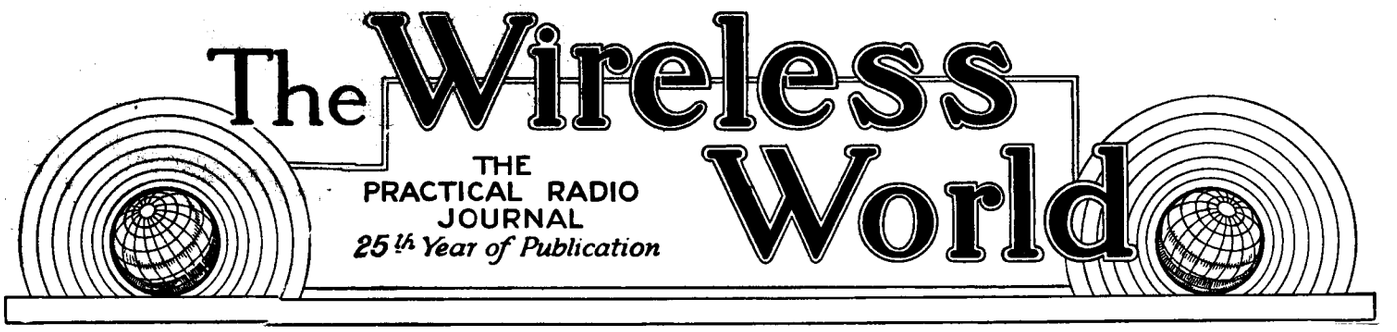

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The following abbreviations used after page numbers will save time and labour by indicating the nature of the reference, thus giving an idea of its value or otherwise, to the intending reader. *B.B.* = Broadcast Brevities. *Constr.* = Constructional article. *Corres.* = Correspondence. *Edit.* = Editorial. *Gen.* = General article. *H.T.* = Hints and Tips. *Illus.* = Illustration. *L.G.* = Listeners' Guide. *R.P.* = Readers' Problems. *S.P.* = Short paragraph. *Appar. Commer.* = Apparatus, Commercial. *C.N.* = Club News. *C.T.* = Current Topics. *F.G.* = Free Grid. *R.R.* = Random Radiations. *Rec. Commer.* = Receivers, Commercial.

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APART from the General Index, the following fourteen classified indices, arranged alphabetically, are provided for the convenience of readers:—

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EDITORIAL COMMENT

Broadcasting's Most Urgent Need

Wider Frequency Separation

A STAGE in the design of receivers for broadcast reception has been reached where further progress is no longer possible until changes are made in the system of broadcast distribution. Receivers are available capable of extremely high quality of reproduction, but, except under unusual and most favourable conditions, the full advantages of their capabilities cannot be realised, owing to the narrow frequency band transmitted or the proximity of other transmitting stations.

The frequency range transmitted by the best stations of the B.B.C. is at least equal to that of any transmitters elsewhere in Europe, or, indeed, in the world. Really good reproduction, to be satisfying, should cover a range of about 30-13,000 cycles, but the B.B.C. is far behind this. Unless we are favourably situated near a B.B.C. station, we cannot even enjoy the range at present transmitted without the risk of adjacent-channel interference. It is certainly no use, under present conditions, for the B.B.C. to try to improve much upon their present quality.

The remedy is obvious. It will be necessary, before any real progress can be made and before present technique of receiver design can be utilised to advantage, for the frequency band to be widened at the cost of eliminating a number of stations.

But, unfortunately, all countries in Europe do not at present agree on the question of quality and prefer to compromise. They are content to transmit a much narrower band of frequencies than is required, even for passable quality. This being so, it ought surely to be possible to devise a scheme for wavelength distribution where those countries desiring to improve the quality of their transmissions could do so without being penalised by the attitude of less progressive nations.

If all countries could agree to the necessity for a wider transmission band for each station, the problem would be solved, but since this seems to be an unattainable goal at present we must look elsewhere for a solution of the problem.

The Solution?

We are thrown back, then, on to a suggestion which has been put forward in *The Wireless World* from time to time, that instead of distributing wavelengths amongst the various countries on the present lines so that stations of different nationality jostle one another in all too intimate contact, each country should be allotted a definite band or bands of wavelengths exclusively for their own use. This would mean that, having gained possession of these wavelengths, each country could please itself as to whether the bands were crammed with a large number of stations transmitting poor quality or a limited number putting out the highest quality possible.

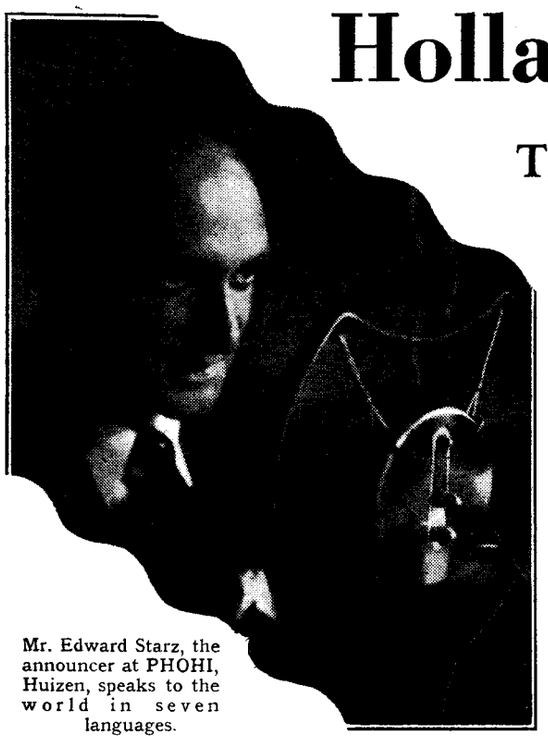
Designers and manufacturers of broadcast receivers are marking time ; they have the knowledge available to produce sets capable of extremely high quality reproduction, but they are at present deterred from doing so because, under existing conditions, the general public would not be able to take advantage of their possibilities.

Quite definitely the next step towards improving the standard of reception must come from those responsible for wavelength distribution, and some radical change is already overdue.

Holland's Empire Station

The New Short-wave Service at Huizen

IN colonial broadcasting Holland has always led the way, a short-wave service to the Indies having been in operation at Eindhoven seven years ago. This description of the newly designed Philips short-wave station at Huizen shows that the early tradition is being more than maintained



Mr. Edward Starz, the announcer at PHOHI, Huizen, speaks to the world in seven languages.

SEVEN years ago a dramatic wire flashed into the office of the Philips Radio Laboratory in Eindhoven. It consisted of these four words: "We can hear you." This laconic message spelt the triumphant conclusion of years of patient experiment. It came from Bandoeng, in the East Indies, and signified that the experimental transmitter PCJJ had established communication by short-wave telephony between Holland and her Colonial Empire.

By this achievement Station PCJJ was placed on the road to success; and from the most modest beginnings the experimental transmitter developed into a noted radio station with a large listening public scattered all over the world. The little station received its due acknowledgment and reward when, on July 1st, 1927, the Queen of Holland visited the studio and spoke to her subjects through the PCJJ microphone, addressing a vast unseen audience divided between two hemispheres; one in the East Indies, where Holland has rich colonial possessions, the other in the West Indies, where there have been Dutch settlements since the 17th century.

A Permanent Station

The enthusiasm of the Dutch people at home as well as overseas was unbounded at the success of the broadcast. The question of a permanently established radio centre for the colonies was mooted. The PHOHI station came into being.

The station's strange name is formed from the first two letters of "Philips" plus the initial letters of the words "Omroep Holland-Indie," Holland-Indies Broadcasting. It is pronounced as a word: "fo-hee."

The experience obtained with the PCJJ transmitter was found most useful when the new transmitting installation was being designed and constructed.

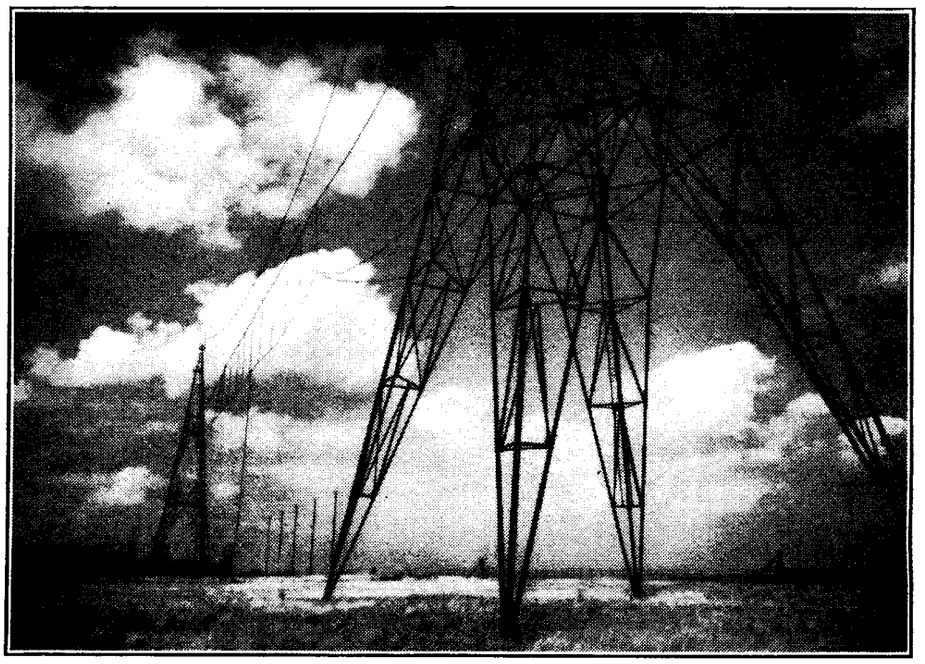
Agrarian interests, shipping and oil companies, banks and commercial enterprises were quick to see the importance of the new transmissions to their employees, and they gave full support to the initiation and development of the project.

In the autumn of 1929 the first experimental broadcasts took place; they were transmitted on a wavelength of 16.88 metres, and with a power of 20 kilowatts, an expenditure of electrical energy regarded as considerable for an ultra short-wave transmitter even to-day. Results were good right from the beginning. A few months after the opening of the new station various American radio corporations relayed a PHOHI Christmas programme; and hundreds of letters of appreciation from American listeners reached Hilversum by the first mail-boat. Reception in the East Indies (the programme including a running commentary on a football match) was particularly good.

The home programmes did much to add variety and interest to the exile of many of the Dutch colonists in the Far East. "No other short-wave station," commented the East Indian journal of Commerce, the *Sœrabayan Handelsblad*, "can compete with PHOHI, either with regard to the technique of transmission or the choice of programmes." Indeed, the musical and artistic standing of the new station reached a high standard of excellence.

In spite of the efficiency of this particular station, broadcasting in general in Holland at this date had become erratic and chaotic. Active Government intervention was decided upon, and the innocent had to suffer with the guilty. The colonial station was closed down, and remained silent for two years. At length, after protracted negotiations and in response to urgent demands from the Indies, a compromise was effected, and the reopening of the station was arranged for the autumn of 1932.

The official inauguration took place in December of that year. But the general enthusiasm was somewhat tempered when



A portion of Holland's colonial station at Huizen. The nearer aerial is used by transmitter PHI, using a wavelength of 16.88 metres. A twin transmitter, PCJ, operates simultaneously on 19.71 metres.