RADIO, TV and RECORDING

TECHNICIAN-ENGINEER

JULY, 1956



TECHNICIANENGINEER

VOLUME 5 17 NUMBER 7

PRINTED ON UNION MADE PAPER

The INTERNATIONAL BROTHERHOOD of ELECTRICAL WORKERS

GORDON M. FREEMAN JOSEPH D. KEENAN FRED B. IRWIN International President International Secretary International Treasurer

ALBERT O. HARDY

Editor, Technician-Engineer

. . . in this issue

. . . the cover

Robert E. McConnell and Albert J. Paukstitus, members of IBEW Local 1215, Washington, D. C., operate the board at Radio Station WWDC, one of the most popular AM and FM operations in the nation's capital. The consoles at the station are divided for simultaneous broadcasting of an AM schedule and an FM background music schedule, as well. Operating on a 24-hour basis at 5,000 watts, WWDC has a 14-man engineering crew at its combined studios and transmitter at Silver Spring, Md.

commentary

Our best citizens frequently deplore the excess and the extravagances of language that are committed during the course of a Presidential campaign. We wish to be on record as deploring them, too. But while deploring, it is still permissible to entertain the suspicion that in the long run they do not make very much difference.

Apparently the American people expect that in a campaign the two contending parties will lambast each other unmercifully. If one or the other fails to do so, the electorate concludes that it is being cheated. That happened in 1948.

However, when the campaigners perform according to tradition, the electorate still knows that it is witnessing something which is partly phony. People are not so unsophisticated that they are unable to separate the phony from the real.

The man who marched in the torchlight parade said on the morning after election:

"I know I was making a fool of myself at the time." — William H. Grimes, "Thinking Things Over," Wall Street Journal, July 10, 1956.

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 the 1955 figures:

May, 1956—115.4

May, 1955—114.2

Published monthly by the International Brotherhood of Electrical Workers, AFL-CIO, 1200 Fifteenth St., N. W., Washington, D. C., for the men and women in the recording, radio and television industries. Entered February 20, 1952, as second-class matter at Washington, D. C., under Act of August 24, 1912. Subscription Price: U. S. and Canada, \$2 per year, in advance.

IBEW Files Comments on Proposed Rule Relaxation

NARTB Petition Asserted to be Deficient, Inadequate and Subject to Dismissal Without Hearing

FOLLOWING an extension of the time limit (originally set as July 2, 1956, in Public Notice 56-323) granted by the FCC upon petition of the IBEW and an additional extension granted as the result of a petition by NABET, the final date for receiving comments in Docket No. 11677 is August 2, 1956. Such comments have been filed with the Commission by the IBEW and clearly indicate to the Commission that the proposal of the National Association of Radio and Television Broadcasters should be dismissed without hearing.

The purported evidence of reliability, public interest and scientific determination is sharply attacked by the comments of the IBEW and the "inadequacies, discrepancies and the more significant omissions" of the Petition are detailed for the Commission's consideration. The Commission is also referred to its own determination in the previous case (Docket 10214, 1953):

"With respect to the scope of the amendments, we determined upon the figure of 10 kilowatts on the basis of our experience with problems arising with the utilization of very high power equipment and the showings made in this proceeding. . . . It was felt that the relaxation should extend to that level of power at which no serious problems would be encountered because of the nature of the transmitting equipment itself. . . ."

Some forty pages of argument have been filed. No surmise or prognostication has been resorted to, which the Commission inveighed against in the 1953-1954 proceeding. The comments of the IBEW are concise and factual and, in several instances, point out that the NARTB Petition does not contain all of the facts which should be considered. Indeed, the data presented by the Petition is shown to be unscientific and incomplete, as well as riddled by inaccuracies.

Comment on each of the Petitioner's Exhibits has been afforded only by careful examination of the Petition itself. Its imposing volume is, at first glance, such as to lend the impression that it was carefully written, in a scientific and careful manner. Second reading, however, reveals that unwarranted conclusions are drawn and implied—from data which is out of tolerance, sketchy and, in some cases, unsupported by probative evidence.

Excerpts from the comments of the IBEW, printed verbatim below, speak for themselves. No attempt will be made here to detail all of the comments, but our readers will be able to form a general opinion and to follow the lines of argument presented to the FCC:

COMMENTS OF INTERNATIONAL BROTHERHOOD OF ELECTRICAL WORKERS ON PROPOSED RULE MAKING

THE International Brotherhood of Electrical Workers (hereinafter referred to as IBEW), pursuant to the Commission's Notice of Proposed Rule Making released April 12, 1956, and the Commission's Notices released May 17 and June 26, 1956, herewith submits its comments in this proceeding.

The position of the International Brotherhood of Electrical Workers is that the Petition filed herein on February 15, 1956, by the National Association of Radio and Television Broadcasters (hereinafter sometimes referred to as Petitioner, NARTB or Association) should be dismissed.

Inasmuch as the Petition does not present even a prima facie showing of technical feasibility of the proposed changes in the rules or that the public interest would be subserved by the requested changes, the Commission should not hold hearings on the Petition but

should dismiss the proceeding without hearing or argument.

The comments set forth herein discuss the background underlying the present Petition, the nature of the relief requested, the precise issue before the Commission and the material submitted in support of the Petition. These comments will demonstrate, it is submitted, that the material filed by the NARTB, viewed with complete objectivity, simply fails to make out a case for the proposed rule making.

THE PRESENT PETITION

The Petition now presented is for further relaxation of the Commission's rules and is, in effect, a petition for reconsideration of the 1953 order. The present Petition seeks further amendment of the Commission's rules to allow remote control in three categories:

- A. Stations with power in excess of 10 kw and directional antennae;
- B. Stations with power in excess of 10 kw and non-directional antennae;
- C. Stations with power of 10 kw or less and directional antennae.

These three separate categories are clearly defined and delineated both by the existing rules and the 1953 opinions of the Commission and by the petition itself. It must be required of the Petition, therefore, that a clear and convincing showing both of technical feasibility and of the public interest be presented as to each category. As is shown below, no such showing has been made as to any of the three categories. The petition, therefore, cannot, on its very face, serve as a basis for further rule making proceedings.

. . .

It may be appropriate at this point to note that Petitioner's Exhibit 1 purports merely to explain the contents and significance of the other Exhibits. It thus cannot be considered as evidence in support of the Petition but rather is seen to be in the nature of a brief in support of the Petition concluding, as might be expected, with a recommendation that the prayers of the Petition be granted. Exhibit 1 not only adds nothing of an evidentiary character but it incorporates into itself all the irregularities and infirmities of the Exhibit it recapitulates. It is misleading to entitle such a document an "Exhibit."

It is also difficult to see what Exhibit 2 adds to Petitioner's case. This Exhibit purports to show reliability of remote control operations with powers not exceeding 10 kw and non-directional antennae. But this material has absolutely no bearing on the present Petition. The reliability of low power non-directional operations was the subject of the 1952-53 proceedings. This would become an issue before the Commission if and when a petition is filed to revoke the relaxation ordered by the Commission in 1953. The precise issue in the instant proceeding is the extension of the relaxation of rules to high power and directional operations. The survey forming the basis for Exhibit 2 is quite evidently irrelevant and immaterial to the instant proceeding. This is particularly true since the Commission stated in its 1953 Order that it had drawn the limits of the relaxation in that proceeding deliberately and therefore, denied that the evidence which was presented to it for relaxation up to 10 kw with non-directional antennae ipso facto proved the technical feasibility of extension of such relaxation to stations with directional antennae or operating at powers exceeding 10 kw. The Petitioner must, therefore, bring forward adequate affirmative evidence in support of the present request for extension of the relaxation and, as will be shown below, it has not done so. We respectfully request the Commission to make a critical and technical analysis of the Petition and its attachments. We are confident that the Commission will not infer that such technical affirmative evidence has been presented by reason of the length of the Petition and attachments (400 pages), the high quality of the paper used, the excellence of the printing work or the publicity and fanfare which accompanied the filing of the Petition.

The Material in Support of the Petition Stations With Power in Excess of 10 Kilowatts and Directional Antennae

In support of this phase of the Petition, NARTB has furnished data relating to experimental operations of KIRO and WOWO. It also furnishes a statement of the opinion of an un-named group of engineers as to feasibility of high power directional operation. The quality of this material is discussed below and, as will readily be seen, is such as to require dismissal of this phase of the Petition.

WITH REGARD TO KIRO

With respect to KIRO, the Exhibit itself clearly reveals the unreliability of the remote operation. The Exhibit attempts to explain the extremely poor results by saying on page 399, "Existing local conditions have presented many technical problems which are still being overcome." The Exhibit then describes the problems of obtaining suitable control circuits. It is obvious that this same problem of suitable and reliable control circuits affects any remote control operations.

With reference to the graphs, although the period of remote operation covered approximately 79 days, readings are given for only eight days. The common point current readings at the remote point for the eight days shown far exceed the 2 per cent tolerance and indicate the complete unreliability of the system as a whole. The only confusion to be reached from the data presented in connection with KIRO is that the experiment was an engineering failure.

Whatever the validity of the excuses offered for the poor results, they do not constitute technical affirmative evidence in support of the Petition under the legal standards prescribed by the Act and the decisions of this Commission and the Courts.

The Petitioner itself is aware of the poverty of its Exhibit and seeks to bolster its lack of proof by adding the following sentence to the "Engineering Description":

"It is the expressed opinion of all concerned that given time to overcome the various local problems the installation at KIRO will prove successful." (Pet., p. 399.) (Underscoring supplied.)

Does not the Petitioner thereby admit that the experiment actually has proved to be unsuccessful? Can this admission be corrected by the anonymous expression of optimistic "surmise and prognostication" which this Commission inveighed against in the 1952-53 proceeding?

WITH REGARD TO WOWO

In this case the transmitter was operated by "remote control" from a point within the transmitter building. An artificial line consisting of two 1000 ohm resistors was used to simulate each connecting line. This is not remote control in the accepted sense of the term. It is quite apparent that there is a great deal of difference between operating a transmitter by remote control over a circuit consisting of two 1000 ohm resistors as opposed to many miles of telephone circuits that are subjected to many effects other than non-inductive resistance.

• • •

The inclusion of Exhibit 5 in the Petition tends to show that the Petitioner itself has recognized the inadequacy of its case and is endeavoring to utilize the ancient device of pulling itself up by its own bootstraps.

Thus, we arrive at the unusual situation of finding a Petitioner citing its own meeting recommending the *initiation* of experimental operations for the purpose of proving its case as the very proof of its case.

It is respectfully submitted that the Federal Communications Commission is entitled to more dignified treatment.

Insofar as the experimental operations at KDKA and WSB are concerned it is stated in the Petition that they were, in effect, attended operations. This material is not, therefore, sufficient to permit any interference with respect to technical feasibility of unattended transmitters.

Stations With Power of 10 Kilowatts Or Less With Directional Antennae

The greater part of the bulk of material submitted with the Petition relates to this phase of the Petition. This material from a qualitative point of view is equally as unconvincing as that presented under the two other phases discussed above.

Petitioner's Exhibit 5 furnishes the only information directly related to the issue and, as observed above, that Exhibit cannot, for the reasons previously set forth, be regarded as evidence or as having any weight in this governmental proceeding.

Petitioner's Exhibit 3 is apparently relied on as to this phase of the Petition, although nowhere is it clearly stated that the British operations are with directional antennae; nor does it appear from Exhibit 3 or elsewhere what powers (except in the case of Daventry and Wrekenton) are involved in the operations discussed. The statement that the high power Daventry operations are "in an entirely different category" from all the other British stations discussed probably indicates that the others are of 10 kw or less power. Whether they are directional or not cannot be known from the Petition or accompanying material. This is surely not convincing or even probative evidence of technical feasibility.

The Commission should also note that this Exhibit is anonymous.

EXPERIMENTAL OPERATIONS

Petitioner's report of the experience of certain selected American low power directional operations is presented in Exhibit 8.

Each and every case set forth is subject to the fundamental objection previously expressed in these comments that the conditions of the experimental operation were fundamentally different from the conditions requested in the proposed relaxation.

The Engineering Description of each of these experiments contains a statement substantially in accord with the following statement made at page 111 of the Petition relating to KMCO:

"A person holding a First Class radiotelephone license is present at the transmitter during all periods of directional operation. This person maintains the transmitter log and keeps the transmitter under his supervision at all times."

There is no basis in the experimental evidence presented to separate the results of attended supervision of the transmitter from the efficiency of remote control. How then can such evidence prove the efficiency of remote control?

In addition, this Exhibit is subject to the detailed objections set forth below. Petitioner claims (p. 6) for this Exhibit, that it contains data which fully confirms the consensus of "a group of professional radio Engineers" that remote operation of stations with directional antenna systems is feasible and should be authorized. Even a casual reading of the 220 pages devoted to this Exhibit suffices, however, to reveal that the data supplied leaves so many relevant questions unanswered and, in many instances furnished information for so limited a time or covering so limited an aspect of the subject under study, that it must be concluded that the Exhibit, while it may be of some slight value in appraising some aspects of remote operation over brief periods, certainly fails to "fully confirm" anything other than that an inadequate presentation has been made.

CAA RANGE OPERATIONS

Data on the CAA radio range stations is contained in Exhibit 6. The Petition at p. 6 refers to this Exhibit as showing a reliability of operation for the Civil Aeronautics Administration's unattended directional antenna radio range stations of 99.7 per cent and 99.8 per cent for two of the three months reported based on CAA Reasons 1, 2 and 4 only. No explanation is furnished as to why the Exhibit confined itself to CAA Reasons 1, 2 and 4 and only three months of operations. An explanation is, however, readily furnished as to why only the two months showing the relatively high reliability figures are incorporated into the Petition itself:

"The high outage figure for April apparently was caused by excessive time required to secure needed equipment." (Underscoring supplied.) (Exhibit 6, p. 32.)

Since no basis for this assumption appears on the graph or by data in the Petition it must be regarded as mere conjecture.

Both in the Petition itself (p. 6) and in Exhibit 1 (p. 4) the argument is made that since the operations of these CAA installations insure safety of lives on the federal airways, a fortiori the feasibility of similar operations for broadcast purposes should be allowed. The argument would indeed be compelling were it not for two significant items: (1) the CAA operations are in no way comparable to the broadcast operations covered by the Petition and (2) Petitioner has not, in fact, shown a clear and convincing record of reliability.

With respect to the comparability, or rather lack of comparability, of the CAA unattended installation to the higher power broadcast operations it should be noted that, as a matter of common knowledge, the CAA equipment is all of relatively low power—no such installation exceeds 400 watts and some operate at less than 50 watts. Furthermore, as the IBEW was informed by CAA officials, in their transmission of a copy of the chart cited in fn. 2, page 32, Exhibit 6, practically all of the CAA low frequency radio ranges have dual transmitters and automatically started standby engine generator sets.

As to the relative reliability of the CAA operations, the Petitioner in Exhibit 6 gives information only as to outages per month for a three month period (p. 32). Fortunately, more information is available. The official CAA chart of outages (Supra), a copy of which is attached hereto, shows that from July, 1954, through June, 1955, the CAA operated an average of 309.6 facilities for a total of 2,712,096 hours. These facilities consist, as noted above, of a "regular transmitter" and an "auxiliary transmitter" and part of the installation consists of an emergency primary power supply. . . .

To sum up the CAA presentation: there was an average of 309.6 range station installations in operation by the CAA during the period July, 1954, through June, 1955. Analysis of the CAA chart reveals that more outages occurred at these 309.6 installations, during this period, due to troubles inherent with remote control operations (CAA Reasons 7-8-9-10) than occurred at these same installations during the same period for CAA Reasons 1-2-4. The NARTB did not include the outages caused by CAA Reasons 7-8-9-10 in its Petition although they appear on the same chart from which the Association obtained its data (Ibid.). The number of hours of outages occurring at the CAA installations were 2,180 more for CAA Reasons 1-2-4 than for CAA Reasons 7-8-9-10. This would further indicate the desirability of having an operator on duty at a given transmittereven the CAA low-powered transmitters. Said differently, there were more outages due to remote control than there were due to transmitter trouble. However, more time was lost due to transmitter trouble than was lost due to remote control failure. The high power attended broadcast stations lost far less average time per station (.79 hours) than the low power remote controlled CAA stations (30.42 hours).

The CAA radio range stations are not comparable to broadcast stations because of all-important differences in the level of power as well as the availability of auxiliary transmitters and standby power sources for the CAA ranges. The material in Exhibit 6 furnishes no basis for reaching any informed conclusion as to feasibility of remote control of broadcast operations with directional antennae at the power here involved or under the conditions proposed by NARTB.

As to this third phase of the Petition, namely, directional antenna operation at powers not in excess of 10 kw, it clearly appears that no showing is made of technical feasibility or of the public interest in any degree warranting further proceedings.

ABOUT CONELRAD

It is the position of the IBEW that, while the instant Petition should be dismissed, improvement in the Conelrad system at an early date is desirable. No comments with respect to Conelrad are submitted, therefore, in this document. The IBEW is separately filing with the Commission its petition looking to rule making proceedings designed to assure improvement in the Conelrad operations.

IN CONCLUSION

The present Petition should be dismissed without hearing. No right to a hearing exists where the applicant does not meet the required standards of affirmatively demonstrating technical feasibility and the public interest (see, in addition to cases cited above, *United States of America and Federal Communications Commission vs. Storer Broadcasting Company*, Sup. Ct. October Term 1955 No. 94, decided May 21, 1956)....

. . .

It can thus readily be seen that there is literally nothing with which the Commission may proceed. For the Commission to take any action other than dismissal of the Petition would not be in the public interest or in accord with its previously established procedures. No competent evidence has been submitted with the sole exception of Exhibit 7 relating to low power directional operations. That evidence, as pointed out above, is an insufficient showing of reliability. As to high power directional and non-directional no material, even of low quality, has been presented.

The IBEW respectfully submits that the Petition should be dismissed.

Labor Is Torn Between State and Federal Laws

By LOUIS SHERMAN

IBEW General Counsel



This is the second installment of a three-part series on union legal problems, based upon a speech by Brother Sherman at the recent Division Progress Meeting in Miami.

THE Federal pre-emption rule today stands as the primary bar against State court action prohibiting labor activity. Those of you who have had experience with the State courts know that the injunctive process works in a manner which is difficult for labor. It was because of the Federal pre-emption rule, as you know, that the case of Garner vs. Teamsters was decided by the Supreme Court which held that even though picketing is prohibited by Taft-Hartley, a State court cannot enjoin it.

The folks on the other side know this just as well as we do and they have a bill pending in the Senate and another in the House which is intended to change this rule. These bills were introduced by Senator McClellan of Arkansas, and by Congressman Smith of Virginia, in the House. They provide that the State may act unless there is a clear conflict with Federal legislation or unless the Federal Congress has made it explicit and clear that it does not wish the State to act. I know, and you know, that there are other purposes that are sought to be achieved by that bill. We are not concerned here with these other problems. The question is the effect of these bills on local unions of the IBEW and other parts of organized labor.

There is going to be a development within the next month or two in this field which I think you ought to take note of before it happens. The Railway Labor Act provides, by reason of the 1951

amendments, that you may have a union shop on the railroads and it is further specifically provided that this is so notwithstanding the laws of any State or territory to the contrary. In other words, you have an express provision in a Federal law making it clear that the Federal law is intended to override the State laws. There has been litigation pending on this matter for a good many years and the case has finally reached the Supreme Court of the United States from the Supreme Court of Nebraska. It is known as the Hanson case and the Hanson case was argued just about a week or two ago. I am not given to prediction but I think there is a strong possibility that the Supreme Court of the United States will uphold the Railway Labor Act as written. (Editor's Note: The United States Supreme Court ruled on May 21, 1956, that the Railway Labor Act Amendments of 1951 were valid and union shop agreements are legal notwithstanding State Right to Work Laws.) What will that mean, if it happens? If the Supreme Court decides the case on the basis I have indicated, it will mean that the 18 right-to-work laws of the States will be rendered inoperative and ineffective, insofar as the employees on the railroads are concerned. (Editor's Note: After the delivery of this address Louisiana repealed its Right-to-Work law reducing the total number of States having such laws to 17.) I do not think the resulting situation needs much elaboration. I cannot see any logic, I cannot see any

sense in a situation where, for example, in the city of Richmond, Va., a union shop agreement covering the employees of a railroad who are working and living in that city is legal and valid, but if you have the same contract, word for word, between a man who happens to own a radio and TV station and his employees, why it is a very serious "crime" and under certain circumstances the punishment can be assessed as much as \$500 a day under the Virginia statutes. I mention this because it seems to me that the day the Supreme Court decides the Hanson case, if it should decide it favorably, as I hope and believe it will, an extremely powerful argument will have been made available to support the project of repealing Section 14 (b) of the Taft-Hartley Act. You see, in the hypothetical case I have stated, the only reason why the radio union would be violating a State law, as distinguished from the railroad union which is not, is the fact that in one Federal lawthe Railway Labor Act-Congress made it clear there was to be uniform Federal regulation and in the other Federal law—the Taft-Hartley Act the Congress made it clear that there should not be uniform Federal regulation but instead, that the laws of each of the States should govern the situation. This is a very important point which must be registered clearly, convincingly and vigorously with the public.

OUR EYE ON THE BALL

There are a great many other moves on the legislative field with respect to labor but I am not going to go into them. I am trying to confine myself to those matters which are really of the greatest degree of concern to us. I am not trying to imply that these other things are not important. The Minimum Wage Law is a very important matter, but it does not seem to involve too many of our people. We share in the effort to do something about it, but in terms of assigning priorities, we are trying to keep our eye on the balls that affect us. So, I turn from the matter of legislation to another subject which is becoming of increasing importance and which I think you will hear more about as time goes on. That is the question of what is the National Labor Relations Board doing under the Taft-Hartley law.

Perhaps the single most important act in focusing attention on the subject was a speech by Senator Wayne Morse of Oregon, which I have in my hand and which you can see is a weighty docu-

ment. He delivered this on the floor of the Senate, Friday, March 23, and it is entitled "Perversion of the Taft-Hartley Act by the Eisenhower National Labor Relations Board-A Call for a Congressional Investigation." I think you can see the undertones and the overtones in the title. But regardless of that we have our own problems with the Board and I, for one, welcome the direction of public attention to the work of this admin-The situation with which we istrative agency. are faced now is one which I would like to refer to as Taft-Hartley Law No. II. We know the law was enacted in 1947. At that time the National Labor Relations Board consisted of a group of men who had been administering the Wagner Act. A change was made in the office of the General Counsel-Mr. Robert Denham was appointed. The present composition of the National Board appears to have made a substantial change in the law.

I think if you go through the Honorable Senator Morse's speech, you will find that he may have oversimplified the problem. He talks about the old Board and that is the good Board, he talks about the new Board and that is the bad Board. I think the new Board is subject to serious criticism but I do not think the old Board is immune from criticism. I think that if I had my choice I would prefer the old Board, because this new Board is really sailing into things with great gusto. The gentlemen who were on the old Board were good fellows, but they were also concerned -overconcerned-about possible criticism from anti-labor sources. They retreated from the law to avoid such criticism and decisions were made which caused us a great deal of trouble. I will concede that the old Board was not happy about some of these decisions. I have described the new Board as being composed of a group of men who do not seem to be unhappy about the direction in which they are going. This is about the difference. As far as the results are concerned, the objective results to labor are just about the same regardless of the emotional state of the government officers making adverse decisions. However, since the old Board is not in the current picture and since the new Board is the problem before us, I am going to address my attention to what this new Board is doing.

I would like to give you some small indication of the current situation. I would like to read an excerpt from Senator Morse's speech to give you

' Contract Which Is Judged Legal For Rail Unions

the flavor of what is taking place. I may say that I have selected this excerpt because I have reviewed the decision to which he refers. I find that what he says about it is accurate, although I do not subscribe to all the adjectives in the excerpt. Senator Morse calls this item "Bankrupting the Union—The Brown-Olds Case." And this is the Senator addressing himself to the President of the Senate:

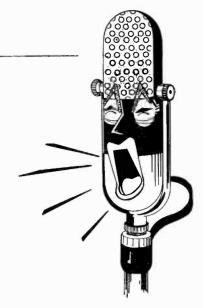
"Mr. President, one of the most inequitable features of the Taft-Hartley Act is its prohibition of hiring practices with respect to skilled craftsmen which have worked for generations to the mutual satisfaction of both employers and unions. The usual practice—before the Taft-Hartley Act —in the construction industry was for a contractor and the union representing the skilled journeymen of the particular craft to agree that the union would supply the qualified skilled artisans required by the contractor, and he in turn would agree to hire only the craftsmen referred by the union. Under such agreements, the union could see to it that the available work was evenly distributed among the journeymen in the crafts, and the contractor was assured of qualified personnel.

BOARD IS RESPONSIBLE

"Sections 8 (a) (3) and 8 (b) (2) of the Taft-Hartley Act outlawed these healthy and mutually satisfactory arrangements. But the statute did not decree that any union which entered into such an arrangement should be bankrupted and broken and forced to pay out every cent of dues and assessments lawfully paid to it by its loyal members. The act did not do that. But the Eisenhower Labor Board has done it.

"In making its decision the Board overruled its own trial examiner as to the facts—deciding that witnesses who the examiner who heard the case said were lying spoke the truth, and that those who he thought spoke truthfully were lying. But, passing this, these are the facts as found by the Eisenhower Board:

"In December, 1954, a welder named Bryant went out to the job site where Brown-Olds were doing some work for Standard Oil. He asked whether a job was available. It turned out that two men were needed. A call was placed to the local union, to see whether they objected to hiring Bryant. The union did—but not because Bryant was not a union member. He was a member of a different local of the plumbers' union whom the El Paso local had cleared. But in El Paso there



were seven men who had been laid off longer than Bryant who the union thought should get the work. So the company did not hire Bryant. It took the two men sent by the union.

"Bryant filed a charge with the Labor Board. After the above facts were found by the Board, it had no difficulty in finding that because the company had hired the men sent by the union in proper order, instead of Bryant, the union had violated the act. It had no difficulty in ordering the union to pay Bryant all the wages he would have received if he had been hired.

"That was only the beginning. Next, it declared illegal the contract between the union and the company which said that the company would hire through the union. That, too, perhaps was all right, even though the evidence showed that the contract was not enforced and non-union plumbers had in fact been hired. But the Board went further. The local union, it said, also had similar contracts with a number of other companies. Those companies were not parties to the case; they were given no notice and no hearing. The Board did not even know whether it could take jurisdiction over those companies. No matter—an order was issued directing the union to cease and desist from executing, maintaining, or enforcing its agreements with those other companies and a footnote was added that this would not apply if investigation showed that those companies were not subject to the act.

"Having thus made a decision affecting contracts with employers who were not parties to the case, the Board turned its attention to the treasury of the local union. It found that in the union's contract with Brown-Olds there was a provision that the by-laws, working rules and regulations of the local should be considered part of the con-

Senator Says, 'Eisenhower Board Appears to be Against Unions'

tract. Turning to the by-laws, it found that dues were calculated in the following way: First, there was a flat monthly payment of \$3 for all journeymen, whether working or not; second, there was an additional payment, for members working at the trade, of 2 per cent of their net wages. The second payment was called an assessment; but it was uniform in its application, and payable monthly.

"There was no evidence that anyone had been discharged by Brown-Olds for not paying these so-called assessments. To the contrary, it was clear that Brown-Olds had ignored its contract with the union, and had hired non-union plumbers and welders. And Bryant, the only man who, on the record, ever had been hurt by the contract, was a member of the union. But, no matter—the contract was found to be illegal on its face; and, because it was illegal, the union must pay.

UNION ORDERED TO PAY

"First, the Board said, the union must pay back to all of the employees of Brown-Olds all of the so-called assessments. For how far back? Well, the Act has a statute of limitations. The Board cannot act on a charge filed six months after the act complained of. So, in this case, the board ordered the union to pay back to all of the employees all of the assessments collected since six months prior to the day Bryant filed his charge—a period running back from February, 1956, to September, 1954.

"One would think this was enough. The General Counsel for the Board thought that it was enough. He got everything he had asked for and won on every single issue that had been litigated.

"But even this did not satisfy the Eisenhower Board. The union had also collected the flat dues of \$3 per month during the long period from six months Bryant filed his charge up till February, 1956. Why not make the union pay all that money out?

"Of course, there is nothing illegal about the provision for dues of \$3 a month in the union's by-laws. But the contract with Brown-Olds said that union members would be hired. Under the Taft-Hartley Act, this is illegal. It can only be provided that employees must become members of the union 30 days after they are hired. Therefore, the by-laws plus the contract made the dues illegal.

"Of course the union employees had been hired

long before September, 1954. The 30-day grace period required by Taft-Hartley had therefore long since expired. And Taft-Hartley does not make it illegal to join a union before the 30 days are up. Nor does it make it illegal for workers to join a union voluntarily, and pay dues, even before they are hired on a particular job.

"And, above all, no one in this case had claimed that the dues provision was illegal or had asked that dues be refunded.

"None of these considerations mattered to the Eisenhower Board. It ordered all of the dues money returned—all of the dues paid all of the employees of Brown-Olds back as far as the Board legally could go—back to September, 1954.

"Why was this done? Because it was a union, and because the Eisenhower Board appears to be against unions. That is the only possible explanation I can give for this unreasonable decision. Certainly the Board's decision gives no other clue. This whole case arose because of the union's simple effort to obtain employment for its laid-off members instead of a man who tried to muscle-in ahead of them. That is all that happened, according to the Board's own record. But because of that one incident, and the Eisenhower Board's thirst for blood, the order which I have described was issued."

In all probability, in this case, there was a violation of the Act and the usual remedy which has been followed during the years has been to order the local to cease and desist from the particular violation and to make the man whole for his non-employment. That is the way it used to be. What Senator Morse was trying to bring out here was the attitude of the new Board and their approach in determining how much punishment to deal out for this type of violation.

The result in this case is offensive, not just from the standpoint of labor, but from the standpoint of law, entirely removed from the question of the rights of labor or the rights of management. It is a serious matter in this field of law and labor when the members of an agency dispensing the law get the idea that they are sitting on a bench like Papa and telling the kiddies what's what. Once they get into that dangerous frame of mind they do not have to pay too much attention to law, they do not have to pay too much attention to procedure. All they have to do is do what is right as they see it.

(To be concluded in the August issue)

THANKS to Dr. Lee DeForest, many isolated human beings are not completely alone. The warmth of the human voice is theirs with the flick of a radio switch or the turn of a television dial.

Dr. DeForest has been responsible for linking man to man everywhere, in cars, studios, offices, factories, airplanes and all the ships at sea.

This man-to-man network around the world was largely stimulated by Dr. DeForest's production—the world's first wireless transmission overland in 1904, the world's first wireless telegraph between moving trains and fixed stations the next year, the world's first three-electrode vacuum tube the year after that and, in 1907, the world's first broadcast. This is the 50th anniversary year of his audion tube, the amplifying device on which broadcasting is based.

Now Dr. DeForest looks back and calls his first audio tube "a crude, preposterous device, but a beginning." He remembers how the telegraph



Doctor Lee de Forest

The man who developed the audion tube and calls himself the world's first disc jockey still probes the mysteries of electronics

boys down at the Brooklyn Navy yard thought they were going crazy when they started to hear voices in their earphones. Dr. DeForest jokingly calls himself "the world's first disk jockey."

That first broadcast was almost fifty years ago, and Dr. DeForest in his 82nd year is still working just as hard to bring new devices to the world of electronics. He's now experimenting on what he calls "the old problem of getting electricity from heat"... and it's an uphill battle.

However, Dr. DeForest is used to uphill battles. In his early years in the radio industry his struggles were long and arduous. He had to deal with "claim jumpers," sensation-mongers, official and quasi-legal obstructions, and at every step, the frustrations and challenges of technical imperfections. Today, his many failures are forgotten; it is his successes that count.

Dr. DeForest was born in Council Bluffs, Iowa, on August 26, 1873. He graduated from Yale Sheffield Scientific school in 1899 and almost immediately started his career of invention.

From the moment he started his work, he had to face the toughest competition. The telegraph companies and private inventors were all in the

race to improve and discover new aspects in the promising field of the wireless. It was never easy to make sound scientific experiments and still be first with the latest electronic device.

DeForest was first with the audion tube, which, crude as it was, opened a new and unexplored field of broadcasting. In 1910, DeForest transmitted the singing voice of Enrico Caruso, and in the same year went to San Francisco to establish radio-telegraph communications between the Golden Gate City and Los Angeles. His company collapsed in New York, so Dr. DeForest went to work for a telegraph and telephone laboratory in Palo Alto.

At San Francisco in 1912 he put his inventiveness to work with success on the telephone audion amplifier and later the revolutionary principle of the "feed back" or oscillator circuit.

The rest of his years were just as productive in the field of electronics. It was only natural that honor should follow Dr. DeForest. He was heaped with medals such as the Legion of Honor and Edison medal. Even today the man who turned wireless into radio is still experimenting in his world to excel human expectations.



YOUR VOTE CAN TURN
THE RIGHT-TO-WORK TIDE

Unions Fight State Petitions

THE tide of the right-to-wreckers seems to be turning, and labor's drive for the freedom of the union shop is gaining momentum.

Early this month, the forces of Organized Labor in Montana defeated an effort to get a "right to work" proposition on the state election ballot. A lavish campaign by anti-labor groups for signatures to a petition failed miserably. By the dead-line—midnight, July 5—the backers of a move to outlaw the union shop had filed with the secretary of state petitions bearing only 5,636 signatures, just a little over one-fourth of the 21,000 required.

Montana citizens who helped to defeat the petition hailed the result as a testimonial to the efficacy of united action by workers, farmers, church groups and educational leaders.

Senator James E. Murray of Montana called the result "proof that Montana citizens weren't fooled by propaganda." Congressman Lee Metcalf of Montana, said, "Straight thinking Montanans recognized the drive to destroy union security as fraudulent mispresentation, detrimental to the best interests of farmers, businessmen and workers."

Louisiana Repeal

Meanwhile, Labor is still cheering the successful repeal of a "right to work" law in Louisiana. After a successful effort by AFL and CIO unions to elect Earl Long to the governorship on the campaign promise of repeal, the Louisiana legislature—now containing a majority of friends of organized labor, thanks largely to union efforts—repealed the wreck law, which had been on the state statute books for several years.

Washington Struggle

In the State of Washington, anti-labor forces got signatures on a petition known as Initiative 198. An outfit called "Job Research, Inc." filed petitions with a claimed total of 64,300 signatures asking that the "right to work" proposition be placed on the ballot in Washington. On its face, the total number of signatures was 14,300 more than required by state law. The total may be drastically whittled down, however, after a check of the authenticity of the signatures is completed.

Names are to be checked by the secretary of state not only to see if they are genuine, but also to see if they are signatures of duly registered voters. Great numbers of voters have written in asking removal of their names on the ground that they were obtained under false pretenses.

On the basis of past experience with similar petition drives, some officials declared it was possible that the number of valid signatures may shrivel below the 50,000 mark by the time the check is completed. If that materializes, then the "right to work" campaign in Washington State will go down in defeat.

Indiana Attempts

"Right to work" is also shaping up as a major political issue in still another state—Indiana. Democrats at a state convention in Indiana recently denounced proposals for such a measure. By contrast, the Hoosier GOP convention adopted a trickily-worded resolution that amounted to a boost for the "right to work" forces.

This led President Carl Mullen of the Indiana Federation of Labor to declare: "We are definitely going to bat against anybody who is not willing to pledge himself against the so-called 'right to work.'"

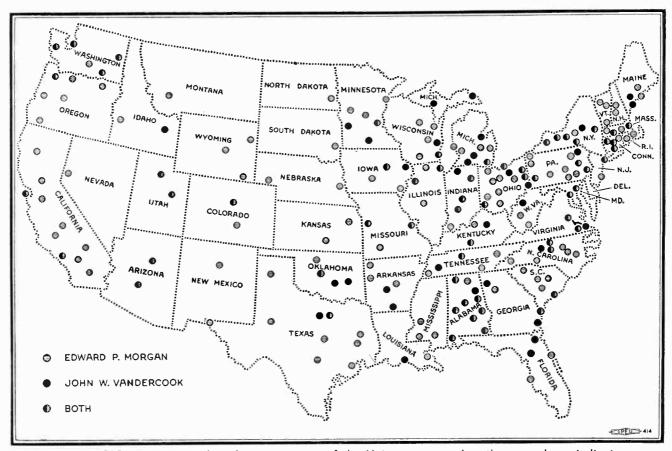
AFL-CIO Broadcasters Get Pulse Scrutiny

TO determine the "audience characteristics" of the Edward P. Morgan and John W. Vandercook newscasts for the AFL-CIO, Pulse, Inc., recently buttonholed listeners in 19 major cities. Pulse pollsters checked 18,000 households in these cities and came out with a composite rating of 3.1 for Morgan and 2.6 for Vandercook. These ratings, obtained in May, are probably representative of a year-'round average, contends Pulse.

The survey indicates, says Pulse, that Edward Morgan reaches 1,221,000 homes per broadcast and Vandercook reaches 885,000 homes. There was an average of 1.6 listeners per home for Morgan (a total of 1,954,000 listeners per broadcast) and an average of 1.8 listeners per home for Vandercook (1,593,000 listeners per broadcast).

Among the other facts found about the audiences of the two AFL-CIO newscasters were the following:

- Approximately 65 per cent of their audiences are people over 35 years old, "the mature, decisive age, AFL-CIO's most vital age group." Five per cent of the audience are teen-agers; 32 per cent are over 50.
- "Very few mass media have a higher proportion of men than women in their audience," the survey organization points out. "Men, the molders and wielders of public opinion, are relatively difficult to reach, with almost all radio and TV programs attracting more women than men. For this reason, it should be gratifying to AFL-CIO that between 55 and 60 per cent of their shows' audiences are men—58.7 per cent for Morgan; 56.7 per cent for Vandercook."
- Vandercook appeals to slightly more women than Morgan, the survey also shows—41.3 per cent for Morgan, 43.3 per cent for Vandercook.



An AFL-CIO newscaster is heard in every state of the Union . . . spread as the map above indicates.

Technical NOTES

World's Smallest Station?

George Waslo, an engineer at Station WKRC, Cincinnati, Ohio, has built what may be the world's smallest broadcasting station. It weighs only four ounces and is smaller in cubic area than a pack of cigarettes. Built in three months at a cost of \$40, Waslo's transmitter is .006 watt, and the power to operate it is one-twentieth of that required to light a regular flashlight battery. Its range is 100 to 150 feet.

According to Station WKRC, Waslo is toying with the idea of adapting the same design for use in TV broadcasts, specifically to be built into microphones and hence require no attached wiring.

750-Mesh TV Screen

Two improved image orthicon television camera tubes—the RCA 5820 for black and white, and the RCA-6474 for three-tube color cameras—are now being quantity-produced by RCA for the broadcasting industry with Micro-Mesh, a 750-mesh screen, replacing the 500-mesh screen heretofore standard in both tube types, Lee F. Holleran, General Marketing Manager, RCA Tube Division, announced this month.

"The 750 mesh," Mr. Holleran said, "eliminates all traces of bothersome moire patterns. Although mesh up to 1,000 lines per inch has been produced by RCA, requirements of the present 525-line television system are exceeded with camera tubes employing the new 750 mesh. Laboratory and field tests have shown that mesh of 750 lines per inch is more than adequate."

To achieve the goal of a 750-mesh screen, Mr. Holleran explained, it was necessary for RCA to develop its own mesh-making techniques and equipment. Included in the work was the design, over a period of many years, of an amazingly accurate ruling engine to produce the "master" matrices from which the gossamer-like screen can be produced in quantity and with uniform quality. So fine is the grid forming the mesh, he said, that

the minute openings represent more than 60 per cent of the total area of the screen. It is through these openings that electrons must pass to reach the vital "target" of the image orthicon and create the television signal.

Color Renewal Tube

Sylvania Electric Products, Inc., announced, last month, a color television picture tube which is believed to be the industry's first such picture tube for renewal use, i.e., for replacement of the picture tubes in existing color sets. The tube is the 21AXP22, a direct-viewed, metal picture tube for use in those color television receivers which can produce either a full-color or black-and-white picture.

The 21AXP22 utilizes three electrostatic focus guns, features magnetic convergence and magnetic deflection, and has a deflecting angle of approximately 70 degrees horizontally and 55 degrees vertically. The face-plate is of gray filter glass and the assembly consists of a spherical, metal shadow mask with uniform holes and a metalized, tri-color, phosphor dot screen.

Sylvania's action in introducing a color tube specifically for renewal use reflects the company's strong belief that color television, after a slow start, is approaching a period of great growth, company officials state.

First color TV picture tube for renewal use is the 21AXP22 by Sylvania, shown at right.



Technician-Engineer

Low Light TV Tube

An RCA developmental television camera tube designed especially for use in industrial and scientific-research TV applications where extremely low light levels are encountered has been announced by the RCA Tube Division.

The new developmental tube combines very high sensitivity with a spectral response approaching that of the eye. Because of these characteristics, the tube is capable of extending the range of human vision by amplifying images of low light intensity so that the eye can see details in the amplified picture when displayed on a television picture tube. Used in a standard television system and with proper amplifying equipment, the tube operates successfully when its tube face is subjected to an illumination as little as one hundred thousandth of a foot-candle. This is equivalent to the light from a candle when observed at a distance of about 300 feet.

The structure of the new developmental tube differs mainly from that of the conventional image orthicon in the much greater spacing between the target glass disc and the fine mesh screen. The effect of this greater spacing is the generation of higher voltages which results when the light reflected from the televised image strikes the photosensitive surface of the tube.

This increased spacing makes it possible for the tube to function at extremely low light levels without introducing "smearing" on the reproduced image.

The tube embodies a five-stage electrostatically focused multipler which amplifies the signals approximately 500 times without accompanying increase in "noise."

Decry Film Quality

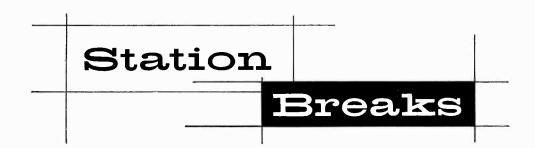
Members of the Film Producers Association, meeting in New York recently, decried the "poor quality" prints of TV film commercials now being used. They agreed that the condition resulted from loss of control of finished negatives by producers. They say that optimum quality images and sound tracks of release prints "are best attained when the individual producer involved deals directly with the film processing laboratory." (In recent years, ad agencies have consigned finished negatives to service organizations which arrange for mass production of release prints and for shipping.)



HIGH POWER, LOW DISTORTION AMPLIFIER for heavy duty P.A. and industrial control applications—The Altec Lansing 260A is a 260-watt amplifier of low distortion and wide frequency range intended for public address and industrial control applications where long life and minimum maintenance are paramount. Specified power available continuously at 2% or less distortion over full frequency range of 40 to 15,000 cycles. Output connections provides for low impedance speaker loads and 70-volt line; also a 60 ohm tap for 140 V line or 117-125 volts to operate motors at various frequencies. Protection by thermal cutout. Filament warm-up period controlled by delay relay, permitting remote full on-off control.



COMPRESSOR AMPLIFIER for P.A. and Industrial use—The Altec Lansing 436A is a small, self-powered compressor amplifier featuring automatic gain control at line level output. Occupies 31/2" of rack space. Front panel contains meter indicating decibels compression, power switch, fuse and pilot light. Input employs a high impedence transformer which can bridge a 600 ohm line or the output of the 1510A and 1511A preamplifiers. Output transformers provides load taps of 150 and 600 ohms or may operate directly into the high impedance input of the 1520A or 1530A amplifier. Frequency response is nominally 1.5 db from 30 to 15,000 cps, gain 44 db, and compression threshold -2dbm (output). Distortion with 25 db of compression is less than 1.5%, 35 to 15 KC; with 30 db of compression less than 2.5%, 35 to 10 KC. Output level+19 dbm at 30 db compression. Attack time approximately 50 milliseconds with 63% recovery in I second.



NABET Secures Delay In Filing Comments With FCC

On June 25, the FCC issued a "Notice of Extension of Time for Filing Comments" in the proceedings in Docket No. 11677. The overall effect of this extension is that it allows any and all parties until August 2, 1956, to complete their filing of comments in the proposed Rule Relaxation.

The FCC noted that:

"In support of its request the NABET states that it proposes to file comments in this proceeding; that it has elicited information from transmitter operators in a number of key stations

throughout the country in connection with the rule making proposal; and that a further extension of time for filing comments is necessary in this connection."

The request by NABET was filed on June 14 and resulted in the finding of the Commission that the further extension would serve the public interest, convenience and necessity. The time for filing replies to such comments was similarly extended to 20 days after August 2, 1956.

(See IBEW Comment to FCC on Page 3.)

The Second Chance

Twenty inmates of the Minnesota State Prison have gotten jobs prior to leaving prison walls, which is what was required as a condition for parole, thanks to the efforts of a broadcaster at an IBEW-contract station. Bob DeHaven of WCCO, Minneapolis-St. Paul, found employers for the men by interviewing two every Monday night on his program "As You Like It."

NLRB Election Reports

- Local Union 445, of Battle Creek, was successful in getting a unanimous vote of the employees of WELL, Battle Creek, very recently.
- Local Union 1266, of Dayton, Ohio, reports certification of the NLRB for 25 technical employees of WHIO-AM-FM-TV, Dayton. Of the 25 eligible voters, 23 votes were cast—19 of them indicating their wish to be represented by the IBEW. The election took place on May 13.
- The Program Department employees of WLWA (TV), Atlanta, voted for representation by the IBEW in an NLRB election held recently. Local Union 1193 received all of the votes cast. WLWA is one of the television stations owned by the Crosley Broadcasting Corporation and serves the Atlanta area on Channel 11.

• Local Union 1266 was chosen by the Program Department employees of WLWD in an NLRB election in April—which fact somehow escaped the attention of this publication. Eleven members of the Department will now be represented by the IBEW. WLWD is the Crosley station for Dayton, operating on Channel 2.

Old Pilots Never Die

There must be about 10,000 pilot films (for TV film series which didn't quite jell) stored around the country, estimates the New York agency, Barry and Enright Productions. Also, there must be at least one good film series in this vast collection of films that never got on the air, B & E surmises further.

So the New York organization has formed a division to operate as a clearing house for the sale and distribution of individual pilot films. B & E plans to incorporate groups of pilots of the same types into various series for sale to stations and agencies and also to effect one-time sales of single pilots to stations, networks and established programs.

Technician-Engineer

ACEXANDER BROWDY
1962 S STEARNS DR
LOS ANGELES 34 CALTE