

TECHNICIAN ENGINEER

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INTERNATIONAL BROTHERHOOD OF ELECTRICAL WORKERS — AFL-CIO

LANDMARKS OF LABOR
No. 7
Founding of the
INTERNATIONAL
TYPOGRAPHICAL
UNION - 1852



In May, 1852, after two years of planning and preliminary efforts, the National Typographical Union was founded in Cincinnati, Ohio. Seventeen years later "International" was substituted for "National" in the name. Printers are the great pioneers in trade unionism in America. During the Revolution in 1778 New York printers banded together and struck against low wages and won. The "Typographical Society" was founded in New York in 1794 and from then until 1852 some 40 local Unions in 30 cities were established be-

fore the first truly national union was formed. The ITU as a pioneer in national action, its consistent leadership for more than a century in seeking higher wages, lower hours and better conditions and its important role in helping to establish the American Federation of Labor make the founding of the ITU a great landmark of labor. The union's label or "bug" has symbolized trade unionism for more than a century. Today the Typographical Union stands for the basic principles deeply rooted in one of America's longest heritages of trade unionism.

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The INTERNATIONAL BROTHERHOOD of ELECTRICAL WORKERS

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An overall view of the WDSU-TV transmitter at Chalmette, La., below New Orleans. WDSU-TV is an NBC-TV primary affiliate serving Louisiana's largest city. It employs members of IBEW Local 1139.

The station transmitter rises to 975 feet, and it has two complete sets of bat wings. The transmitter can be switched from one to the other as a push-button operation, or both can be utilized simultaneously for additional gain when fed only by a driver stage.

commentary

It has been said that "There is a rowdy strain in American life, living close to the surface but running very deep. Like an ape behind a mask, it can display itself suddenly with terrifying effect. It is slack-jawed, with leering eyes and wet loose lips, with heavy feet and ponderous cunning hands; now and then, when something tickles it, it guffaws and when it is made angry, it snarls; it can be aroused much more easily than it can be quieted. Mike Fink and Yankee Doodle helped to father it and Judge Lynch is one of its creations. When it comes lumbering forth, it can make the whole country step in time to its own frantic, irregular pulse-beat."

Senator Charles Sumner demonstrated its presence in the background in his speech in the Senate on May 18, 1856—hastening the approach of the War Between the States. In more recent years, it manifested its presence in the Father Coughlins, the Black Shirt legions, the Ku Klux Klan and even in the various elements paraded before the McClellan Committee.

Let us keep it *out* of the IBEW, going forward with Responsibility, Integrity, Democracy and Brotherhood—these are the things which made the IBEW what it is today. Our past is the foundation of our future.

the index . . .

For the benefit of local unions needing such information in negotiations and planning, here are the latest figures for the cost-of-living index, compared with 1958 figures: September, 1959—125.2; September, 1958—123.7.

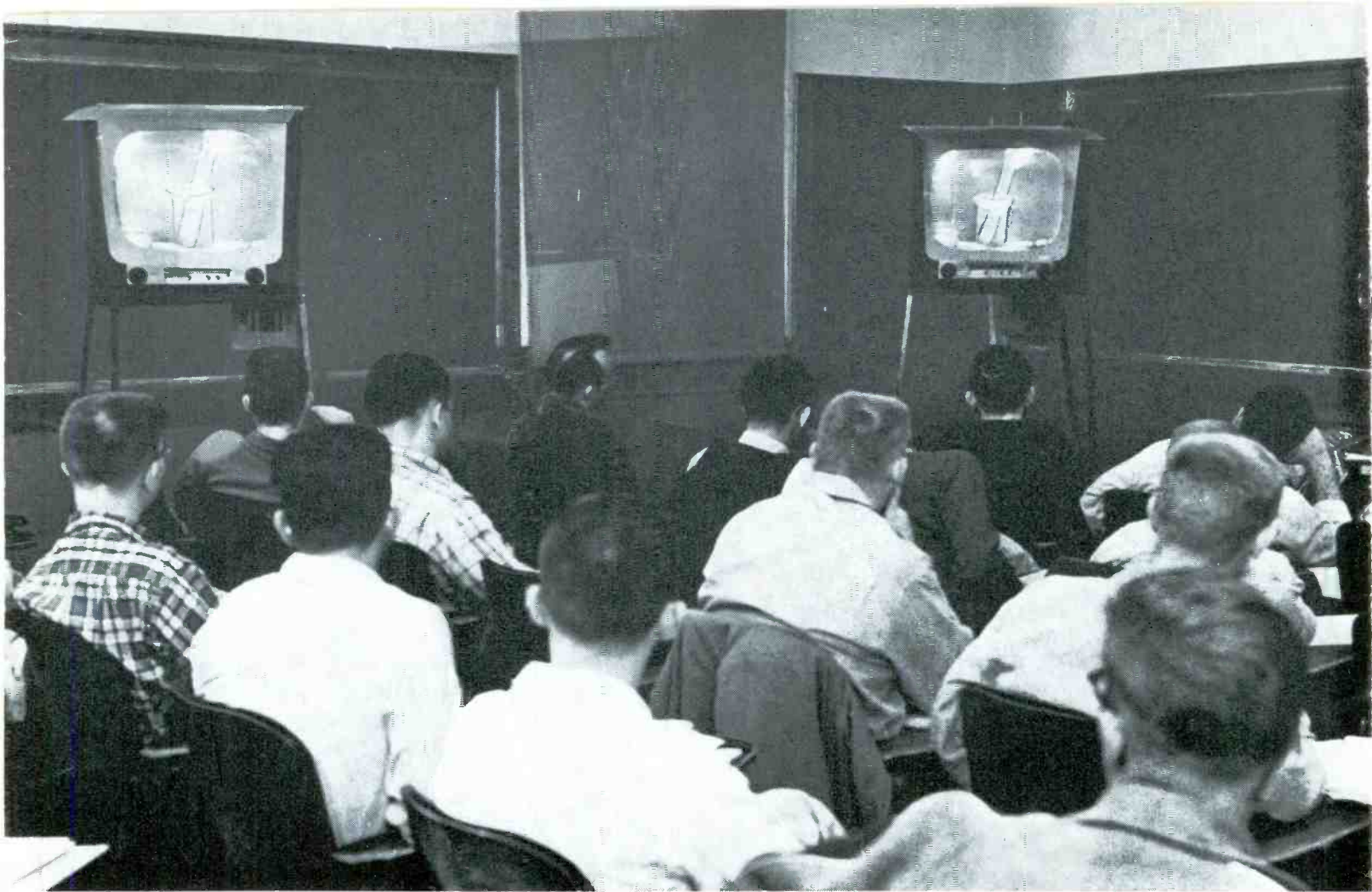


Photo courtesy of National Education Association

A chemistry class at Pennsylvania State University watches a televised laboratory experiment, which is also being viewed by students in another classroom.

Television Goes to School
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Television Goes to School

By John Culkin, S. J.

Editor's Note: The author is a theological student at Woodstock College, Woodstock, Maryland, and secured his M.A. degree at Bellarmine College. While his chief interest is in educational administration, he is very interested in educational TV and has devoted a great deal of time in studying and evaluating television as an educational tool. We are grateful to him for having submitted this article to us for publication.

A DOZEN years ago it was difficult to watch television unless you drank. Most of the few thousand TV sets in the country were monopolized by the friendly neighborhood taverns. Today, however, even total abstainers can share the benefits of television because of the almost 50 million sets in the country. The novelty has worn off and now America is "at home" with television in more ways than one.

The whole process has taken place with the suddenness and surprise of a genie being released from a bottle. Yesterday we had to tackle many of our problems alone. Today we have this powerful force obedient to our every wish. It will be as good as we want it to be. Like the airplane, the atom, and the book, it can be harnessed to good or bad causes. It is important to keep this in mind when considering the educational uses of television, for television has gone to the schools and put its might at the service of education.

In the shadow of the commercial antennas, educational television has been growing intelligently and consistently for the past six years. Because many of the experiments are conducted on a local level and because ETV has not received its share of publicity, there are relatively few people in the country who are aware of its progress and extent and potential. And yet television will be as important to education as the printed page. When Gutenberg invented movable type, he presented the world with a powerful means for saving or destroying its mind. Men have put many good things and many bad things on the blank page. Now we can sit in front of the blank TV screen and decide how it will serve us. This medium can bring the best of the world's educational and cultural resources to life—at the touch of your hand and in response to your demand.

SCOPE OF THIS ARTICLE

No one can deny the great contribution television has made to our leisure time by giving us front row seats at the best of entertainment, sports, music, and news. This article, however, will focus only on the direct and indirect use of television in furthering strictly educational goods. As Americans we have set ourselves some Herculean tasks in education by committing ourselves to universal education and to excellence in education. This is as it should be. But with one out of every four Americans now in school and enrollment figures skyrocketing every year, we are putting a tremendous strain on the teacher supply and on physical facilities. By 1965 there will be a shortage of 250,000 teachers and we will have to build 500 new classrooms every day to keep pace with this growth. One thing is clear. We will never be able to assemble enough teachers or bricks to multiply educational facilities fast enough.

Television can help in this crisis. And if we are really interested in the education of our children, we must be really interested in television. It cannot solve all the problems, but we must find out where it can help and to what extent it can be used in education. It will never replace the classroom teacher or the school building, but it can multiply their efficiency and range.

The best way to find what television can do and will do is to see what it has done already. We will consider the educational uses of TV which have been made by

the commercial networks, the commercial stations, the non-commercial educational television stations, and by closed-circuit systems. We won't be able to touch all the bases, but the examples used will give an idea of typical projects that are being carried out all over the country.

COMMERCIAL NETWORKS

The television networks have already done more to realize their educational responsibility and potential than the movies or the radio ever seemed to do. Television has helped literature courses by presenting 15 of Shakespeare's plays and maintaining a consistently high standard of dramatic achievement in series like "Playhouse 90," "Producer's Showcase" and "The Hallmark Hall of Fame." It has boosted interest in the arts through performances of opera, ballet, and the dynamic appearances of Leonard Bernstein and the New York Philharmonic. Series like Bell Telephone's "Science on TV," "Mr. Wizard," "Odyssey," and "Adventure" have kept interest in science very much alive. And Americans have become eyewitnesses to history and politics because of the many news, interview, and documentary programs.

Although all these programs supplement school courses, the major network contribution has been NBC's televised college courses in science. Aptly called "Continental Classroom" this program last year offered a year's course in Modern Physics taught by Dr. Harvey White. More than 270,000 viewers saw the program daily and 241 colleges offered credit to more than 300 students. This year Dr. John Baxter is teaching a course in Modern Chemistry which is the first educational series to be televised in color.

COMMERCIAL STATIONS

Although local stations do not have the resources of the networks, they can better adapt their schedule and programs to meet local educational needs.

a) **SUNRISE SEMESTER.** More than 100,000 New Yorkers turned out daily at 6:30 a. m. for Prof. Floyd Zulli's lectures on Comparative Literature. This year New York University repeated the experiment with courses in Physics, Sociology, History and Literature.

b) **MODERN LANGUAGE.** More than 30 commercial stations have presented courses in modern language within the past two years.

c) **NEW YORK REGENTS.** For the last two years the New York State Board of Regents has leased 25 hours of time per week for in-school broadcasting and for other special programs.

d) **COMBINED STATIONS.** Central Michigan will feature the nation's first combined educational-

commercial station when Channel 10 in Onondaga opens on a shared-time basis. Michigan State University will use it 38 and a half hours a week and the TV Corporation of Michigan will broadcast commercially for the remaining time.

NON-COMMERCIAL ETV STATIONS

The FCC has allocated 259 channels for exclusive use in non-commercial educational broadcasting. At present there are 44 educational stations on the air—34 on VHF channels and 10 on UHF channels. The stations are usually owned by schools or community groups representing the educational and cultural groups of the area.

a) **PITTSBURGH.** This is the first city in the world to have two educational channels. During school hours they broadcast direct teaching for the elementary and secondary schools. They also have an adult education schedule. Two years ago, Robert Frost read and explained his poetry to the classes studying American Literature.

b) **CHICAGO.** Through the facilities of WTTW it is now possible to get a Junior College diploma by television. Students register for credit, receive study guides and texts, follow the course on TV, and take exams on campus. Two years ago, the second highest student at graduation was a television student.

c) **EDUCATIONAL NETWORK.** Alabama has the nation's first ETV network with three stations combining to reach 80 per cent of the state's population. More than 250 schools are utilizing the programs which are now on the air 66 hours a week.

d) **NATIONAL PROGRAM FOR PUBLIC SCHOOLS.** This project in TV teaching is nationwide and involves nearly 40,000 students in more than 100 school systems.

CLOSED CIRCUIT INSTALLATIONS

At present there are 119 institutions using closed-circuit systems for educational purposes. It seems clear that within ten years almost every college in the country will be using it for part of their program.

a) **HAGERSTOWN, MD.** This is the largest closed-circuit hook-up in the world. Its cable system links the 48 schools of Washington County and reaches 18,000 students. The teachers work in teams and each student has televised teaching for about an hour a day. The classroom teacher follows up the half-hour TV lesson with a 45-minute period for discussion and questions.

b) **CHELSEA PROJECT.** In New York City, a closed-circuit system links the local schools, a community center and a housing project. In this predominantly Spanish-speaking neighborhood, the parents see

what their children are learning in class and have the opportunity to learn English in the process.

c) **MEDICINE AND DENTISTRY.** Walter Reed Hospital has a complete color CCTV system which televises classes, experiments, and operations to its medical students. Many schools of dentistry have adopted television and the American Dental Association has reported that demonstrations can now be viewed by groups of 90 or 100 students with greater clarity and with a saving of three week's time for one teacher.

d) **PENN STATE.** More than 30,000 students have taken regular college courses by closed-circuit television. Research shows that the TV groups did just as well as the regular classroom groups.

THE FUTURE OF ETV

Educational television has been spearheaded by a group of intelligent and balanced leaders. For the most part, its projects have been well planned, its research careful, and its claims realistic. Eventually the closed-circuit system will be as common as the public address system and every major city will have an ETV channel devoted exclusively to educational programming. More recent developments like video tape, color television, and the large screen will bolster the educational arsenal. Soon the finest teachers and minds of our time will be at the disposal of every school in the country. TV will do for education what it did for sports—bring the big-leaguers into the living room. When the World Series is on television, somehow the neighborhood stickball games lose their attraction.

As is true of anything new, there are problem areas which have not been completely explored. One of the regular objections is that TV will destroy the personal teacher-student relationship. This might be true if anybody were advocating that TV do *all* the teaching. We must be realistic. Think of the best teacher you ever had. Think of one of the poorer ones. Would you prefer the poor teacher in the classroom to the good teacher on television?

Union people should be especially concerned with the growth of ETV. In addition to the educational advantages for themselves and their families, educational television is opening the door to new job opportunities. The high standards of their broadcasting and the expense of their equipment demand the skilled and professional talents of experts. It is likewise important that labor leaders offer active cooperation to ETV projects to prove to educators that the unions are as concerned about education as industry has been.

When the histories of education are written in the year 2000, they will look back over a half century and realize that television was the most important thing that happened to education. Our decision and cooperation now can make this chapter in the story of education have a happy ending.

Why Strike?



A LINE IS DRAWN AGAINST ABUSE

Why strike?

The ultimate tool of labor relations is a two-edged implement, and people are always surprised when it cuts a little.

How can you possibly get back what you've lost in wages?

You can't. Why should you?

A strike occurs when a group of employees decides negotiations have reached the end of reason and a demonstration of solidarity and unwillingness to continue work without proper redress is called for.

Are all unions right when they strike? Of course not. All wars aren't right, nor are all politicians, all policemen, all wheeler dealers in the world of finance, all agents of the judiciary.

Why strike?

When a labor negotiation reaches total impasse, the union has just two choices.

1. Give in.
2. Take a walk.

Where would labor be if there had never been a successful strike? Where would the country be?

You have only to consider where the wage earner once was to know where he'd be now.

Without the right to strike, a man in the great mass industries, a foundryman, perhaps, would be getting about \$45 a week now. This is a fact even when all the external inciters to inflation are considered, wars, monetary manipulation, federal reserve hocus pocus and the governmental boondoggle of wayward spending.

Without the right to strike, a printer today would be drawing something like \$40 a week in many cities the size of San Jose, for a six-day week.

The Great Spirit alone could guess what the average newspaper reporter would get; \$18 a week perhaps, if

he proved willing to work seven days a week, run errands of an evening, could give up eating lunch and showed willingness to take out \$7 of the \$18 a week in free passes to second rate movies and fourth rate boxing matches.

The first union was founded to circumvent abuse. This applies to abuse at the pay window as well as to the abuses of near-slavery and child labor.

There is nothing in the history of the world to indicate such abuse would have been abated by the good intentions of the political bodies and the best possible offices of the do-gooder reformers.

Abuse has been checked by drawing a line and standing on it.

The unions did the drawing.

The whole economy has benefited. The farmer may never admit it, but this is why he gets more for his produce. The investor may not ever acknowledge the sources of his well being, but today this chiefly is why he is able to clip gold crust off the edge of his coupons. Industrial management shows rare inclination to admit the existence, where labor relations figure, of economic fact, but this mainly is why management these days has something to manage.

The reason is this. The United States is a business nation. Business requires consumers. A consumer requires purchasing power. Nobody makes him a gift of it. A consumer has to earn, create and bargain for his purchasing power. He can't do it well; in fact, he can't do it at all, as a unit of one. Hence, the union.

The paycheck of practically every wage earner in the land is the size it is because of the existence of labor unions. This applies whether the wage earner belongs to a union or whether or not he's even ever heard of one.

And had there not always been implied the possibility of pressing the working man's claims by taking recourse to the picket line, the foundryman's first big pay raise would still be due.

The average man wouldn't have to worry about how big a yield his bond holdings might produce.

The average man wouldn't have any.

This editorial appeared originally in the San Jose, Calif., Reporter, published by the San Jose Guild during its long strike last spring. It impressed the 1959 American Newspaper Guild convention so much that it was made a part of the record.



AFL-CIO Resolutions Oppose Runaway Work

TWO Resolutions, from the record of the Third Constitutional Convention of the AFL-CIO in San Francisco, are worthy of noting. Needless to say, the IBEW wholeheartedly supports these resolutions and a special letter of endorsement of Resolution No. 36 has been sent to AFL-CIO President George Meany, emphasizing the interest of the IBEW in video tape recording.

• Foreign Production of Video Tape for Broadcasting

RESOLUTION NO. 36—By Delegate George N. Smith; National Association of Broadcast Employees and Technicians.

WHEREAS a United States Senate sub-committee has been established for the purpose of investigating the foreign production of motion pictures and the foreign production of musical recordings by United States companies as they affect the American motion picture and recording industry, and

WHEREAS it has been demonstrated that the production of motion pictures and recordings outside the United States has, and will continue to have, a serious effect upon the employment opportunities of a substantial number of workers in the United States in these industries, and

WHEREAS with the recent development of video tape many United States radio and television broadcasting companies have expanded the practice of producing television and other programming on video tape, in foreign countries. This practice will have a serious effect upon the employment of Union members in the Broadcast industry, and therefore be it

Resolved, That the AFL-CIO respectfully requests that the sub-committee of the United States, through its Chairman, Senator Wayne Morse, place upon its agenda the investigation of the foreign production of video tape by United States and foreign companies for display in the United States, and the effect of such foreign production on the employment opportunities of American workers in the television industry.

COMMITTEE SECRETARY BUCKMASTER: The Committee recommends to the convention that Resolutions Numbers 36 and 84 be referred to the Executive Council with its endorsement and with the request that all interested organizations be consulted with, and the Executive Council be authorized to proceed with the objectives sought. I move the adoption of the Committee's recommendation.

... The motion was seconded.

• Use of Foreign Music in TV And Motion Picture Film

RESOLUTION NO. 84—By Delegate Herman Kenin, Hal C. Davis, Ed Charette, Frank B. Field, Bob Sidell, Edward Ringus, Kenneth E. Plummer, American Federation of Musicians.

WHEREAS the practice of incorporating into American television and motion picture film foreign music, talent and services, in no way identified as such, does not promote genuine, international cultural exchange, and

WHEREAS the palming off as American of bogus foreign substitutes for American musicians, actors and technicians has had a seriously detrimental impact on American culture, industry and labor, and

WHEREAS musicians and other employees of the filmed entertainment industry need protection from the "runaway" film making abroad, which uses "cut-rate" canned music, thereby depriving even foreign musicians of adequately compensated employment, and

WHEREAS Senator Wayne Morse, at the instance of the AFM, has introduced a resolution in the Senate calling for a Congressional investigation of these retrogressive, job-destroying practices and for remedial legislation to correct such abuses,

Resolved, That the American Federation of Labor and Congress of Industrial Organizations goes on record as supporting the efforts of the American Federation of Musicians to protect American employment and cultural standards in the filmed entertainment industry, as expressed in Senator Morse's resolution, Senate Resolution 126, introduced May 28, 1959, and be it further

Resolved, That this Convention instructs the Legislative Department of the AFL-CIO to use every effort to support the Morse Resolution.



"Freedom of the Press"

THOUGHT FACTORIES FOR THE "INDEPENDENT" PRESS—Four Texas newspapers, independent of one another and published in different sections of the state, recently printed the same editorial, *word for word*, within a three-day period.

The identical editorials attacked trade unionists' opposition to the anti-labor Landrum-Griffin bill. They called upon unions to "grow up."

"Grow up"? How long does it take certain newspaper publishers—and the Texas case is not at all unusual—to grow up to the point where they print their own editorials instead of pap that has been packaged in word canneries of chambers of commerce and manufacturers' associations?

—C. O. P. E.



*'We're a little late,
folks,' but we want to
congratulate an enterprising
IBEW-manned station
on its recent anniversary.*

WDSU, *a most progressive station*

WE are happy to render an appropriate salute to WDSU-AM-FM-TV, New Orleans, on the occasion of its eleventh television anniversary this month and (as of July of this year) its 36th year in radio. Only very recently, we learned that the 10th television anniversary was marked by a modest celebration appropriate to the occasion. Hence, our story.

Forty-seven members of Local Union 1139 are employed by the station. All through its history of operation, the station has never had to face a strike issue with *any* union. It is also interesting to note that an arbitration has never been required. The management and representatives of the IBEW have scheduled monthly luncheons for the purpose of discussing and working out solutions to problems and potential problems—a very successful experience for all involved.

The television operation is especially progressive. Some five hours per week of live color programs are available to its viewers. Two Ampex video tape recorders, recently added to its first-class equipment, now afford even more extensive coverage of interesting events.

The studios are in the heart of the French Quarter, on Royal Street. Because of civic prohibitions, WDSU probably has the most modest identification of any station in the country—the small sign near the TV studio street entrance is almost hard to find. Across Royal Street, the radio studio is identified by signs on the windows—also quite small and unobtrusive. City regulations require that building fronts in “the Quarter” be maintained as they were years ago and in keeping with the general outside appearance of existing and adjoining structures. WDSU completely complies with these regulations but behind the facade of past decades is an extremely modern and attractive studio and technical facility.

Photos by

C. F. Weber

are gratefully acknowledged.



The patio and part of the entrance to the WDSU-TV studios being used for a show. The patio has a long history and has been maintained without modification since the TV studios were built.



Lindsey Riddle, chief engineer, at the 10th anniversary party. Riddle has been a member of the IBEW continuously for the last 26 years.

November, 1959

*you don't just belong,
you are part of the union,
you ARE the union*

SURE, you belong to a union, "Certainly," you say, "and so what? Some people belong to the Elks, some to the Sons of Erin. Me, I belong to a union. So what?"

Well, it's not quite that simple, Brother. You don't just belong to a union, you are part of the union, you **ARE** the union. There are lots of other union members, too. There were many before you were born, and there will be many more after you are dead and gone.

Be Proud You're a Union Man



In London, Ontario, recently, Thomas Hindley, press secretary of Local 120, picked up a "throw-away sheet" used in local union organizing and signed by an unknown writer named Jack Williams. He sent it in to be published in *The Electrical Workers Journal*. Because it contains so much inspirational value for all of us, we reprint it in this issue of the **TECHNICIAN ENGINEER**.

But right now it's you. It's you that's getting the breaks a lot of union people sweated for, fought for, went to jail for, and sometimes even died for.

So your kids go to school? Maybe to high school, or even to college, and you say "So what? All kids go to school."

You are right, but not so many years ago you wouldn't have been right, because kids worked then, 10 or 12 hours a day, six or even seven days a week. More hours than horses get worked now. And why don't your kids slave these hours instead of going to school?

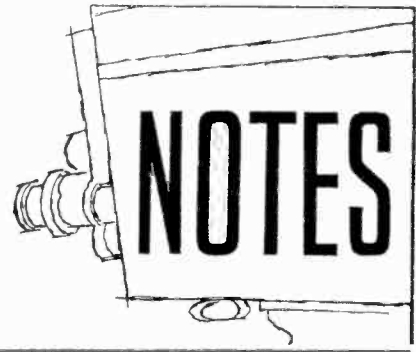
Well, Brother, it's just because people, the kind of people who make unions, argued and nagged and voted for what is known as compulsory education. You can thank those people; but you can thank them best by getting back of your union in its fight today to give a better break to the youngsters of the future.

Maybe sometime you had an accident, and you got Workman's Compensation. It wasn't always that way, Brother. Unions had a tough fight to get the idea of Workman's Compensation across, and they are still fighting today trying to get improvements.

You can say the same thing about unemployment insurance, and all the social laws that affect you and your job.

So unions have helped to make men and women something more than a mere clock number. Unions have given workers dignity. Take the grievance procedure. If you have a legitimate "beef," there is a way in your union contract for getting it settled, a way that makes it possible for you to face top management face to face without any worry that you are going to get pushed around just because you want to beef.

And it isn't just union people who have the benefits. Unions have been right in the front line of every fight for progressive social law this country has ever had. Unions have been in there year after year, trying to get pensions for older people, more assistance for widows, better allowances for children and a better break for the handicapped. Unions are making headway, sometimes slowly, but they are always in there plugging.



Fishy Feed Back

The restless world beneath the sea's surface is not as silent as it seems.

Submarine chatterboxes include croakers, drums, grunts, and other families of the spiny-rayed order of fish, the National Geographic Society says. Fish lack true vocal organs, but the noisy ones can produce sound by teeth-grinding or rapid vibration of special muscles attached to the swim bladder.

The famed cod also adds to the under water cacophony. At a recent international fish conference in New York, a British scientist reported that codfish have developed a social order and seemingly communicate by a series of grunts. The inflections vary according to the activity—fighting, courtship, or what may amount to idle gossip.

The noises of various fish differ. Thus it has been suggested that when more is known about underwater vocalizing, fishermen can use hydrophones to locate big schools of commercially important fish.

Recognition of fish "talk" became important during the submarine warfare of World War II. Subsurface listening devices picked up complicated background noise that couldn't be attributed to shipping or operations ashore. The disturbance ran the gamut from mild beeping, clicking, chirping, crackling, and whistling to groans, grunts, and moans.

At times the noise sounded like coal running down a chute into a basement, at other times like pneumatic drills biting into pavement.

Navy sonar operators, probing ocean depths for the hum of submarines, were particularly annoyed by interference from shrimp. Disturbed, the snapping shrimp makes a popgun sound with its oversized claw.

There was always the danger of mistaking natural ocean racket for the enemy, but American submarine commanders turned the nuisance into an ally. Subs often took refuge in the shallows of coral reefs to hide amid the sheltering crackle of snapping shrimp.

Recordings of many fish sounds have now been made. However, the social significance of the noise is uncertain. The vocalizers seem to be particularly clamorous in breeding season. Among Atlantic croakers, the male can make far more noise than the female.

Only the male in the related weakfish family has sound-making apparatus.

Indirect evidence suggests that fish can hear under water, but it is not actually known whether they do. A fish's ears are hidden in its body and apparently are used for equilibrium. It is possible that the fish relies upon its air bladder and bony structure as aids in detecting sound waves.

None of the marine noisemakers produces a louder fuss than the drum. Where large schools of the black species have gathered near a ship at anchor, their drumming by vibration of their air sacs has been known to keep crewmen awake.

Teeth-gnashers include the grunts and pigfish. Their loud, rasping, croaking grunts can be produced under water or in the air.

As a medley of fish sounds can take on the tones of a deep-throated organ, fish probably inspired belief in sirens, mythological creatures whose singing lured mariners to their destruction.

Thin Radar Picture Tube

A radically new type of thin picture tube, resembling a standard automobile wheel in diameter and thickness, is being developed by the Radio Corporation of America to improve the brightness, detail, and compactness of large-screen military and commercial radar display systems.

The new tube has potential application in military fire-control and tracking radar systems and in commercial airport use. It was described at the 1959 Electron Devices Meeting by Harold B. Law and Edward G. Ramberg of the RCA Laboratories technical staff.

The tube, of a type known as a "reflected-beam kinescope," displays its images on a viewing screen 21 inches or more in diameter, employing a tube structure that is only 10 inches long and has a recessed rear area large enough to hold most of the receiving circuit equipment. It was described by the two scientists as an outgrowth of RCA research in electronic display systems for both radar and television.

Installed for operation, the experimental tube resem-

bles a large cylindrical bowl standing on edge, with a bulging front surface and a scooped-out rear. From the center of the recessed back surface extends a short slender neck containing the electron gun, as in conventional radar and television picture tubes.

Power for Space TV

Solar batteries aren't offering the complete answer to power needed in a satellite. So researchers are seeking other devices. General Electric Co., is experimenting with a device which generates electricity by passing hot gases through a cold magnetic field. This system is one of several under study. Any devices which succeed in current tests could be used to power TV transmitters and other recording units in a satellite.

Vacuum Tube Needs

The FCC has deleted the requirement in broadcast technical standards for AM, FM, and TV stations that spares of all vacuum tubes used in transmitters, frequency and modulation monitors be kept on hand at the transmitter site of the broadcast station. The Commission said that the rules, which appear in Sections 3.40, 3.317, and 3.687, are no longer necessary.

Tape Versatility

A technique utilizing video tape recording "in a manner formerly reserved exclusively for film" was reported by CBS's WBBM-TV Chicago recently.

The station completed a sample pilot of a proposed documentary series, recording about 3½ hours on video tape at four remote locations and editing it down to 24

minutes of playing time. Several film segments, shot separately, also were transferred to tape.

The station predicted the technique "is destined for future development." Here's how the pilot was made (using Ampex machines):

The video tape remotes were shot with background sound only. In most cases, the audio level was so low that amplification and equalization were necessary. Background sound was dubbed from the master video tape to audio tape, with addition of some pre-recorded sound effects. Separate tracks with narration and music where needed, were prepared to synchronize with video. The three audio tracks then were mixed and recorded on a video tape dubbing made from the edited master. (Two masters were recorded simultaneously, one for reference and the other for a work copy.)

Background audio was erased from the master tape and composite audio finally restored from the video tape dub to the much-edited original piece of tape—with "minimum loss" in the separate but related operations (editing of tape; transfer of film to tape, and mixing, dubbing and re-recording of audio.)

All film exposed on location was "shot silent" and recorded on tape, with three audio tracks of specially-created sound, music and narration fed simultaneously to the tape room to produce the complete and finished transfer. To achieve a desired effect in some instances, videowise, a dub was prepared of the first five seconds of a taped scene, and a superimposition was then made onto the dub, which in turn was spliced back onto the master tape. According to WBBM-TV, it "was almost impossible to distinguish between the dub and the original, even when the segments were back to back."

Combined to produce an hour-long audition tape, it was explained, were (1) the edited master tape segments (plus short dubbings), (2) film inserts placed on tape, (3) open and close taped live in the studio, and (4) video tape commercials especially produced for the pilot.

In all, picture-to-picture splices totaled about 250 during the entire show. One segment of about five minutes contained over 50.

Technical Studies

The Assn. of Maximum Service Telecasters, meeting in Washington this month, authorized financial underwriting for two TV technical field studies to be undertaken by the engineering experiment station of Iowa State U., Ames. One project, a one-year study of uhf wave propagation, is scheduled to begin in January.

The second study will attempt to determine the extent and severity of interference to TV service which results from operations on adjacent channels. This study will begin in December and is expected to last three months. Dr. William L. Hughes, professor of electrical engineering, will supervise both projects.

Station Manager All Eyes!



Well, take your head out of this Technician - Engineer and GET BACK TO WORK!

MANAGEMENT TALK

freely translated



the word . . .

It Is in Process

We Will Look Into It

A Program

Expedite

Channels

Consultant (Or Expert)

To Activate

To Implement a Program

Under Consideration

Under Active Consideration

A Meeting

A Conference

Reliable Source

Informed Source

Unimpeachable Source

A Clarification

We Are Making a Survey

Note and Initial

Give Us the Benefit of

Your Present Thinking

We Will Advise You in Due Course

To Give Someone the Picture

Forwarded for Your Consideration

the thought . . .

So wrapped up in red tape that the situation is almost hopeless.

By the time the wheel makes a full turn, we assume that you will have forgotten about it, too.

Any assignment that can't be completed by one telephone call.

To confound confusion with commotion.

The trail left by inter-office memos.

Any ordinary guy with a briefcase more than 50 miles from home.

To make carbons and add more names to the memo.

Hire more people and expand the office.

Never heard of it.

We're looking in the files for it.

A mass mulling by master-minds.

A place where conversation is substituted for the dreariness of labor and the loneliness of thought.

The guy you just met.

The guy who told the guy you just met.

The guy who started the rumor originally.

To fill in the background with so many details that the foreground goes underground.

We need more time to think of an answer.

Let's spread the responsibility for this.

We'll listen to what you have to say as long as it doesn't interfere with what we have already decided to do.

If we figure it out, we'll let you know.

A long, confused and inaccurate statement to a newcomer.

You hold the bag awhile.

Courtesy The Electrolizing Corporation, Los Angeles

Station

Breaks

Night Sports in Color

Plans for the first color telecasts of night sports events in the United States were announced recently by television station WLW-T, Cincinnati, Ohio.

Robert E. Dunville, president of Crosley Corp. which owns the station, said that color telecasting with the normal lighting used for night sports events was the result of several years of experimentation.

He said the desired results were obtained when their experiments were changed from plans to increase the lighting and to improve the camera lenses to the development of more sensitive electronic tubes for the color cameras.

The station now telecasts about 19 hours of local programs in color each week, plus the color programs carried by NBC.

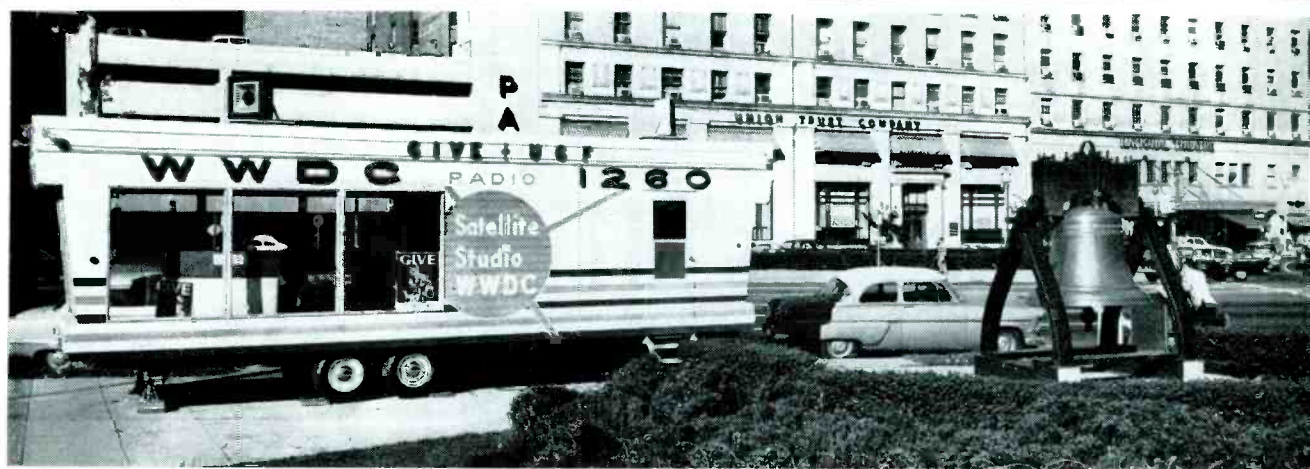
Members of Local 1224 are employed by WLW-T.

Movie Critic

Two goats broke into a Hollywood studio. . . . One of them gulped down an entire celluloid version of "Gone With the Wind" before studio officials routed them. . . . On the way out, the film-munching goat was asked by the other goat, "How did you like it?" . . . "Oh," he replied, "I thought the book was much better."

We Say: Amen

"There's no institution in our Western culture which the Communists hate more than organized labor. Industrialists and management are boys in their hands . . . but the union men are COBRAS. Unionists want to talk about political freedom, right for workers to organize, strike, vote, change jobs as they see fit, and go where they please; this the Communists have not, will not, and dare not discuss."—HARRY GOLDEN.



Satellite for UGF

Station WWDC, Washington, D. C., has a mobile unit which it calls its "Satellite Studio." Well equipped for originations, the unit conducted its inaugural broadcasts recently on busy Pennsylvania Avenue, near the Treasury Department's Liberty Bell (See photo above). The occasion was the campaign of the United Givers Fund. At the controls, left, was Norman Cook, member of Local 1200; announcer, background, was Fred Fiske.

Painted Tower Question

Under present FCC regulations, all broadcast towers must be painted orange and white, with each color between 1½ feet and 40 feet in width. The job must be accomplished by January 1.

This regulation has caused complications for Station WHAS-AM-TV, Louisville, Ky., which employs members of Local 1286. The Louisville station told the Commission that it is currently working with the Federal Aviation Agency in testing out different color schemes to determine which are best for high visibility to aircraft pilots. It has cooperated in these tests for several weeks, including in its testing the use of lights and other safety devices. WHAS says it believes black and white bands to be superior to orange and white ones. The FAA has evidenced interest in testing this theory.

What will come out of the WHAS request is questionable. If black and white bands should prove more visible, the tower painters of the nation would soon be making time-and-a-half.

Simplex Order Stayed

Three stations manned by IBEW members are affected by a recent FCC action holding in abeyance an order forbidding FM stations to continue functional music broadcasts on a simplex basis. In an announcement dated October 29, the Commission said it would have to study the implications of a Supreme Court refusal last month to review a lower court ruling that the FCC's multiplex regulation was in error.

The three IBEW-contract stations are KRKD, Los Angeles, Calif.; WWDC, Washington, D. C.; and WCFM, St. Louis, Mo. Eleven other FM stations were also affected.

Finally Confirmed

In Detroit, Mich., union bartenders welcomed scientific confirmation of one of their oldest and most cherished beliefs—that standing with one foot propped on a brass rail helps an aching back. It does exactly that, reported Dr. James K. Stack, associate professor of orthopedic surgery at Northwestern University. According to Stack, "Hooking your foot on the rail when you stand at a bar straightens your spine and reduces strain, thus making you more comfortable."

The Exploited

A survey conducted by Printers' Ink magazine reveals that 76 per cent of the advertising industry's executives who make over \$25,000 a year are unhappy in their jobs. More than 21 per cent of those interviewed blamed their gloom on the belief that they were underpaid.



THE MONEYCHANGERS

The man in the coonskin cap from Tennessee, Sen. Estes Kefauver, has the unlucky habit of drawing the most important investigating assignments but assignments which are doomed to suffer from lack of newspaper coverage. His recent investigation of administered prices by Big Business, which showed that industry ignores the law of supply and demand and charges what the traffic will bear, was conducted virtually in secret. Now, as chairman of the Senate Antitrust subcommittee, he has drawn another assignment that the press may find much less newsworthy than the McClellan hearings. His subcommittee is starting to investigate whether bank and investment companies exercise any control over drug manufacturers.

The subcommittee, which starts hearings on November 30, has subpoenaed records of three major New York banks and eight investment companies. The investigation was touched off by complaints from the public over high drug prices. The investigation, the New York Times noted, could mark the first move in "what could become an explosive issue: whether the financial district, by accumulating corporate stock through pension funds and other means, is again playing a major role in corporate control, similar to what existed before the New Deal Reforms."

Legislation enacted during the terms of President Franklin D. Roosevelt prohibited banks from owning stock in corporations. What the Kefauver subcommittee wants to find out is whether the banks are now exercising control without being direct owners of stock. Although commercial banks can own no stocks themselves, they can hold stock for pension or personal trust funds that they manage. This stock, according to subcommittee investigators, is often placed in the name of "nominees." It will be interesting to note if this investigation, into "administered prices" in the drug industry—will suffer the same fate of the Senator's previous investigation.

SO YOU'RE IN
ELECTRONICS?



ORGANIZATION

provide job security
be better paid
insure employer respect
obtain good conditions
in your future



IN FACT—YOU NEED THE I.B.E.

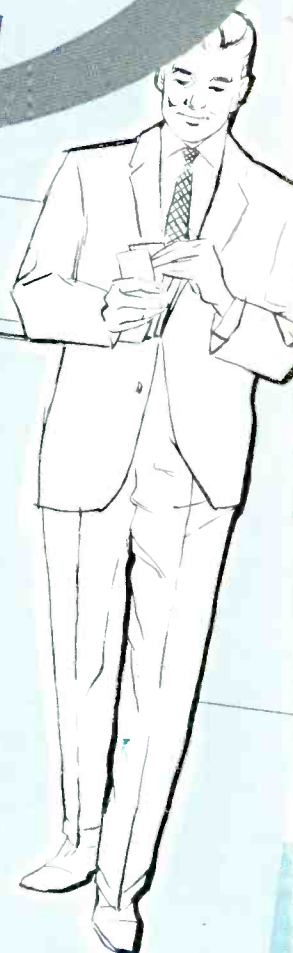
The International Brotherhood of Electrical Workers is the foremost and largest union in electricity-electronics.



**NEW
ORGANIZING
LEAFLETS**

CASHIER

**YOU
OWE
IT TO
YOURSELF**



The field of electronics is mushrooming into all phases of modern life. Once limited to broadcasting and recording, it has branched out into instrumentation, automatic devices, testing equipment, and scores of other uses. Under the broad heading "electronics" are thousands of engineers and technicians needing union representation. Here are two new leaflets for your use—good material for workers in all fields of electronics. Order a supply from the Supply Department of the International Office.

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