

WIRELESS TELEGRAPHY APPENDIX, 1907.

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GENERAL SUMMARY OF WIRELESS TELEGRAPHY PROGRESS DURING THE YEAR 1907.

By the end of 1906, the general lines on which W.T. in H.M. Service was to proceed had been decided, and it remained for "Vernon" to work out the details and designs of an installation for the larger ships of the Fleet which would be capable of sending a musical note, and have as great a range as possible. The design of this installation, which has been named "Service Installation Mark II.," has just been completed, and 45 sets are now on order, which should all be delivered by June 1908.

Although the design of this installation was the principal feature of the year's work in "Vernon," there have been many other improvements introduced tending to make the existing installations more efficient and reliable, for instance, 110 ships have had rotaries (1½-K.W.) supplied to them, tuned shunts have been issued generally, and a large number of ships have had silent cabinets fitted in their Wireless offices. Some 35 ships of the Fleet have had topgallant masts with yards for supporting the aerials and insulated rigging fitted, and their W.T. offices brought up to date in preparation for the Service Mark II. installation; and ten ships have been installed with C tune sets. It is satisfactory to record the success of the C tune installation, which has surpassed all expectations in range and reliability. It was designed for a range of 250 miles by day on S, T, and U, and has proved itself capable of doing a great deal more. Besides this, the design of a Destroyer installation has been worked out, and the River Class and later ocean-going Destroyers are now having the apparatus installed.

A repair shop for Wireless Telegraphy instruments has been instituted at Portsmouth Dockyard. It is at present under the charge of a Gunner (T) belonging to "Vernon," with a repairing staff of three armourer ratings and two carpenter ratings.

In other directions, a long-felt need has been supplied by the issue of "Instructions for Conduct of W.T. Signalling" and the "Supplementary Signal Code" to the Fleet, and other useful literature in the form of pamphlets entitled "Instructions for guidance of Officers in fitting large-power W.T. Instruments" and "Instructions for fitting W.T. Instruments in Destroyers" have been circulated.

A new branch, known as the Telegraphist branch, has been introduced, and the training of boys for this rating is steadily progressing in the training ship "Impregnable." The first class of boy telegraphists will be drafted to sea in May 1908, and after that date a class of about 12 boys will be passed out every four weeks. At sea continual practices have resulted in steady improvement of Wireless Signalling, and the experience gained during the October manœuvres has enabled progress to be made in dealing with matters which had previously been under trial. A conference between various branches of Wireless Telegraphy departments at home and the seagoing Fleets was held on board "Vernon," at the end of October 1907, and their report is given in full on pages 16 to 20. The year has also been eventful in regard to Commercial Wireless Telegraphy, in that an International Convention has been established (which comes into force in July 1908), by means of which definite rules have been agreed to by the majority of Governments to enable ships of different nationalities, and using different systems, to communicate with Commercial Shore Stations all over the world.

The International Conference on this subject was held in Berlin during the months of October and November 1906.

In March 1907, a Select Committee was appointed by the British Government to consider the Convention and to report what, from the point of view of national and public interests, would, in their opinion, be the effect of the adhesion or non-adhesion of this country to the Convention. Finally, after receiving the Select Committee's report, the British Government ratified the Convention in July 1907. Space does not permit even a summary being given of the various amendments to the original draft made by the British delegates at the Conference, or of the various arguments for and against ratification during the time the Select Committee was sitting, but it may be mentioned that the provision of Paragraph II. of the Final Protocol with reference to Article 3 of the Convention made it possible for the British delegates to sign the Convention, and that of the 18 witnesses called by the Select Committee, 13 were for and 5 against the ratification.

INTERNATIONAL RADIOTELEGRAPHIC CONVENTION CONCLUDED
BETWEEN THE ARGENTINE REPUBLIC, AUSTRIA, BELGIUM,
BRAZIL, BULGARIA, CHILI, DENMARK, FRANCE, GERMANY, GREAT
BRITAIN, GREECE, HUNGARY, ITALY, JAPAN, MEXICO, MONACO,
THE NETHERLANDS, NORWAY, PERSIA, PORTUGAL, ROUMANIA,
RUSSIA, SPAIN, SWEDEN, TURKEY, THE UNITED STATES OF
AMERICA, AND URUGUAY.

The undersigned, Plenipotentiaries of the Governments of the countries enumerated above, being assembled in conference at Berlin, have, by common consent and subject to ratification, agreed to the following Convention :--

Article 1.

The High Contracting Parties undertake to apply the provisions of the present Convention at all radiotelegraph stations—coast stations and ship stations—open for the service of public correspondence between the land and ships at sea which are established or worked by the Contracting Parties. •

They undertake, moreover, to impose the observance of these provisions upon private enterprises authorised either to establish or work radiotelegraph coast stations open for the service of public correspondence between the land and ships at sea, or to establish or work radiotelegraph stations, whether open for public correspondence or not, on board ships which carry their flag.

Article 2.

The term "coast station" means any radiotelegraph station which is established on land or on board a ship permanently moored, and which is used for the exchange of correspondence with ships at sea.

The term "ship station" means any radiotelegraph station established on board a ship which is not permanently moored.

Article 3.

Coast stations and ship stations are bound to exchange radiotelegrams reciprocally without regard to the particular system of radiotelegraphy adopted by these stations.

Article 4.

Notwithstanding the provisions of Article 3 a station may be appropriated to a service of public correspondence of a restricted character, determined by the object of the correspondence, or by other circumstances independent of the system employed.

Article 5.

Each of the High Contracting Parties undertakes to cause its coast stations to be connected with the telegraph system by means of special wires, or at least to take such other measures as will ensure an expeditious exchange of traffic between the coast stations and the telegraph system.

Article 6.

The High Contracting Parties shall acquaint one another mutually with the names of the coast stations and ship stations indicated in Article 1, as well as with all such particulars, proper for facilitating and accelerating the exchange of radiotelegrams, as shall be specified in the regulations.

Article 7.

Each of the High Contracting Parties reserves the right of prescribing or permitting the establishment and working, at the stations indicated in Article 1— independently of the installation of which particulars are published in accordance with Article 6—of other arrangements designed for radiotelegraphic transmission of a special character, without publishing the particulars of these arrangements.

Article 8.

The working of radiotelegraph stations shall be organised, as far as possible, in such a manner as not to interfere with the working of other stations of the kind.

Article 9.

Radiotelegraph stations are bound to accept with absolute priority calls of distress from ships, to answer such calls with similar priority, and to take the necessary steps with regard to them.

Article 10.

The total charge for radiotelegrams comprises :—

- (1) The charge proper to the transmission over sea, viz :—
 - (a) The " coast charge " which belongs to the coast station.
 - (b) The " ship charge " which belongs to the ship station.
- (2) The charge for transmission over the lines of the telegraph system, calculated according to the general rules.

The rate of the coast charge is subject to the approval of the Government to whose authority the coast station is subject, and the rate of the ship charge to the approval of the Government whose flag the ship flies.

Each of these two charges shall be fixed according to a tariff per word pure and simple, with the option of fixing a minimum charge per telegram, on the basis of an equitable remuneration for the radiotelegraphic work. Each of these charges must not exceed a maximum to be fixed by the High Contracting Parties.

Nevertheless, each of the High Contracting Parties has the right to authorise charges exceeding this maximum in the case of stations of a range exceeding 800 kilometres, or of stations which are exceptionally costly by reason of the material conditions of their installation and working.

As regards radiotelegrams originating in or destined for a country with whose coast stations they are directly exchanged, the High Contracting Parties shall acquaint one another mutually **with the charges** applicable to transmission over the lines of their telegraph systems. **The charges shall be those which follow from the principle that the coast station is to be regarded as the station of origin or of destination.**

Article 11.

The provisions of the present Convention are completed by Regulations which have the same validity and come into force at the same time as the Convention.

The provisions of the present Convention and of the Regulations relative thereto may be modified at any time by the High Contracting Parties by common consent. Conferences of Plenipotentiaries or simple administrative Conferences, according as the Convention or the Regulations are in question, shall take place periodically; each Conference will itself fix the place and date of the following Conference.

Article 12.

These Conferences shall be composed of delegates of the Governments of the contracting countries.

In the deliberations, each country shall have one vote only.

If a Government adheres to the Convention for its Colonies, Possessions or Protectorates, subsequent Conferences may determine that the whole or a part of these Colonies, Possessions or Protectorates is to be regarded as forming a Country for the purposes of the foregoing paragraph. But the number of votes which one Government, including its Colonies, Possessions or Protectorates, may exercise cannot exceed six.

Article 13.

An International Bureau shall be entrusted with the duty of collecting, arranging, and publishing information of every kind relative to radiotelegraphy; of circulating in proper form proposals for the modification of the Convention and Regulations; of notifying the alterations adopted, and, generally, of carrying out any work bearing on matters of administration which may be assigned to it in the interests of International radiotelegraphy.

The expenses of this institution shall be borne by all the contracting countries.

Article 14.

Each of the High Contracting Parties reserves the right of prescribing the conditions on which it admits radiotelegrams from or to a station—whether ship or coast—which is not subject to the provisions of the present Convention.

If a radiotelegram is admitted, the ordinary charges must be applied to it.

Every radiotelegram originating at a ship station and received by a coast station of a contracting country, or accepted in transit by the Administration of a contracting country, must be sent forward.

Every radiotelegram intended for a ship must also be sent forward if the Administration of a contracting country has accepted it from the sender, or if the Administration of a contracting country has accepted it in transit from a non-contracting country, subject to the right of the coast station to refuse to transmit it to a ship station belonging to a non-contracting country.

Article 15.

The provisions of Articles 8 and 9 of this Convention are also applicable to radiotelegraph installations other than those indicated in Article 1.

Article 16.

Governments which have not taken part in the present Convention shall be allowed to adhere thereto on their request.

This adhesion shall be notified through the diplomatic channel to the contracting Government under whose auspices the last Conference has been held, and by it to all the others.

Adhesion involves as a matter of right acceptance of all the clauses of the present Convention and admission to all the advantages stipulated therein.

Article 17.

The provisions of Articles 1, 2, 3, 5, 6, 7, 8, 11, 12, and 17 of the International Telegraph Convention of St. Petersburg of the 10/22 July 1875 are applicable to International radiotelegraphy.

Article 18.

In case of difference between two or more of the Contracting Governments concerning the interpretation or execution of the present Convention or of the

Regulations provided for in Article 11, the question at issue may, by common consent, be submitted to arbitration. In that event, each of the Governments concerned shall choose another not interested in the question.

The decision of the arbitrators shall be determined by an absolute majority of votes.

In the event of an equality of votes, the arbitrators shall choose, in order to settle the difference, another Contracting Government, also without interest in the question. In default of agreement as to this choice, each arbitrator shall propose another disinterested Contracting Government; and lots shall be drawn between the Governments proposed. The drawing of the lots appertains to the Government on whose territory the International Bureau provided for in Article 13 carries on its work.

Article 19.

The High Contracting Parties undertake to carry out or to propose to their respective Legislatures the measures necessary to ensure the execution of the present Convention.

Article 20.

The High Contracting Parties shall communicate to one another the laws which may have already been adopted or which may hereafter come into force in their countries relative to the subject matter of the present Convention.

Article 21.

The High Contracting Parties retain their full liberty concerning radiotelegraph installations not covered by Article 1, and, in particular, concerning naval and military installations, which are subject only to the obligations of Articles 8 and 9 of the present Convention.

Nevertheless, when these installations carry on public correspondence, they shall conform, for the performance of this service, to the stipulations of the Regulations so far as concerns the manner of transmission and the accounting.

Article 22.

The present Convention shall come into operation on and from the 1st July 1908, and shall remain in force for an indefinite period, or until the expiration of a year from the date of its denunciation.

Denunciation only takes effect as regards the Government in whose name it is made. The Convention shall remain in force as regards the other Contracting Parties.

Article 23.

The present Convention shall be ratified and the ratification shall be deposited at Berlin with as little delay as possible.

In witness whereof the respective Plenipotentiaries have signed the Convention in a single copy, which will remain deposited in the archives of the Imperial German Government, and of which a copy will be sent to each Party.

Done at Berlin, the 3rd November 1906.

(Here follow the names of the Plenipotentiaries.)

ADDITIONAL UNDERTAKING.

The undersigned Plenipotentiaries of the Governments of the Argentine Republic, Austria, Belgium, Brazil, Bulgaria, Chili, Denmark, France, Germany, Greece, Hungary, Monaco, the Netherlands, Norway, Roumania, Russia, Spain, Sweden, Turkey, the United States of America, and Uruguay undertake to apply the provisions of the following additional Articles on and from the date on which the Convention comes into force:—

I.

Each ship station indicated in Article 1 of the Convention shall be bound to intercommunicate with every other ship station without regard to the particular system of radiotelegraphy adopted by these stations respectively.

II.

The Governments which have not adhered to the above Article may at any time make it known, by adopting the procedure indicated in Article 16 of the Convention, that they undertake to apply its provisions.

Those which have adhered to the above Article may at any time make known, under the conditions prescribed in Article 22 of the Convention, their intention of ceasing to apply its provisions.

III.

The present undertaking shall be ratified and the ratifications shall be deposited at Berlin with as little delay as possible.

In witness whereof the respective Plenipotentiaries have signed the present undertaking in a single copy, which will remain deposited in the archives of the Imperial German Government, and of which a copy will be sent to each Party.

Done at Berlin, the 3rd November 1906.

(Here follow the names of the Plenipotentiaries.)

 FINAL PROTOCOL.

At the moment of proceeding to the signature of the Convention adopted by the International Radiotelegraphic Conference of Berlin, the undersigned Plenipotentiaries have agreed as follows:—

I.

The High Contracting Parties agree that at the next Conference the number of votes which each country shall have (Article 12 of the Convention) shall be determined at the outset of the deliberations, so that the Colonies, Possessions, or Protectorates admitted to the enjoyment of votes may be able to exercise their right of voting throughout all the proceedings of that Conference.

The decision arrived at shall have immediate effect, and shall remain in force until it is varied by a later Conference.

So far as the next Conference is concerned, proposals for the admission of new votes in favour of Colonies, Possessions, or Protectorates which may have adhered to the Convention shall be addressed to the International Bureau six months at least before the date of meeting of that Conference. These proposals shall immediately be notified to the other Contracting Governments, which may, within a period of two months from the receipt of the notification, put forward similar proposals.

II.

Each Contracting Government may reserve the power of designating, according to circumstances, certain coast stations which shall be exempt from the obligation imposed by Article 3 of the Convention, on condition that, on and from the application of this provision, there shall be open on its territory one or more stations subject to the obligations of Article 3 and providing for the radiotelegraphic service in the region served by the exempted stations in such a manner as to satisfy the requirements of public correspondence. The Governments which wish to reserve this power must notify their desire in the form prescribed in the second paragraph of Article 16 of the Convention, not later than three months before the Convention comes into operation, or, in the case of later adhesions, at the moment of adhesion.

The countries whose names appear below declare, at once, that they will not reserve this power:—

Argentine Republic.	Germany.	Norway.
Austria.	Greece.	Roumania.
Belgium.	Hungary.	Russia.
Brazil.	Mexico.	Sweden.
Bulgaria.	Monaco.	United States of America.
Chili.	Netherlands.	Uruguay.

III.

The manner of carrying out the provisions of the preceding Article is left to the Government which avails itself of the right of exemption; this Government has full liberty to decide, from time to time, according to its own judgment, how many and what stations shall be exempted. This Government has the same liberty in regard to the manner of carrying out the condition relative to the keeping open of other stations subject to the obligations of Article 3 and providing for the radiotelegraphic service in the region served by the exempted stations in such a manner as to satisfy the requirements of public correspondence.

IV.

It is understood that, in order that scientific progress may not be impeded, the provisions of Article 3 of the Convention do not prevent the possible use of a system of radiotelegraphy incapable of communicating with other systems, provided always that this incapacity is due to the specific nature of the system, and is not the result of arrangements adopted solely with a view to prevent intercommunication.

V.

The adhesion to the Convention of the Government of a country having Colonies, Possessions, or Protectorates does not imply the adhesion of its Colonies, Possessions, or Protectorates in the absence of a declaration to that effect on the part of such Government. A separate adhesion or a separate denunciation may be made in respect of the whole of such Colonies, Possessions, or Protectorates, taken together, or in respect of each of them separately, under the conditions laid down in Articles 16 and 22 of the Convention.

It is understood that stations on board ships having their port of registry in a Colony, Possession, or Protectorate may be deemed to be subject to the authority of such Colony, Possession, or Protectorate.

VI.

Note has been taken of the following declaration :—

The Italian delegation, while signing the Convention, must nevertheless make the reservation that the Convention can only be ratified by Italy at the date of expiration of its contracts with Mr. Marconi and his Company, or at an earlier date if the Italian Government is able to arrange accordingly by negotiation with Mr. Marconi and his Company.

VII.

The Convention, in the event of one or more of the High Contracting Parties not ratifying it, shall be none the less valid for the Parties which shall have ratified it.

In witness whereof, the undermentioned Plenipotentiaries have drawn up the present Final Protocol, which shall have the same force and the same validity as if its provisions were inserted in the actual text of the Convention to which it relates, and they have signed it in a single copy, which will remain deposited in the archives of the Imperial German Government, and of which a copy will be sent to each Party.

Done at Berlin, the 3rd November 1906.

(Here follow the names of the Plenipotentiaries.)