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TESTS PROVE G-MAN STATION AT WASHINGTON A POSSIBILITY

The dream of the Bureau of Investigation of the Department of Justice to establish a radio telephone broadcast station in Washington capable of being heard anywhere in the United States has been given technical encouragement by the Bureau of Standards.

First reports on tests conducted early this year were disclosed this week in the annual report of Dr. J. H. Dellinger, Chief of the Radio Section of the Bureau of Standards.

While explaining that "no definite conclusions can be drawn", pending further tests, the report added:

"It seems likely, however, that a useful radio telephone service to cover the United States could be conducted from a station in Washington, using possibly two day frequencies and two night frequencies."

The report also disclosed that the Bureau of Standards had prepared a number of specifications for radio equipment for the Bureau of Prisons, Department of Justice.

"Examples were specifications drawn up for a radio receiving system with a number of loudspeakers for use at Alcatraz Island, San Francisco, and an extensive ultra-high frequency two-way communication system between fixed and mobile stations for use at McNeil Island, Washington.

"Specifications for an all-wave radio receiving set were prepared for the Federal Bureau of Investigation."

The tests with regard to the Department of Justice station were described as follows:

"At the request of, and in cooperation with, the Federal Bureau of Investigation, Department of Justice, experiments were made over a period of a year to obtain data on the possibility of voice broadcasting to cover the United States from a station at Washington. Special test emissions were made from the Bureau's transmitting station WWV at Beltsville, Md., and reception was recorded by some 300 voluntary observers throughout the United States. In addition, a program of listening and logging of reception at Washington of high-frequency stations was carried on.

"The WWV emissions were made on four days during each of the four seasons of the year, i.e., in September, December, March and June. Frequencies of 5,000, 10,000 and 15,000 kc/s were used

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in the daytime, and 4,200 and 6,800 kc/s at night. The emissions were made to determine the intelligibility of reception of the broadcast by the observers. For this purpose, lists of unrelated words, as well as connected statements, were read into the microphone. The observers recorded all words they understood on special report forms furnished by the Bureau. The percentage of words correctly recorded was taken as a measure of the intelligibility.

"The results of the WWV emissions are given below for three of the four seasons. The results for June had not been compiled when this report was written. The figures represent the distance range in miles for intelligibility of 40 percent or more.

| | Sept. | Dec. | March |
|-------------------|-----------|----------------|----------------|
| 5,000 kc/s, day | 0-550 | 0-550 | 0-400 |
| 10,000 kc/s, day | 250-1,200 | 0-1,400 | 0-1,200 |
| 15,000 kc/s. day | 400-2,500 | 0-60,300-1,750 | 0-30,650-1,400 |
| 4,200 kc/s. night | - | 0-1,500 | 0-1,700 |
| 6,800 kc/s. night | - | 0-60,400-1,800 | 0-2,500 |

"This work was supplemented by observations made one or more nights each week throughout the year, in which an observer tuned in and recorded as many radio telephone stations as he could identify, on frequencies above 1,500 kc/s. The intelligibility of reception was rated on an arbitrary numerical scale. The received stations grouped themselves into 3 fairly definite bands of frequencies, in the vicinity of 1,700, 2,500 and 6,000 kc/s. At 1,700 kc/s, fair intelligibility was secured up to about 700 miles in September, increasing to about 1,200 miles in the Winter. At 2,500 kc/s, fair intelligibility was secured up to about 1,000 miles in September, increasing to over 2,000 miles in the Winter. At 6,000 kc/s, fair intelligibility was secured from about 200 to 4,500 miles in September, changing to about 800 to less than 2,000 miles in the Winter."

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EUROPEAN UNION FAVORS WIDER SEPARATION OF WAVES

The International Broadcasting Union, representing all of the leading broadcasting organizations of the continent, appears ready now to adopt the 10 kc. separation between frequencies on the broadcasting band.

Although Europe adopted this minimum of separation as early as 1926, a shortage of frequencies induced the practice of permitting separations of 8 or 9 kc. or even less. The United States maintains the 10 kc. policy.

While declining to accept the suggestion of the United States that the minimum be raised to 15 kc., the U.I.R. in a formal communication with reference to the forthcoming C.C.I.R. meeting in Bucharest in 1937 went on record as indorsing the 10 kc. separation as a "compromise".

The statement of the U.I.R. follows, in part:

"The U.I.R. expresses the opinion that the predominating quality in the matter of broadcasting is the obtaining of high fidelity acoustic reproduction.

"It refers in this connection to the curve presented at Lisbon by the United States of America, expressing the quality of orchestral music as a function of the cut-off frequency, and that, on the basis of this psycho-physiological fact, it is desirable to adopt separations of at least 15 kc.

"It is evident that such separation is not possible within the limits of the bands of frequencies allocated to broadcasting and that the separation of 10 kc adopted at the beginning in Europe (1926), and at present maintained in the other regions, constitutes a practical and acceptable compromise.

"In Europe, because of conditions peculiar to this continent, separations of 9 and 8 kc. or even less have had to be adopted, although such separations cannot be considered as entirely satisfactory from a technical standpoint.

"It is, therefore, desirable that the Administrations consider this point of view during the forthcoming conferences, and that they carefully weigh the advantages of obtaining good quality with sufficient separations which would imply a reduction in the number of channels against the maintenance or increase of the number of present channels which would inevitably carry with it a diminution of the quality of the reproduction.

"With regard to the short waves, it appears necessary, in accordance with present information to fix a minimum of 10 kc because of the world-wide range of shortwave services and that it is necessary to insure good reception. It is necessary to consider a greater separation corresponding to two or three channels of 10 kc. between stations which can be received simultaneously, with a field of the same order of strength in the same region."

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AYLESWORTH QUILTS NBC; CONCENTRATES ON R-K-O

Merlin H. Aylesworth has resigned as Vice-Chairman of the National Broadcasting Co. to devote his full time to RKO, of which he is Chairman of the Board. Mr. Aylesworth was President of NBC for nine years. He will continue as a member of the RCA-Victor Board.

As Vice-Chairman of NBC, Mr. Aylesworth was in an advisory capacity on matters of company policy.

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FCC DECLINES TO AID BROWDER IN TERRE HAUTE AFFAIR

Although it had previously forced WCAE, Pittsburgh, to carry an address by Earl Browder, Communist candidate for President, the Federal Communications Commission this week declined to come to his aid following his arrest in Terre Haute, Ind.

Replying to a request from William Z. Foster, Chairman of the Communist campaign committee, Anning S. Prall, Chairman of the FCC, said:

"Jurisdiction of the Communications Commission in broadcast matters extends only to station licensees. Action of the Chief of Police does not come within the jurisdiction of the Commission."

Foster had urged intervention on "behalf of free speech to permit Mr. Browder to speak as scheduled over stations as contracted for a month ago."

Browder's address was delivered over a Terre Haute station despite his arrest. His attorney evaded a local vigilance group and read the speech over the air.

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EFFECT OF SNOW IN FIELD INTENSITY TESTED

The U. S. Bureau of Standards has made measurements to determine whether snow has a large effect on radio field intensities. Measurements were made of the ground-wave field intensities of broadcast stations, from February to June. The intensities in June had decreased to about half the February values. There was no sharp change of intensity, so the diminution was probably due to the combined effects of the disappearance of the snow, drying out of the surface soil, and the leafing out of the tress and other vegetation, the Bureau stated in its annual report.

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GENERAL ELECTRIC CO., LTD., EXHIBITS TELEVISION SETS

Among the exhibitors of television receivers at the recent Radiolympia exhibition in London were two sets manufactured by the General Electric Co., Ltd. There were nine exhibitors altogether.

World-Radio, BBC journal, in a brief description of the television sets said:

"In most of the models exhibited the equipment includes, in addition to the television sound and picture reproducer, means for receiving ordinary broadcast programs, either by a long and medium-wave receiver or an all-wave unit. One or two instruments have also a gramophone section, thus being truly universal home entertainers. These models naturally have, in addition to the television controls, the normal tuning arrangements and other controls found in all broadcast receivers.

"The General Electric Company have two models, BT3701, at 95 guineas, for television programs only, and BT3702, using the same television unit combined with an 8-valve 'Fidelity' all-wave broadcast receiver, and costing 120 guineas. In these instruments most of the controls are permanently adjusted by the installing engineer, the user merely having to operate the combined system-selector and main switch, a brightness control, and the sound volume control. There is a small tuning control so arranged that by accurately tuning in the sound accompaniment the picture is automatically tuned correctly."

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NAB NOTES END OF SUMMER SLUMP IN JULY REPORT

Indications that the Summer slump in broadcast advertising "has been definitely beaten" are seen by the National Association of Broadcasters in an analytical report of total radio time sales for July.

Broadcast advertising during July amounted to \$7,232,225, a decline of 9.4 percent as compared to June, but less than the June-July drop last year of 11.1 percent. Regional network volume rose 7.5 percent over June this year.

Gross time sales were 23.4 percent greater than during July, 1935, all phases of the broadcasting industry showing approximately the same rate of increase.

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FCC ISSUES LIST OF AMERICAN STATIONS OUTSIDE U. S.

Although broadcasting has developed rapidly in North America outside the United States, it is still far behind this country in the number of operating stations, a list compiled by the Federal Communications Commission discloses.

Canada, Mexico, and Cuba now have 195 stations as compared with more than 600 in this country.

Canada and Mexico are tied for second place with 70 outlets each, while Cuba has 55.

Most of the Canadian stations, moreover, are of low power. The Dominion has one 15,000-watt outlet, two of 10,000 watts, and four of 5,000 watts.

Mexico, however, boasts several super-power stations along the United States border. It lists XERA, Villa Acuna, at 250,000 watts, half the power of the most powerful U. S. station, WLW, and XENT, Nuevo Laredo, at 150,000 watts, and XEPN, Piedras Negras, at 100,000 watts. The only other powerful station is XEAW, Reynosa, with 50,000 watts.

These border stations are controlled by American capital, XERA and XEAW being in the name of Dr. John R. Brinkley, the former Kansas "goat-gland specialist", and XENT being under the name of Norman Baker, another ex-American broadcaster.

All the Mexican stations in the interior are of low power.

Cuba has one 3,000 watt and two 1,000 watt stations in Havana.

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MURRAY OF BBC NAMED MANAGER OF CANADIAN RADIO

Gladstone Murray, formerly of the British Broadcasting Corporation, has been named General Manager of the revised Canadian broadcasting system. He will assume his duties in Ottawa early in November.

A native of Vancouver, Mr. Murray is said to be glad to return to Canada. He will be paid \$13,000 a year.

Reginald Brophy, also a native Canadian, now with the National Broadcasting Company, was mentioned as one of the candidates for the job.

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ITALY DEVELOPING "TELEVISODE" TO RIVAL BBC "TELEVISOR"

While the British Broadcasting Corporation pauses in its experimental television transmissions from Alexandra Palace, London, one Italian firm is engaged in promoting television in the Fascist State.

As the British have registered the trade name "televisor", to designate its receivers, Italy has adopted the title of "televisode".

The Italians began experimenting with television early in 1930, and conducted the first public tests in the Fall of the same year at the First National Radio Show in Milan.

The SAFAR (S.A. Fabbricazione App. Radiofonici) is the only firm in Italy concerned with television, according to Andrew W. Cruse, Chief of the Electrical Division, U. S. Bureau of Foreign and Domestic Commerce.

"This company follows courses parallel with those of Baird in England and Telefunken in Germany", he said.

The latest development of the "televisode", he said, was exhibited at the sixteenth Milan Fair this year.

"The experimental service maintained throughout the Fair proved very satisfactory and also aroused lively technical interest abroad as well" Mr. Cruse said.

"During the period of the Fair there took place meanwhile in the SAFAR television laboratory interesting tests of direct television with the Castellani system. The results were those attesting both to the durability and to the sensitivity of the 'Telepantoscopio'.

"These new experiments thus produce the anticipation that the system can be used with success sooner than was expected.

"Meanwhile the cathode receiving tubes were also perfected. A new type of foot and a new electrodic structure were created, which notably simplified the mounting of the tube, facilitated its evacuation, and avoids the dangerous tail of vacuum outside the tube. New mixtures of sulphides were also prepared for the screens with which best luminosities and pleasing colors of the image were obtained.

"At the beginning of May the telecinema set of 180 lines with Televisode type receiver was taken to Turin to effect an experimental service at the first National Inventions Exhibition. At the same exhibition cathode tubes of various types and dimensions for oscillography and television were exhibited, as well as the 'Telepantoscopio'.

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"At present continuous experiments are in progress with the 'Telepantoscopia', both in telefilms for analysis beyond 240 lines, and in direct transmission by daylight beyond 120 lines.

"From the reception side the 'Televisode', though already electrically defined and made mechanically separable to permit acquisition in sections, was further studied from a mechanical and systematical angle, with a view to reducing the present encumbrance.

"It is in order to attack the problem of eliminating the direct relation between the dimensions of the images and the diameter of the screen of the cathode tubes, in order to be able to increase the dimensions of the images without recourse to cathode tubes of excessive dimensions, together with some very detailed researches on the luminosity of the cathode tubes and on the possibility of obtaining tubes at high tension with greatly reduced screens and a luminosity such as to permit conveniently the projection of the image upon a secondary screen. The SAFAR cathode tube in a bulb of special substance and the incombustible luminescent substances are the result of very satisfactorily successful researches."

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NEWSPAPER LOSES TO RIVAL IN NIAGARA FALLS SCRAP

The Falls Gazette Publishing Co., which publishes a newspaper at Niagara Falls, N. Y., this week was turned down by a Federal Communications Commission Examiner in favor of a rival group in a local scrap for a new broadcasting station.

Examiner Melvin H. Dalberg stated in his recommendation that the Power City Broadcasting Corporation, whose stockholders "enjoy excellent local reputations and are representative of the population of the area in practically all of its activities, is better qualified as the licensee of the proposed station."

Facilities asked by both applicants are 630 kc., 250 watts power, daytime operation.

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RADIO IS MAKING NOTEWORTHY PROGRESS IN INDIA

Radio has begun to make notable progress in India, a report to the Commerce Department from its Trade Commissioner at Calcutta indicates. During the last two years, it is pointed out, imports of receiving sets have shown a striking increase. Receipts of "wireless apparatus" (receiving sets are not separately classified in Indian customs returns) during the fiscal year 1935-36 were valued at 2,830,406 rupees (\$1,048,000) an increase of 75 percent over the preceding year and 150 percent in advance of 1933-34. Imports from the United States in 1935-36 under this classification totaled 1,242,627 rupees (\$460,000) compared with 830,348 rupees (\$307,000 in 1934-35 and 178,994 rupees (\$67,000) in 1933-34.

Owing to lack of classification, the report states, it is difficult to analyze the participation of other countries in India's import trade in radio apparatus, but the share of Great Britain, totaling 1,048,701 rupees (\$388,000) in 1935-36 is believed to have included a very considerable amount of broadcasting equipment. The Netherlands supplied 381,256 rupees (\$141,000) worth of equipment and it is believed that this country holds second place after the United States as a supplier of receiving sets.

Broadcasting in India has made substantial progress in the past three years, it is pointed out. At the present time there are three broadcasting stations in India and the Government is now planning the construction of five additional units. Seven-eighths of the import duty on receiving sets and nine-tenths of the income from license fees are allotted by the Government for broadcasting development. Besides this considerable sum, an additional allotment was made in 1935-36 of 2,000,000 rupees (\$740,000) out of surplus Government funds.

According to unofficial estimates there are now approximately 30,000 receiving sets in operation in India, of which approximately half are in the two cities of Bombay and Calcutta, the report states.

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NOTRE DAME WON'T COLLECT ON GRID BROADCASTS

The University of Notre Dame has not sold exclusive radio broadcasting rights to its five 1936 home football games, Rev. John F. O'Hara, President of the University, said this week. Father O'Hara added that Notre Dame had not sold and would not sell exclusive broadcasting rights to any of its football games, although commercial sponsorship of football broadcasts would be permitted. He said that all broadcasts would be on a non-exclusive basis and Notre Dame would not receive one cent in remuneration for them.

The N. W. Ayer Company clarified its position this week by saying that no payment had been made to Notre Dame for this series which had been arranged on a non-exclusive basis.

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RCA EMPLOYEES HONOR SARNOFF ON 30TH ANNIVERSARY

David Sarnoff, President of the Radio Corporation of America, was tendered a dinner September 30th at the Ritz-Carlton Hotel, New York City, by employees of RCA and its service companies in honor of the completion of his 30th year in the radio industry.

More than 300 employees of RCA, National Broadcasting Company, R.C.A. Communications, RCA Manufacturing Company and Radiomarine Corporation of America, including a group whose service periods in radio range from ten to 25 years, presented Mr. Sarnoff with an inscribed platinum watch. Members of the Veteran Wireless Operators' Association gave him a scroll commemorating his years of leadership in the radio art. Gen. James G. Harbord, Chairman of the Board of RCA, presided and read messages of congratulation from many prominent people, including Senatore Guglielmo Marconi, the "father of radio".

Mr. Sarnoff began his radio career in 1906 as an office boy with the American Marconi Company, predecessor of RCA. Quickly mastering the telegraph code, he was made a junior operator the following year, and in 1908 he was placed in charge of the company's wireless station on Nantucket Island. While there, young Sarnoff, then only 17, studied every book in an extensive radio library and became so proficient in his work that the next year found him as Manager of the Marconi station at Sea Gate, New York.

Then followed several trips as wireless operator on various ships, including several months in the Arctic ice fields on a seal fishing expedition. In the Spring of 1912 Mr. Sarnoff was at the key of the John Wanamaker station in New York, where he picked up the first message from the stricken "Titanic." For 72 hours without rest he remained at the key and passed on to a shocked world the details of the disaster and the names of the survivors.

Promotions came in rapid succession and placed Mr. Sarnoff in the position of Commercial Manager of the Marconi Co. in 1919. When the Radio Corporation of America was organized in that year, absorbing the older wireless company, Mr. Sarnoff continued in the same position until 1921, when he was made General Manager of the new company at the time when radio broadcasting was in its infancy. The following year Mr. Sarnoff assumed the added duties of Vice-President, and in 1930 he was elected President of RCA.

Mr. Sarnoff is a Chevalier of the Legion of Honor and also has been decorated by the Polish and Luxemburg governments. He has received honorary degrees from several universities. He is a Director and member of the Executive Committee of the Metropolitan Opera Company and Director of the World's Fair Corporation as well as Chairman of the Board of the National Broadcasting Company, RCA Manufacturing Co., and many other corporations.

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WLW NETWORK PLAN RUMORED, DENIED

"Partial or complete denial represents the official comment on a number of reports strongly stressed within broadcasting circles and concerning WLW, Cincinnati, John L. Clark's Trans-America Company, the creation of a new radio combination and the tie-in of the Warner Bros", reports Variety. "It is understood discussions have taken place and are continuing.

"Moves will in no way interfere in the relations between WLW and NBC and also those prevailing between WLW and Mutual. WLW would continue to maintain its independence status all around. Powel Crosley, Jr. has during the past week smoothed out his lines of association with both NBC and Mutual.

"Reported to be already committed to the WLW group idea are WIP, Philadelphia; WOL, Washington, and KQV, Pittsburgh. If the WLW and associated stations idea materializes, it is expected to be sold through the Trans-America Broadcasting & Television Corp., of which John L. Clark is head.

"To serve as contact man among the stations that it has on its list Trans-America has just engaged Mortimer Prall, son of Anning S. Prall, Chairman of the Federal Communications Commission."

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BRITISH HONDURAS HELD POOR RADIO MARKET

"The only radios, parts and accessories for sale in British Honduras are of American manufacture", the U. S. Bureau of Foreign and Domestic Commerce reports. "There are at present nine local agents for American radios and it would appear that radio receiving sets in this Colony of only 52,000 inhabitants, the majority of whom are colored and maintain a very low standard of living, are over-represented.

"There are no broadcasting stations in British Honduras but the British Honduran Government owns a radio station in Belize operating for the receiving and sending of messages, and also an experimental station in Corozal. In addition, there are six amateurs licensed for receiving and sending messages as well as one commercial station and five ships, the annual license fee for each being \$2.50 (British Honduras currency, which is at par with American), \$25.00 and \$12.50 respectively. The local Government-owned radio station rebroadcasts weather reports received from Washington.

"The total number of radio receiving sets licensed for use in 1935 and for which the \$1 annual license fees have been paid was 195, of which 106 were of the medium-wave type, 15 of the short-wave, and 74 all wave. However, it is estimated that approximately 500 sets are in use. Dealers state that there is little possibility of the present number being materially increased in the near future."

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