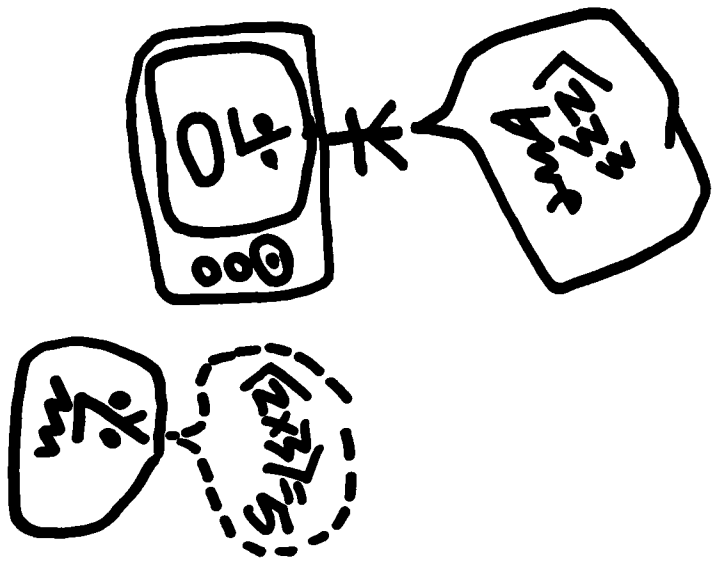


to supply improved basic education in several poverty districts, and to supply high quality, specialized instruction to an already ambitious and highly successful foreign language program.

Local school administrators turned to Micro-Link/Varian to assist them in the planning and installation of a complete 2500 megacycle ITV system. In establishing this system, Micro-Link/Varian undertook all the surveying, engineering, and filing of applications with the appropriate federal agencies, necessary to the adequate planning of an extensive ITV system. After the award of the station construction permit by the Federal Communications Commission, Micro-Link/Varian undertook to supply and install all the necessary equipment—from studio origination equipment through 2500 megacycle transmission and reception equipment and RF master antenna systems in the schools, right up to the classroom TV receivers. The Newburgh system consists of a two-channel single-hop transmission. The programs originating in Newburgh's television studios are carried to some 500 classrooms in 25 public and parochial schools (as recommended for projects funded under Title I of ESEA) located in the 35 square mile Newburgh metropolitan area. Its studio features a remote camera which lends great flexibility to the programming. By using this remote camera in conjunction with its Micro-Link 2500 megacycle ITV system, the school district can, for example, originate programs from the district's planetarium located in the Newburgh Free Academy, and broadcast them district-wide.

NEW TRIER, ILLINOIS

New Trier Township is a high-income, residential suburb to the north of Chicago. Its residents have long desired and paid a premium for high quality education. Dr. William H. Cornog, the Superintendent of Schools, describes the New Trier style of education as being "excitingly stable and committed . . . . The New Trier education program is man-centered and mind-centered." Color it academic! New Trier's approach to instructional television is no different from the rest of its educational projects. It is not a gimmick, nor is it merely a prestige attention-getter. Instructional television is an integral part of the intel-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lectual life of the New Trier public schools.

New Trier's instructional television system is a Micro-Link 2500 megacycle system. It broadcasts to some 25 schools in seven school districts throughout the township. Since it can broadcast four programs simultaneously, it enjoys extensive flexibility.

Mr. Robert Pirsein, the Television Coordinator for the district, points out that New Trier is using instructional television to fill specific educational needs where, after considering all the other resources available to a teacher, such as films, slides, and his own ingenuity, it is evident that instructional television can do a better job. It is used in areas where teachers, because of a lack of money, or equipment, or background, or their own time, naturally turn to ITV to help them accomplish the job at hand. In some cases, New Trier's instructional television is entirely supplemental. In other cases it serves as the basic instruction upon which the classroom teacher then builds.

During this year and the next, there is practically no area that will not be covered in some way by instructional television. Programming is going forward in almost every academic discipline. Pirsein emphasizes that a great deal of the program time will be devoted to in-service teacher training. These in-service programs are made available to teachers at times most convenient to them—before and after school and during lunch periods. New Trier's four-channel capability allows a considerable degree of latitude in scheduling these programs.

Enthusiasm is high over some special projects, such as the Faculty Township Institute Day and several PTA Days which will be conducted via television.

UNIVERSITY OF CALIFORNIA

2500 megacycle ITV is not limited to elementary and secondary education. It is also currently employed at the university level, where it has proved to be extremely useful in the area of medical education. The University of California's first 2500 megacycle ITV station was installed on Moffitt Hospital at the San Francisco campus in April of this year. Its second station was installed by Micro-Link/Varian at the San Francisco General Hospital. Both these stations are currently serving the staff, residents, and students

associated with these hospitals and the university's medical school.

The purpose of the university's ITV system is to achieve:

- ☐ Better utilization of instructors' and students' time through reduction of travel time between the medical campus and the hospitals.
- ☐ A reduced requirement for classrooms and operating theaters at the campus.
- ☐ Provision for opportunities to graduate fellows at all teaching hospitals to see the demonstrations and hear televised lectures originated at Moffitt Hospital and San Francisco General Hospital.

This year's programming provides televised demonstrations and lectures covering pediatrics, obstetrics and gynecology, neurology, tropical medicine, clinical pathology, and clinical demonstrations in psychiatry.

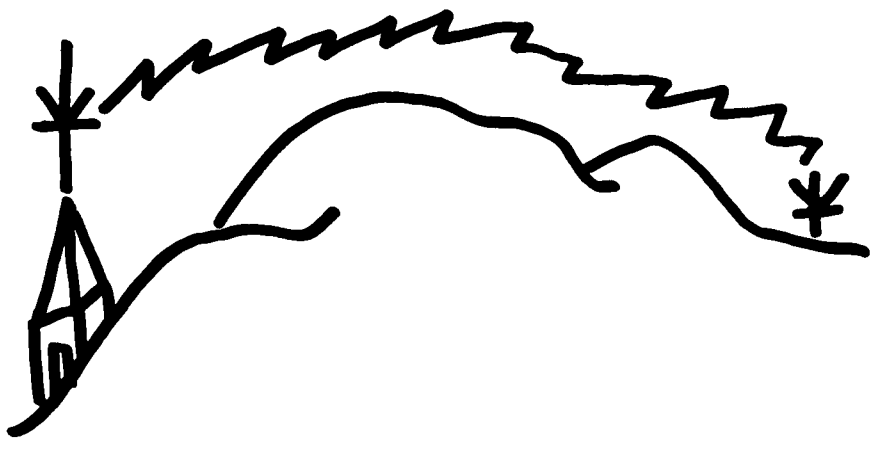
The potential of the University of California's ITV system is only begining to be tapped. The future will see the programming originated at Moffitt and San Francisco General Hospitals being received by many additional hospitals, clinics, schools, professional buildings, and qualified individuals in the San Francisco area.

Micro-Link 2500 megacycle ITV systems are helping medical schools, hospitals, and clinics to get together in a more efficient way than ever before. Not least of its contributions to medical institutions is its ability to improve the initial training and to facilitate the in-service training of both nurses and nurse's aides.

MIFFLIN COUNTY, PENNSYLVANIA

The nay-sayers have maintained that a 2500 megacycle instructional television system would not work in rugged terrain. The Micro-Link system in operation in Mifflin County proves them wrong.

Mifflin County encompasses a rural area in the Appalachians 60 miles northwest of Harrisburg, Pennsylvania. When Micro-Link prepared its proposal to the Mifflin County Board of School Directors, it was necessary to prepare detailed engineering data and to indicate careful planning of the entire system. The contract called for Micro-Link/Varian to assume the responsibility of supplying and installing studio equip-



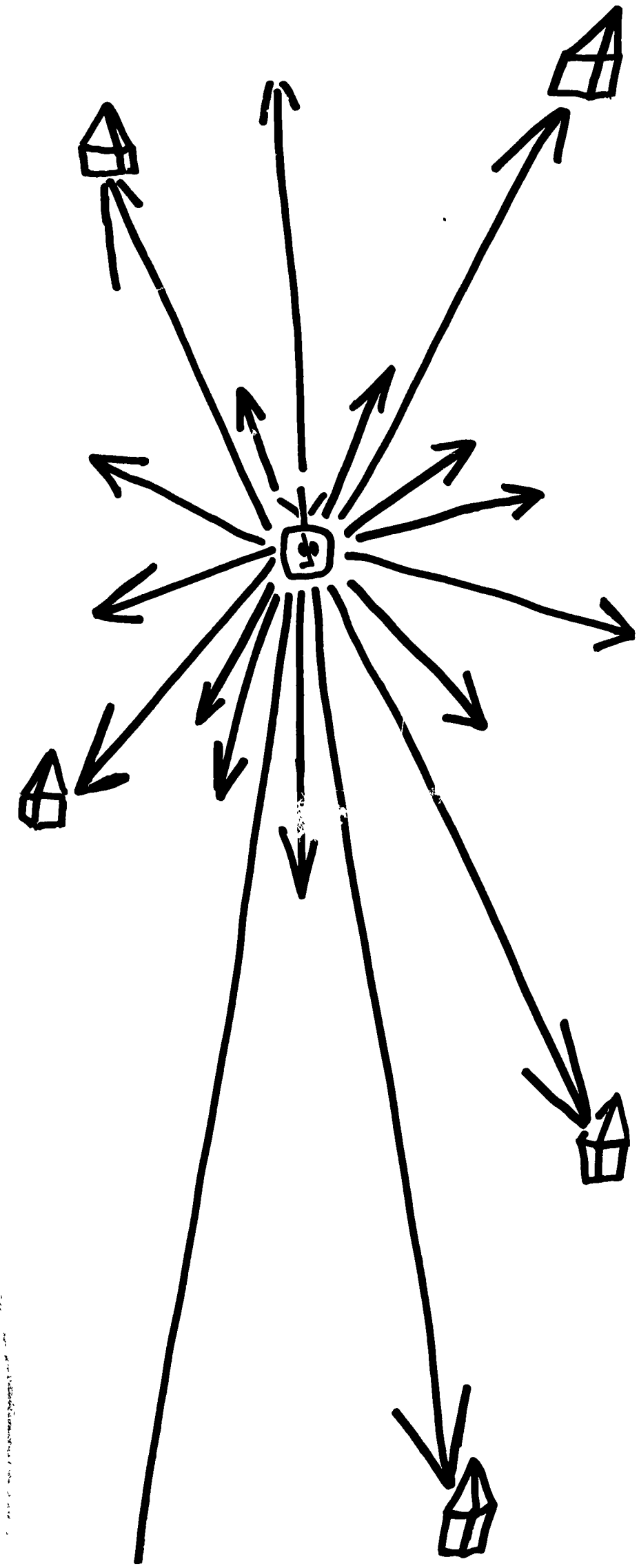
ment, 2500 megacycle transmission equipment, the erection of a remote controlled transmitter on Big Ridge Mountain, a repeater station on Jacks Mountain, the construction of an access road to the top of a hitherto inaccessible peak, the installation of 2500 megacycle receiving equipment at each school site, and the installation of RF master antenna systems within each school.

Superintendent Walk is responsible for the administration of this system which reaches some 10,000 students throughout the county. Besides the obvious use of television for the improvement and enrichment of instruction in the ordinary classroom situation, the Mifflin County Board of School Directors plans to use its system for an intensive program of in-service training and workshops for teachers. It also intends to rebroadcast programs from the State University as well as to undertake the production and dissemination of discussion programs, interviews, and presentations by and with community resource people.

The Mifflin County ITV system is a product of local administration of federal funds. Mifflin County's means of funding its ITV project might serve other school districts with an example. Title I of the Elementary and Secondary Education Act supplied $375,000 to the Mifflin County Board of School Directors. The monies needed to purchase the Micro-Link 2500 megacycle ITV system were drawn from these Title I funds. The school district judges that such an ITV project will supply a major boost to the instructional endeavors of this economically and educationally developing area.

FRESNO COUNTY, CALIFORNIA

Although most of the educational institutions which enter the 2500 megacycle field are independent school districts or individual universities, it is not necessarily always the case. Fresno County, California has supplied the nation with a pattern for inter-institutional cooperation. Recently 48 independent school districts, unified school districts, and high school districts got together with the Fresno County School District to arrange for the installation of a Micro-Link 2500 megacycle ITV system to supply television programming on a county-wide basis. Both the County Super-



intendent and the individual school districts involved saw that it was in the interest of all concerned that such an ITV system be, first of all, established, and secondly, that it be established on a broad enough basis to make it both economically feasible and educationally functional.

In order that the 2500 megacycle channels made available by the Federal Communications Commission be used most effectively, it will be necessary for many small school districts across the country to imitate this spirit of cooperation for the sake of mutual benefit which has been the hallmark of the Fresno County system from its inception.

The system has the peculiar problem of the need to cover a far-flung population of moderate density. The system in its first stage covers 47 schools within sixteen miles of the county seat of Fresno. It will expand in stages by the use of repeater sites to eventually cover all schools in the county. The county has, on the other hand, the great advantage of lying in an almost totally flat valley which minimizes problems in microwave transmission. The studio is located in remodeled quarters at the county Board of Education.

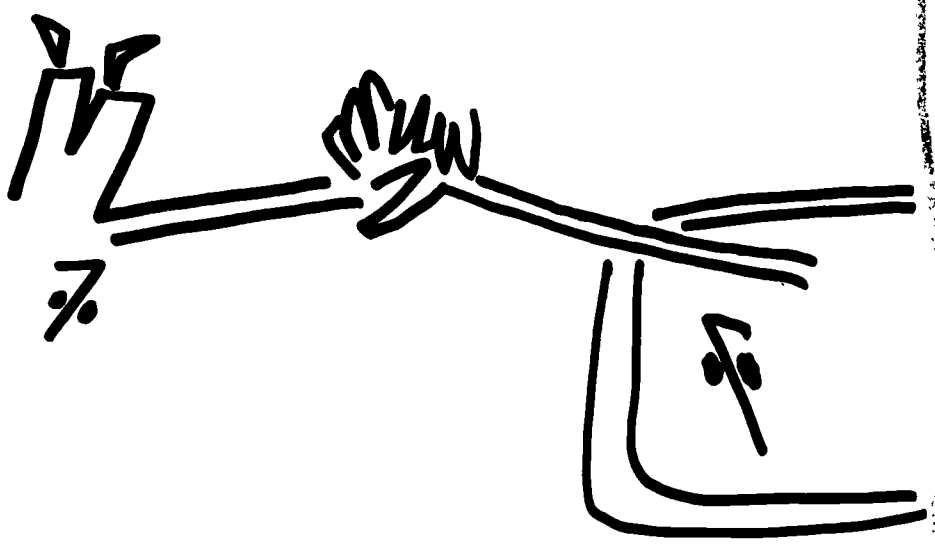
The system, therefore, is important and interesting for three reasons:

- ☐ *It is typical by way of terrain and density of population of many school districts in the Midwest, Southwest, Pacific Coast states, and Florida.*

- ☐ *The requirement for extremely careful planning with regard to locating the studio in remodeled quarters.*

- ☐ *The coordination of a number of school districts in a cooperative ITV effort.*

Mr. Ernest A. Poore, Superintendent of the Fresno County Schools, is responsible for the organization and coordination which enabled the school districts to steer their ESEA Title I funds towards the establishment of a county-wide 2500 megacycle ITV system. Micro-Link/Varian supplied the design, equipment, installation, and the technical-operations staff for the system's studio, as well as 2500 megacycle transmission and reception equipment, RF master antenna systems, UHF off-the-air reception facilities, and TV receivers.



A PHILOSOPHY OF ITV

All sound education must be based on a definite view of man, his mind, and the learning process. As part of the educational process, instructional television must be governed by a thoughtful vision of its nature and its role in the schools. The following tenets have been established by the New Trier Township School District (Illinois) to outline its philosophy of instructional television. Mr. Robert Pirsein, the district's Television Coordinator, states emphatically that "These are not mere pious platitudes, but actual working statements that we will follow, or not do TV at all."

☐ *Television is essentially a medium of communication*—a medium of communication just as books, films, slides and even teachers are media of communication. Television can be used wisely or poorly. Its proper use depends upon the personnel using it and . . .

☐ *Need.* To use Instructional Television properly, it is necessary for administrators, teachers, curriculum personnel and Instructional Television specialists to study the curriculum and, where television can ably fill a specific need, it should be used. Where Instructional Television cannot fill the need, it should not be used. Therefore . . .

☐ *ITV will be used almost exclusively on a planned insertion basis within the total curriculum as needed.* The school district does not hold to the rigid "course concept" often prevalent in Instructional Television today. If Instructional Television can fill a specific need in a subject area on a particular day, it may be used. Following this television presentation, television may not be used again in the subject area for a month or even more, or until the need so arises.

☐ *Close communication is vital.* The ITV system has, as its keystone, a working relationship, a partnership between administrators, teachers, public, and students; only when coordinated communication and suitable training of personnel is developed among these four elements can an effective Instructional Television system result.

☐ *The professional ITV staff are ITV specialists and together with the teachers and curriculum personnel form part of the ITV team.*

☐ *Development of ITV programs begins with the teacher.*

☐ *An effective utilization of every ITV unit is absolutely vital for successful use of the TV medium.*

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