



NEWSLETTER

NATIONAL ASSOCIATION OF EDUCATIONAL BROADCASTERS

14 GREGORY HALL

URBANA, ILLINOIS

NAEB EXECUTIVE COMMITTEE MEETING

Amid wintry weather in Minneapolis, the NAEB Executive Committee met January 10 and 11 to determine future plans and courses of action. Among other things, the Committee—consisting of President Burton Paulu, Treasurer Robert Coleman, Secretary Jack McBride and ex-officio Executive Director Harry Skornia—formed 1957 NAEB committee membership and assignments. (The listings appear elsewhere in the Newsletter.) Since Vice-President Richard Hull was unable to be present, the Committee agreed President Paulu should discuss the main happenings when he saw Hull in Columbus January 16.

The possibility was raised of setting aside a special day during the IERT to continue the NAEB luncheon. The idea was to have the luncheon serve almost as a mid-year NAEB convention, with a business session immediately after the meal. Following this idea, Paulu met the IERT Planning Committee January 17, and results should be heard soon. He also plans to meet with the Institute Committee at Columbus to set the date for the Utilization Day program.

The Executive Committee discussed this year's TV Seminar-Workshops and the Kellogg Grant Workshop-Seminar; and forwarded their views to the Professional Advancement Committee. Among other items discussed were possible reruns of NAEB programs, staff, space and budget problems of Headquarters, better orienting of young NAEbers, NAEB-JCET-ETRC relationships, distribution of NAEB publications and the future convention program.

—N A E B—

NAEB COMMITTEES FOR 1957

The following is a listing of all committees and committee-members appointed by the Executive Committee at their last meeting, Jan. 10 and 11.

Executive Committee: Burton Paulu, President; Richard Hull, Vice-President; Jack McBride, Secretary; and Robert Coleman, Treasurer.

Advisory Committee to the President of the

NAEB Newsletter

Vol. XXII, No. 2

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NAEB Newsletter, a monthly publication issued by the National Association of Educational Broadcasters, 14 Gregory Hall, Urbana, Ill., \$5 a year, edited by Mrs. Judith Stevens. Application for 2nd class mail privileges pending at Urbana, Illinois.

ETRC: Burton Paulu, Ch.; Frank Schooley, Jim Robertson, Armand Hunter, and Richard Hull, ex officio.

Foundations Committee: Frank Schooley, Ch., Burton Paulu, Richard Hull, and James Miles.

Permanent Financing Committee: James Miles, Ch.; Richard Hull, William Harley, and Edward Rosenheim, Jr.

Associate Members: Robert Schenkan, Ch.; Richard Bell, Harold Gregory, Frank Williams, Gerald Willsea, and Bill Cumming.

Awards and Citations: Graydon Ausmus, Ch.; H. B. McCarty, Allen Miller, McCabe Day, Judith Waller, and Hugh Mix.

Engineering Committee: Carl Menzer, Ch.; B. A. Holmberg, Keith Ketcham, Edward Kratt, Bob Higgy, John Boor, John Brugger, John Chenoweth, Fred Ramley, and George Murphy.

Grants-In-Aid: Edward Rosenheim, Jr., Ch.; Larry Frymire, Edwin Browne, and Harry Lamb.

International Relations: Seymour Siegel, Ch.; Kathleen Lardie, Marvin Alisky, Lawrence Creshkoff, I. K. Tyler, Bill Bender.

Membership: Frank Schooley, Ch.; Kendall Crane, Lucille Ruby, Worthington Gregory, Edwin Adams, Howard Curtis, Richard Bell, and Uberto Neely.

Organizational Liaison: Gertrude Broderick, Ch.; Graydon Ausmus, Francis Byrnes, Franklin Dunham, Anna Hyer, Clara Logan, Vanett Lawler, Mrs. Lois McCarthy, Mrs. Dorothy Smith, Ralph Steetle, Raymond Wittecoff, Bart Griffith, Leslie Spence, Sydney Head, and Fred Garrigus.

Purdue's experimental set-up allows about 600 students in seven courses to receive CC instruction at two campus locations.

One highlight on Saturday was Ned Rosenheim's "New World" discussion program, a Conference program item, treating a complex subject - Technology and Communications — a roundtable on "Monitor" which you heard Sunday, January 27th.

A bad cold prevented Dick Hull's attendance and the help of his prepared talk for the closing session. An unprepared but just as helpful message was given by past-president Schooley.

Region III, already the largest in NAEB, emerged from the Conference stronger than ever. Talk of a Region III network, more frequent meetings and unilateral program exchanges were heard everywhere. H. B. McCarty has agreed to put on tape his keynote speech which headquarters will distribute to region members.

The newcomers expressed sincere appreciation at getting to meet the old timers; and the oldsters radiated confidence in the future in light of the splendid young people present at this Conference who appeared ready, willing and able to carry on the work of NAEB.

— N A E B —

MEMO FROM THE EXECUTIVE DIRECTOR

By HARRY SKORNTA

Because so many things are occurring just at deadline, this month's report will be very brief. Undoubtedly we shall be able to provide a longer column next time.

As this is written, we have had relatively few reactions to the changed form of the *Newsletter*. We hope you like it, and we will continue to improve. One way to improve is to have news from you, so please keep it coming — along with any suggestions. Another way is to be sure your staff members have access to the *Newsletter*. Do you route your copy to all who might profit from it?

The principal event of this period, since last month, is the Executive Committee meeting held in sub-zero Minneapolis January 10 and 11. Originally scheduled for Chicago, the meeting-place had to be changed because there were absolutely no hotel accommodations available due to the furniture and automobile shows. Minneapolis, with President and Mrs. Paul's hospitality, turned out to be a good choice after we finally got there (by train, with pockets full of unused airplane tickets).

I shall leave discussion of the results of this meeting to your president. Briefly, committee membership was discussed (advisory to the president), together with problems of goals, support

and projects for the next year — problems which could not wait for the meeting of the full Board at Columbus in early May, in connection with the IERT. I personally, was very well pleased with the meeting and believe much was accomplished. Committee appointments by President Paul appear elsewhere in this issue.

DIRECTORY CHANGES

- p. 1 122 Active Members
- 87 Associate Members
- 76 Affiliate Members
- 3 Honorary Members
- 288 Total
- Radio - FM only 82
- Total Active Membership 122
- (1) . . . these 122 members operate, or have construction permits for, 155 stations.
- p. 4 WUOA (FM) 3 kw
- p. 10 WSLU (FM) Miss Lucille Ruby
- p. 12 KUOM (AM) Phone Federal 2-8158
- p. 12 Add: KTCa (TV) ch. 2 J. C. Schwarzwalder, (St. Paul) Director, Twin City Area Educational Television Corporation
- TSA Room 110 Univ. of Minn. Mid 6-4616 Ext. 263
- p. 14 WKCR (FM) 89.9 mc
- p. 15 WUNC-TV (Chapel Hill) Delete Communication Center
- p. 16 WSLN (FM)
- p. 17 WNAD (AM) Phone Jefferson 4-6900
- p. 17 Delete KETA-TV and KOED-TV
- p. 17 KOKH (FM) 18th & Klein
- p. 18 WQED (TV) V-138 kw John F. White, Gen. Mgr. A-69
- p. 20 Add: WEMC (FM) 91.7 mc Eastern Mennonite College (Harrisonburg) 10 w John R. Mumow, President Harrisonburg, Virginia
- p. 21 WLFM (FM) * 91.1 mc Phone Regent 3-5577
- p. 21 WHA - FM 88.7 mc
- p. 23 Birmingham Public Schools 2015 7th Ave., N. Birmingham 3 Phone Al 2-1151
- p. 25 University of Chicago Phone Extension 3182
- p. 31 Add: Metropolitan Educational Inc. E. A. Hungerford Jr. Television Association, Inc. Executive Director (New York) 345 E. 46th St. New York 17
- p. 33 Northern State Teachers College Mrs. C. H. Holgate, Director of Radio South Jay Street
- p. 34 Baylor University 3929 Splight Phone 4-6647
- p. 34 Add: Abilene Christian College Lowell Perry (Abilene) Dir. of Radio
- Box 215 Abilene, Tex. 2-5413
- p. 34 Delete Lipscomb College Granny White Pike CY 2-4451
- p. 37 Watson P. Dutton Phone District 7-1260
- p. 38 Delete Evansville Public Library
- p. 39 Delete Louisiana Educational TV Commission
- p. 41 Delete Eastern Montana College
- p. 42 Columbia University Center for Mass Communication (NO "S") Lexington 2-8902
- p. 43 Radio Free Europe 2 Park Ave New York 16, N. Y.
- p. 44 Delete The Junior League of Charlotte TV Committee
- p. 46 University of Wisconsin-Milwaukee
- p. 46 Add: University of Wisconsin Robert N. Dick Extension Division Radio-TV Coordinator (Madison) Extension Building Univ. of Wis. Madison 6
- p. 46 Add: WYOMING Northwest Community College J. E. Christensen, Director (Powell) Univ. of Wyoming, Powell, Wyoming
- p. 51 WLFM (FM) *
- p. 53 Delete KETA-TV and KOED-TV
- p. 53 Add KTCa twin City Area Educational TV Corp., St. Paul, Minn.
- p. 53a WTQ-TV Munford

Having roused ourselves at 5:30 in the morning of January 16 for a flight to Hagerstown for the ceremony there in connection with their closed circuit project, Frank Schooley, Cecil Bidlack and I yielded to the weather in the face of the obvious misgivings of the pilot of the light University of Illinois plane which was to have taken us out and back the same day. Therefore, we do not now have a report on that ceremony, or the chats we had hoped to have with Dorothy Smith of the ACE-TV Committee, Ralph Steele and Walter Emery of the JCET, and many others with whom we had planned to compare notes.

As this is written we are ready to leave for the Region III meeting at Purdue. We have arranged for a separate brief report on this meeting and you will find it elsewhere in the *Newsletter*. I believe these regional meetings are among the most important activities of the NAEB, since many staff members who cannot normally get to the national conventions can generally come. We always greatly enjoy them.

The Professional Advancement Committee will have held its meeting in Urbana by the time you receive this. We hope to have a report on this and other regional and committee activity in time for the March issue.

In closing, I've just looked over a brief statement on coverage, costs, and other useful guidance about lower-power TV which Cecil Bidlack has prepared. We decided to send this to our various mailing lists, together with similar material on low-power FM. These will be followed by similar suggestions for closed-circuit TV. In this we hope to increase our service to members and to education nationally when it needs all the tools it can get to meet the great increase in school enrollment at all levels. We'd be interested in your reaction to this and the various other services we seek to provide.

Until next month then, that's thirty.

—N A E B—

HEADQUARTERS PERSONNEL

► At the end of January Headquarters lost Traffic Manager, Mrs. Martha Kappmeyer, who left to await an addition to the family toward the end of the month. Mrs. Peggy Enderby has come to replace her from the Continental Illinois National Bank & Trust Company in Chicago.

► Also, Headquarters gained a new chief secretary, Mrs. Judith Gans, who came to us from NBC in Chicago where she was secretary to the Director of Programming. We are happy to say our previous secretary, Mrs. Mary Francis Bryner, is still with us as secretary for the Engineering Service.

TV CONSULTATION SERVICES AVAILABLE

ETV stations are reminded there are still some funds available (from the Ford Foundation grant) to provide continuation of the consultation services instituted last year. Under the terms of the grant, NAEB will provide consultation service, on either a team or individual basis, in such areas as production, direction, program planning, engineering, station management, writing, staging and lighting, etc.

Any ETV station desiring to take advantage of this service should write a formal application to the Executive Director, setting forth in detail the area(s) in which consultation is desired, reasons why the service is needed, preferred dates, etc. The station may indicate consultants preferred, and, if possible, an effort will be made to obtain those indicated. However, final selection of consultants is made by the Executive Director on the basis of availability and suitability for the task outlined in the request.

—N A E B—

BRITISH IN-SCHOOL BROADCASTING

—BY DR. ERIC GOLDSCHMIDT, MANAGING EDITOR
Tellex Publications Ltd.

The way broadcasting to schools is being introduced in Britain could be an excerpt from a musical comedy if it were not stark fact. About 18 months ago Miss Enid Love toured the U. S. on a fact finding trip launched by the BBC. On her return she was appointed head of the BBC's special schools service. Right through 1956 plans were laid to begin educational telecasts during the fall of 1957.

In harness with the BBC are advisory committees and joint educational bodies and, of course, a long and distinguished record for sending lessons to schools over radio. The weight of this machine will be brought to bear on the problem when the time arrives.

But in April of this year commercial TV is going to launch its own service. This was announced almost as an after-thought by the chairman of the company which had incurred extremely steep financial losses while pioneering private-enterprise TV in England.

The intention is to send out science, geography and history programs three months from now. There will be an experimental schedule during the early afternoon when the commercial screen is not otherwise filled.

One immediate reaction came from Sir Eric James, headmaster of the Manchester Grammar School, who said, "A TV set for listening to the BBC or its rival will enter my school over my dead body."

Be sure to route your *Newsletter* to other staff members so all may know about NAEB and national developments in the educational broadcasting field.

LOW POWER TELEVISION TECHNICAL CONSIDERATIONS

Several manufacturers of television equipment market low power television station packages which sell for around \$50,000. This price includes all equipment necessary for live and film pick up, audio and lighting equipment as well as the transmitter and antenna. Some packages also include the cost of a 200 foot tower and its installation. Obviously such a package contains only essential items, although with the equipment provided it is possible to program a television station.

There are a number of technical considerations which should be pointed out lest you think this is the ultimate answer for educational television. For certain situations this type of installation is entirely adequate; for others it cannot hope to do an adequate job.

One of the first technical considerations is coverage. The area covered is dependent upon effective radiated power (ERP). This is dependent upon the power output of the transmitter, loss in the transmission line to the antenna and the gain (or loss) in the antenna. Coverage is also dependent upon antenna height and, hence, it is very important that the transmitting antenna be placed as high as economically possible in order to insure maximum radiation from it. Tall buildings are an advantageous location for the antenna of a low power TV station since they ordinarily are near the center of population to be covered, save the cost of a high tower and permit the transmitter to be located closer to the antenna, and thus save the cost and power loss of a long transmission line.

Most low power packages are offered with transmitters of 100 to 200 watts power output. The FCC requires at least 100 watts ERP regardless of the size of the city and also requires that a certain minimum signal strength be maintained over the city limits of the principal city served. This limitation will determine whether low power equipment may be used. The following table will give an idea of the coverage provided in the various TV bands with 100 watts ERP and various antenna heights above average terrain. The radii shown have been predicted by FCC methods.

Antenna Height	VHF 2-6			VHF 7-13			UHF 14-83		
	City	A	B	City	A	B	City	A	B
100'	1.7	2.3	8	1.6	2.0	5.0	1.1	1.7	2.8
200'	2.3	3.3	10	2.2	3.0	7.3	1.6	2.3	4.2
500'	3.7	5.3	17	3.4	5.0	12.0	2.5	3.5	6.5

Another technical consideration involved is that of vidicon cameras versus image orthicon cameras. The low power package uses vidicon cameras while the standard television broadcaster uses an image or-

thicon as a live pick up tube. The cost of a vidicon camera chain is approximately \$5,000 while an image orthicon chain will cost three times this amount or in the vicinity of \$15,000. The vidicon equipment produces very acceptable pictures. However, it requires much higher light levels than image orthicons which may necessitate studio air conditioning. Excellent picture quality may be obtained with image orthicon cameras with 75 foot candles of incident light while vidicon cameras will require double this amount or more. Consequently this additional requirement of light will restrict the area which can be covered by a vidicon camera unless a high capacity air conditioning unit is employed for studio cooling. In general it may be said that lenses, camera tripods and other accessory equipment for image orthicon equipment is larger, of better quality and thus more expensive. However, skilled handling is required and it is more costly to maintain and operate.

Space requirements for a low power television station are not severe. The transmitter itself requires very little space. Studio space will be dependent upon the type and extent of the live programming contemplated. Large class rooms may be converted into TV studios. Adequate ceiling height is a prime requirement. Since most television flats used as back drops are 10 feet high the preferred ceiling height should be 14 feet to allow for lights and the grid from which they are hung. This height also contributes to lower room temperatures and comfort of performers and permits proper back lighting.

Another consideration for studio space is sound isolation. Since it is not customary to show microphones on television they must necessarily be operated farther from performers. Studio noise thus becomes a problem; however inexpensive sound treatment may be applied to walls and ceiling. As a result TV studios are usually less live than radio studios. Extraneous noise filters in through walls, floors, windows and other openings. Consequently a relatively quiet studio location should be selected or sound isolation may be necessary.

Floors should be smooth and solid so that cameras can be dollied smoothly while on the air. Accessibility is important, thus ground floor studios have many advantages.

Closed circuit television requires no FCC construction permit. However the communications Act

This material was presented by Cecil S. Bidlack, NAEB TV Engineer, at the low power television session of the Region III meeting held January 24-25 at Lafayette, Indiana. It is based in part on a pamphlet prepared by Cyril M. Braum of the Joint Committee on Educational TV, Washington, D. C. Similar information to the above has been prepared on "Establishing a 10-watt FM Educational Broadcasting Station." It will be mailed to you free upon request to NAEB, 14 Gregory Hall, Urbana, Illinois.

states that no license shall be issued a TV station if construction has begun before a construction permit has been granted by the FCC. If a studio is to be *installed* for the first time as a part of a television station, no construction should be started until the permit is received. The application form to be used in filing for a construction permit is FCC form 301, and for a license FCC form 302. These forms must be submitted in triplicate and are available upon request from the FCC.

If you contemplate establishing an educational television station we suggest you write to the Secretary, Federal Communications Commission, Washington 25, D. C. asking for the Following:

1. Latest issue Information Bulletin No. 1, "Broadcast Application Procedure."
2. Latest issue Administrative Bulletin No. 1, "List of Federal Communications Commission Publications."
3. FCC Form 301 (5 copies) for TV Construction permit.
4. FCC Form 302 (5 copies) for TV license application.

At the same time send a check or money order for \$1.50 to the Superintendent of Documents, Government Printing Office, Washington 25, D. C. for "FCC Rules and Regulations, Part 3 - Radio Broadcast Services." This pamphlet is indispensable since it contains the necessary information for all types of broadcasting stations, AM, FM and TV and the Standards of Good Engineering Practice concerning Standard Broadcast Stations. It lists channels available, licensing requirements and procedures, equipment requirements, operating requirements including logs, station identification and mechanical recording announcements required.

The following list includes the principal manufacturers of television pick-up (camera) and transmitting equipment. Many of them have supplementary material, such as reprints of magazine articles or technical publications, which will be of help in planning an installation. Some of these firms will supply everything, others specialize and are classified accordingly.

Manufacturers supplying a full line of equipment, including image orthicon camera equipment:

Radio Corporation of America Electronics Products Department Camden 2, N. J.	General Precision Laboratory Institutional Television Dept 63 Bedford Road Pleasantville, N. Y.
General Electric Company Technical Products Department Electronics Park Syracuse, New York	Allen B. DuMont Laboratories Technical Products Division 760 Bloomfield Ave. Clifton, N. J.
Sarkes Tarzian, Inc. Broadcast Equipment Division Bloomington, Indiana	Gates Radio Company Quincy, Illinois

The above also make or sell vidicon camera equipment, as do the following:

Dage Television Division Thompson Products, Inc. West 10th Street Michigan City, Indiana	Kintel (formerly Kay Lob) 5725 Kearney Villa Road San Diego 12, Calif.
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For low power transmitters, boosters, translators:

Alder Electronics
1 Le Fevre Lane
New Rochelle, N. Y.

For distribution systems:

Jerrold Electronics
26th and Dickinson Streets
Philadelphia, Pa.

For transmission lines, antenna equipment:

The Andrew Corporation
361 East 75th Street
Chicago 19, Ill.

The first of this month Cohn and Marks, legal counsel for NAEB, filed a protest to the FCC against amending Section 3.182 (c) and (v) of the FCC Rules and Regulations. This section provides protection to broadcasters that render a unique program service.

TEACHING BY TV

▶ TV courses in 2nd-year Algebra, Trigonometry and Physics are being taught to high school students in twelve high schools in Oklahoma. Instruction is presented daily over KETA-TV, Oklahoma City. Tests, notebooks, and assignments are graded by the TV teacher and returned to school; and scores are comparable to those of regular classes in the same subject.

▶ WTHS-TV, Miami, started a new TV course on Psychology February 7th. The series will run 12 weeks and features Dr. Jack Kapchan of the University of Miami Psychology staff. Upon paying a \$3 fee and passing a final exam, viewers will be entitled to a certificate of completion.

▶ Cincinnati Public Schools has put out "A Study on the Effectiveness of TV as a Medium of Instruction in High School Chemistry 1955-56." This mimeographed study is based on a chemistry TV course WCET, Cincinnati, ran March through April, 1956, for the city's public schools.

▶ High school seniors through TV are earning college credits in a new course presented by the State University of New York, State College for Teachers at Albany, in cooperation with the Mohawk Hudson Council and General Electric station WRGB. This first credit offering via TV in New York State is also available for credit to qualified adults who receive the program at home. The course, "Introductory Geography," started February 4th and is televised at 11 a. m. three times weekly.

▶ "Survey of English Literature," a University of Wichita TV course for college credit, is being telecast over KARD-TV, a commercial station in Wichita, Kansas. The course deals with 18th century to present-day English authors, and is taught by Dr. Morton Rosenbaum of the University of Wichita.

▶ Two TV courses are being offered by Indiana University over WTTV. "Individual Study in Guidance" and "Introduction to American Government II" are the two TV-home study courses for college credit.

LETTER FROM PARIS

BY KEITH ENGAR

The French Broadcasting System maintains a unique section called "The Club d'Essai" — tryout club. It's devoted to experimentation in Radio and TV, to the publication of a first-rate periodical called *Cahiers d'Etudes* (which contains many articles in English — it's a cosmopolitan, international periodical devoted to radio-TV), and to training students in skills for radio-TV.

To my knowledge, no French university offers such skills courses, and the Broadcasting System is forced to. This has the worthy effect, however, of making broadcasting more of a profession, for there is a genuine attempt to employ successful graduates of the course. More than skills is taught. Lectures are given in the Sorbonne Amphitheatre Turgot by various specialists on such subjects as "Theories of Information," "Poetry on the Radio," and "The Aesthetics of Broadcasting."

The experimental work is bold in conception. Recently a troupe of actors and technicians went to Grenoble to attempt an experiment in "Radio del' Art" or radio drama by improvisation. The purpose of going on location was two-fold: Parisian facilities of RTF are not readily available, and the locale of the scenario was a bell factory.

There is a dandy bell factory near Grenoble, and the actors were given the opportunity to improvise under realistic conditions. A psychologist (an American Fulbright) was on hand to record reactions of the actors.

Recently the founder of psycho-drama participated in a film which attempted to demonstrate uses of this technique for the training of actors. When the Club d'Essai essays such a film, personnel aren't sure how the experiment will turn out, but they have the true spirit of adventure. I daresay they will become more well known in international broadcasting circles as times goes on.

—N A E B—

Seymour N. Siegel, director of WNYC, has notified us at the NAEB that three additional broadcasting organizations have joined the international competition of the Prix Italia Prize. These are the Swedish Broadcasting Corporation, the Israel Broadcasting Service and the Yugoslav Radio.

The 1957 World Radio Handbook is out now, listing old friends and new in the broadcasting-television world. The book performs a fine service and promotes better understanding between peoples of the world. New York representative is Gilfer Associates, Box 239 Grand Central Station, New York 17, New York.

AWARDS

► CBS Foundation Inc., announces the establishment at Columbia University in New York a group of 8 one-year fellowships beginning this September for eligible persons in news and public affairs in the radio-TV field. Applicants can be regular members of non-commercial broadcasting stations licensed to colleges and universities who engage a large portion of their time in news and public affairs. Teachers of courses in radio-TV news and public affairs techniques at colleges and universities are also eligible. Interested persons should write to William C. Ackerman, Executive Director, CBS Foundation Inc., 485 Madison Avenue, New York 22, New York.

► Opportunities for American graduates to study in Switzerland during 1957-58 have been made available by Swiss universities, societies, and the American-Swiss Foundation for Scientific Exchange. Application is open to U. S. citizens, preferably under 35, with a bachelor's degree, good academic record, and a working knowledge of French or German.

For further information write to The Institute of International Education in New York City.

► The Institute of International Order, a non-profit organization dedicated to the support of the

UN, is offering prizes for 15-minute radio programs promoting greater understanding between people and nations. A radio station and a community organization must cooperate to build this program, which can take any form. This year the Institute is offering two special awards of \$25 to college stations for the best programs on contributions students and schools can make to world peace. For further information write::

The Institute for International Order
11 West 42nd Street
New York 36, New York

► WGBH-TV-FM and WBUR-FM announced scholarships and assistantships they have available to the School of Public Relations and Communications at Boston University. WGBH-TV-FM is offering ten TV and one radio scholarships for \$1000 each for a year's advanced study in broadcasting. WBUR-FM is offering an \$1800 assistantship for one-year's advance study in radio.

Applicants must have a bachelor's degree to be eligible. Write to: Melvin Brodshaug, Dean, Boston University, School of Public Relations and Communications, 84 Exeter Street, Boston 16, Mass. Deadline for applications is March 15, 1957.

NEWS OF MEMBERS

GENERAL

► Burton Paulu's study of TV-radio in the United Kingdom, *British Broadcasting*, was mentioned in the January 12th *TV Digest*. Saying he refuted the belief that the "Third Programme" has elevated British cultural taste, the notice praised Dr. Paulu's work. Among the quotes: "It is not possible to prove that a monopoly like the BBC can raise the level of public culture any more successfully than can a competitive commercial system like that of the U. S."

► WUOM, University of Michigan, received a letter from Chang Jun Yu, secretary to Syngman Rhee, expressing the Korean president's appreciation to Miss Edythe M. Albert "for her part in interesting Michigan children in Korea and our music." The letter stems from Miss Albert's work in "Michigan Festival of Song," an educational series for Michigan schoolchildren prepared by WUOM and carried throughout the state. This year's festival included a Korean folk song.

► Michigan State University radio, WKAR and WKAR-FM, received a public service award given

by the National Safety Council for exceptional service to farm safety. The presentation marked the third M.S.U. Radio has received the award.

WUNC-TV, North Carolina State College, also received a public service award from the National Safety Council for farm safety. In addition, the station collected an award from the Veterans Administration in appreciation of a series of VA programs aired by WUNC-TV over the past several months.

► Sacramento State College has recently begun a full-scale experimental program in TV. For the past two semesters, the college has been presenting over local stations several series of TV programs showing the growth of the institution in the past 10 years and giving the community an overview of courses and procedures at Sacramento State. Future plans for the experimental program include a continuation of the successful "SSC Campus Roundup," and a tentative programming of a telecourse for credit.

► University of Alabama Prof. Wade Coleman will receive the Palmes Academique award early in February from the French government. Arrangements are being made for the presentation to be made on one

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thicon as a live pick up tube. The cost of a vidicon camera chain is approximately \$5,000 while an image orthicon chain will cost three times this amount or in the vicinity of \$15,000. The vidicon equipment produces very acceptable pictures. However, it requires much higher light levels than image orthicons which may necessitate studio air conditioning. Excellent picture quality may be obtained with image orthicon cameras with 75 foot candles of incident light while vidicon cameras will require double this amount or more. Consequently this additional requirement of light will restrict the area which can be covered by a vidicon camera unless a high capacity air conditioning unit is employed for studio cooling. In general it may be said that lenses, camera tripods and other accessory equipment for image orthicon equipment is larger, of better quality and thus more expensive. However, skilled handling is required and it is more costly to maintain and operate.

Space requirements for a low power television station are not severe. The transmitter itself requires very little space. Studio space will be dependent upon the type and extent of the live programming contemplated. Large class rooms may be converted into TV studios. Adequate ceiling height is a prime requirement. Since most television flats used as back drops are 10 feet high the preferred ceiling height should be 14 feet to allow for lights and the grid from which they are hung. This height also contributes to lower room temperatures and comfort of performers and permits proper back lighting.

Another consideration for studio space is sound isolation. Since it is not customary to show microphones on television they must necessarily be operated farther from performers. Studio noise thus becomes a problem; however inexpensive sound treatment may be applied to walls and ceiling. As a result TV studios are usually less live than radio studios. Extraneous noise filters in through walls, floors, windows and other openings. Consequently a relatively quiet studio location should be selected or sound isolation may be necessary.

Floors should be smooth and solid so that cameras can be dollied smoothly while on the air. Accessibility is important, thus ground floor studios have many advantages.

Closed circuit television requires no FCC construction permit. However the communications Act

This material was presented by Cecil S. Bidlack, NAEB TV Engineer, at the low power television session of the Region III meeting held January 24-25 at Lafayette, Indiana. It is based in part on a pamphlet prepared by Cyril M. Braun of the Joint Committee on Educational TV, Washington, D. C. Similar information to the above has been prepared on "Establishing a 10-watt FM Educational Broadcasting Station." It will be mailed to you free upon request to NAEB, 14 Gregory Hall, Urbana, Illinois.

states that no license shall be issued a TV station if construction has begun before a construction permit has been granted by the FCC. If a studio is to be installed for the first time as a part of a television station, no construction should be started until the permit is received. The application form to be used in filing for a construction permit is FCC form 301, and for a license FCC form 302. These forms must be submitted in triplicate and are available upon request from the FCC.

If you contemplate establishing an educational television station we suggest you write to the Secretary, Federal Communications Commission, Washington 25, D. C. asking for the Following:

1. Latest issue Information Bulletin No. 1, "Broadcast Application Procedure."
2. Latest issue Administrative Bulletin No. 1, "List of Federal Communications Commission Publications."
3. FCC Form 301. (5 copies) for TV Construction permit.
4. FCC Form 302. (5 copies) for TV license application.

At the same time send a check or money order for \$1.50 to the Superintendent of Documents, Government Printing Office, Washington 25, D. C. for "FCC Rules and Regulations, Part 3 - Radio Broadcast Services." This pamphlet is indispensable since it contains the necessary information for all types of broadcasting stations, AM, FM and TV and the Standards of Good Engineering Practice concerning Standard Broadcast Stations. It lists channels available, licensing requirements and procedures, equipment requirements, operating requirements including logs, station identification and mechanical recording announcements required.

The following list includes the principal manufacturers of television pick-up (camera) and transmitting equipment. Many of them have supplementary material, such as reprints of magazine articles or technical publications, which will be of help in planning an installation. Some of these firms will supply everything; others specialize and are classified accordingly.

Manufacturers supplying a full line of equipment, including image orthicon camera equipment:

Radio Corporation of America Electronics Products Department Camden 2, N. J.	General Precision Laboratory Institutional Television Dept 63 Bedford Road Pleasantville, N. Y.
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General Electric Company Technical Products Department Electronics Park Syracuse, New York.	Allen B. DuMont Laboratories Technical Products Division 760 Bloomfield Ave. Clifton, N. J.
--	--

Sarkes Tarzian, Inc. Broadcast Equipment Division Bloomington, Indiana	Gates Radio Company Quincy, Illinois
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The above also make or sell vidicon camera equipment, as do the following:

Dage Television Division Thompson Products, Inc. West 10th Street Michigan City, Indiana	Kintel (formerly Kay Lab) 5725 Kearney Villa Road San Diego 12, Calif.
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For low power transmitters, boosters, translators:

Alder Electronics
1 Le Fevre Lane
New Rochelle, N. Y.

For distribution systems:

Jerrold Electronics
26th and Dickinson Streets
Philadelphia, Pa.

For transmission lines, antenna equipment:

The Andrew Corporation
361 East 75th Street
Chicago 19, Ill.

of Coleman's in-school telecasts over the Alabama ETV Network. Prof. Coleman's course "Parlons Français," is shown three times weekly to high school viewers.

▶ The 10th annual Western Radio and TV Conference will be held on the University of Oregon campus in Eugene, February 14-16, 1957. There will be talks by the new Governor of the state of Oregon, Robert D. Holmes, who has had a long career as a commercial broadcaster, Dr. H. K. Newburn, president of the ETRC, and a session on the Bell Telephone Company's new "Science Series" for TV.

▶ Gertrude Broderick's recently revised "List of Educational AM & FM Radio and TV Stations by State and City" is out. Copies have been sent to each station, but additional copies are available on request from the Department of Health, Education & Welfare Office of Education, Washington 25, D. C.

▶ WGBH-TV, Boston, got a tremendous build-up and coverage of activities in Jack Gould's column in the January 13th New York *Times*. This is the third occasion in a few weeks that Gould has raised the torch for educational broadcasters. He praised NBC's step in aiding ETV men and fought for WNYC when it faced the prospect of suspending its evening programs. Never let it be said educational broadcasters don't appreciate this influential friend. These articles do much to bring our problems to public attention.

▶ The English course for illiterates presented over WKNO, Memphis, had an excellent write-up in the January 28 issue of *Life* magazine. As mentioned in the January Newsletter (p. 6, 2nd col.) this is the first in a series of articles in national magazines about WKNO's project.

▶ WILL-TV, University of Illinois, won the lawsuit that has been pending against them for more than two years when the Illinois Circuit Court decided the University of Illinois was legally entitled to use state funds for support of the TV station.

The plaintiffs, two taxpayers, argued that the University has no right to use tax money for a TV station that benefits only a small part of the state's population. Their suit was financed by the Illinois Broadcasters Association, an organization of Commercial broadcasters.

PERSONNEL

▶ Frank D. Jacoby, formerly executive producer of Products Service, Inc., has joined the Metropolitan Educational TV Association, Inc., as director of production.

▶ The appointment of Norman Cousins, editor of the *Saturday Review*, to the Board of Directors of the ETRC has been announced. The appointment is effective immediately. The Center's Board of Directors met February 1 and 2 in New York City.

▶ For the 5th consecutive year Rob Downey, news editor of the Michigan State radio WKAR and WKAR-FM, has been re-elected executive secretary for the Radio TV News Directors Association. Downey was re-elected by a unanimous vote of the Board of Directors of the RTNDA at its annual convention.

PROGRAMS

▶ The first TV coverage of Harvard University's famed Godkin Lectures was presented by Boston's WGBH-TV, January 8, 9, and 10. British Labour Party Leader Hugh Gaitskill delivered this year's lectures on "The Challenge of Co-existence" before live WGBH-TV cameras and simultaneously over WGBH-FM.

▶ Also, WGBH-TV broadcast live the CBS nationwide network *Odyssey* production "Satan in Salem" January 27. The broadcast was specially arranged by the Essex County Tourist Council which contributed the cost of broadcast lines from WNAC-TV to WGBH-TV, as well as the WGBH-TV operating costs.

"Satan in Salem" showed the habits of mind and character traits that lay behind the Salem witchcraft trials. The trials themselves were re-enacted, based word for word on existing records.

▶ Illinois Senator James O. Monroe was interviewed over WILL, University of Illinois, on its "Illinois Editorial Review" program January 25. Senator Monroe answered questions on probes facing the current session of the state legislature, his career, and his belief in personal journalism.

▶ WILL-TV is presenting a new series of 14 programs intended to help interpret the uniqueness and problems associated with each major college on the Champaign-Urbana campus. The programs feature the deans of different colleges in informal interviews.

▶ WNYC, New York, is expanding its live music programming at a terrific rate. The "German Festival of Light Music" series, which started January 7, features contemporary compositions of some of the finest of post-war Germany's artists and musical groups in concerts ranging from jazz to chamber music.

The Oklahoma City Symphony" started January 11 over WNYC, and presents contemporary American and outstanding Norwegian works.

► The Carnegie Institute of Technology presented a series of four fine arts programs, "Classicism in the Arts Today," over WQED, Pittsburgh. Four College of Fine Arts professors participated in the series.

► A new arts and crafts program series "Telecraft Time," of special interest to parents, leaders of youth groups, school teachers and church school leaders, started January 23 on WTTV, Bloomington, Indiana. The educational program will run for 18 weeks, through May 22, telecast via beam relay from the Indiana University campus studios.

Typical projects will be demonstrations of soap-carving, shell craft jewelry, pot-holder weaving, paper mache animals and copper work.

► In the same vein, KQED, San Francisco, is telecasting a show of artistry, impromptu talk and fun. The program is called "Paper Capers" and features a wide range of lovely things made from paper. Bay Area sculptor Billy Shelley hosts the show, and he will be joined from time to time by guests well-known in artistic circles, cartoonists, etc.

► U. S. foreign policy and the nations it currently involves are given news-in-depth treatment on WTTW, Chicago, in their new program series, "America Looks Abroad," which began January 24. The 24-week series is divided into four sections: 6 programs on Africa, 5 on international organizations, 7 on the other Americas, and 6 on the making of foreign policy. It has been kinescoped for distribution to other TV stations by the ETRC.

► "Radiation—You, Me and the Atom" is the title of a new TV series being presented by the University of New Mexico. Many fine visuals courtesy of the Atomic Energy Commission are featured in the televised programs directed by Bernarr Cooper. Simplified sets with flasks, clicking Geiger counters and a backdrop of an outside white microscope suspended against a dark background add interest to the program.

—N A E B—

Mayor Robert Wagner of New York paid tribute to the public service performed by radio and TV. Addressing a monthly meeting of the Radio and TV Executives Society, he said broadcasters have served a public need by their panel shows on which city officials are questioned and permitted to explain the issues and problems before the city government.

TV TECHNICAL TIPS NO. 29

—BY CECIL S. BIDLACK, NAEB TV ENGINEER

The revised NAEB Technical Directory is ready to go press. The new edition will contain the names of over 400 engineers and technicians working at educational radio or TV stations and production centers. This is over a 100 per cent increase in the listings of the original directory published in May, 1955; yet it still is not complete.

We want to thank those of you have returned the directory questionnaires and test equipment data. We believe we have included the names of all who sent this information.

We have also sent a second inquiry to some 20 stations, some of whom have not yet returned the information (although each form was accompanied by a stamped return envelope). Our crystal ball is somewhat cloudy, so if the technical personnel at your station is not included it isn't because we haven't tried.

We'd like to keep this directory up-to-date, and would appreciate having the names of those added to your technical staff. If someone leaves, too, we'd like a post card or short note asking us to delete his name. It would also help if you would advise us of errors in addressograph plates or in the station address and telephone number.

Data secured as a result of the test equipment questionnaire is being compiled. We hope to publish this material soon and circulate it to all chief engineers.

* * *

Another publication of the NAEB Engineering Service is an article which contains the constructional details of a two-channel transistor remote amplifier-mixer. This was designed and built by Donald K. Haahr of the WOI staff. The completed amplifier is 3 inches high, 6 inches wide and approximately 8 inches long. It has an overall gain of 80 DB into a 600 ohm load and excellent frequency response.

The article is complete with schematic, parts list, frequency response, noise and distortion characteristics, as well as three illustrations which show important constructional details and the completed unit.

Copies of this paper have been mailed to all chief engineers of educational radio and TV stations. We shall be glad to take care of individual requests as long as the supply lasts.

* * *

For those of you who are thinking of new studio facilities, we'd suggest reading an article which appeared in the January 7 *Broadcasting-Telecasting*. It appears on Page 70, and tells how WWSA-TV built a studio-office building with 2240 square feet of space

for \$25,000. The studio itself is 28 x 32 feet with a 7 x 13 foot control room and a 7 x 9½ foot projection room. The building also provides space for film preview, an art room, darkroom, combination dressing and rest rooms, a program director's office and a 280 square foot general office.

The building is constructed of Armco galvanized steel. It is fully insulated and temperature is maintained between 70 and 73 degrees throughout the year by a Westinghouse heat pump system. These pumps draw heat from the outside air even in winter and provide cool air in the summer. The two five ton units employed are installed in outdoor metal bins.

The \$25,000 is all inclusive and covers studio fixtures, (except TV lighting system) flooring, wiring ducts, toilets, conduits, air pumps and a ball bearing sliding door. At a little over \$11 a square foot, this is very reasonable building cost. Construction was begun on July 15 and the first TV program went on the air from the studio on December 15.

* * *

Those of you who watched the inauguration January 21st were privileged to see some of the first network use of Ampex videotape recording for delayed broadcast. Both CBS and NBC taped the oath taking ceremony. CBS replayed it twice at approximately 30 minute intervals after the actual ceremony. NBC also reported that it played back a tape of the ceremony less than a half hour after it had occurred.

The use of magnetic video tape recordings is gradually increasing on the networks. December 24 CBS began using videotape for the West Coast repeats of the Arthur Godfrey "Talent Scouts" program on Mondays at 8:30 p. m. EST. Beginning in March when Godfrey is on vacation, the program will be pre recorded and played back for both East and West Coast broadcasts.

NBC is now making use of videotape for West Coast repeats of five Monday-Friday program series. Beginning January 22, NBC will present the "Truth or Consequences" program (11:30 a. m. - 12 noon EST) on tape. The program will be recorded at a 6 p.m. PST, audience performance and repeated on tape the following day in both East and West.

Ampex officials have also announced they are incorporating six new features in the production models of the videotape recorders as a result of the experience gained by CBS and NBC in their use of the prototype models. Delivery on the production models is now set for November, 1957, nine months later than the anticipated start of delivery at the time of the initial demonstration of the machine last April.

These new features are: adequate cueing facilities, convenient switching devices, ready synchronization with other studio apparatus, tape interchangeability among recorders, ease in making duplicate copies of taped programs and easy editing.

While all of the above features are of interest to ETV engineers, this is the first mention that Ampex has made of "duplication" of videotape recordings. Officials of the Ampex Corporation have been very conservative in their statements regarding their videotape recorder. They now foresee three steps in the evolution of monochrome videotape: 1) Strictly for delayed broadcast, 2) Prerecording of TV shows, 3) Syndication and multiple release of taped programs for TV.

Placement Supplement

The following are persons registered with us last month. Anyone wishing further information or wishing to register with the NAEB Placement Service contact Mrs. Judith Stevens, 14 Gregory Hall, Urbana, Illinois.

February 1 — Director of radio-TV at large university wants new ETV position in similar capacity. Produces all radio-TV shows and university films as well as supervises successful operation of FM station. Male, married, M.A., 39. Location open. \$8000.

February 2 — Male, married, 30, M. Ed., wants position as film director. Has been film director for ETV station and handled all aspects of film and kinescopes. Available for employment at once. Location open. \$5000.

February 3 — TV Production, Operations Manager, Program Director, Instructor — thoroughly experienced in all phases of TV operation seeks responsible position with ETV station or production center and/or teaching position with accredited institution. Have 3 years solid commercial experience in film, traffic, continuity, live studio production and management; 2 years experience in ETV film and kinescope production, 3 years college teaching in radio-TV. Male, 31, married, M. A. Prefers mid-west, but location open. \$7500.

Any group sponsoring an event to commemorate Woodrow Wilson, please send newspaper clippings or basic information (date, place, program, group sponsoring, etc.) to: The Woodrow Wilson Centennial Celebration Commission, Department of the Interior, Washington 25, D. C. The Commission is gathering such information for a report to be submitted before Congress this spring.

NAEB OFFICERS AND DIRECTORS—1957

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Director Region II:	Mr. Vernon Bronson Station WTHS-FM-TV Dade County Board of Public Instruction Miami, Florida	Director Region V:	Mr. Robert Schenckan Director, Radio-TV University of Texas Austin, Texas
Director Region III:	Miss Ola Hiller Station WFBE-FM Flint Public Schools Flint, Michigan	Director Region VI:	Mr. Edwin Adams School of Communications University of Wash. Seattle, Washington
Past President:	Mr. Frank E. Schooley Stations WILL-AM-FM-TV University of Illinois Urbana, Illinois	Director at Large:	Mrs. Gertrude Broderick Radio-TV Section Office of Education U. S. Dept. of Health Education & Welfare Washington 25, D. C.

General Counsel:	Mr. Marcus Cohn Cohn and Marks Cafritz Building Washington, D. C.	Management and Community Relations Consultant:	Mr. M. S. Novik Room 1200 300 W. 23rd Street New York 11, N. Y.
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Associate Director
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Network Manager
Placement Officer & Editor
Asst. Network Manager — Production
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