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# ITU world maritime conference geneva, 1967





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THE World Administrative Radio Conference, the opening of which on 18 September, 1967, was described in the ITU Telecommunication Journal of October, 1967, completed its task on 3 November, 1967, when the Final Acts were signed. The Conference was attended by about 300 delegates representing some 70 countries.

In the intervening seven weeks the Conference reviewed about three-quarters of the Radio Regulations, Geneva, 1959, and dealt with such important items affecting the maritime mobile service as the use of single sideband techniques; the desirability of accommodating requirements for oceanographic communications; revision of Appendices 15, 17, 18 and 25 to the Radio Regulations; examination of the pertinent portions of the revised International Code of Signals; review of radio operator's certificates; the introduction of selective calling; direct-printing telegraph, data services and a number of other matters. It was also agreed that the Final Acts of the Conference would come into force on I April, 1969.

The need for a review of these regulations was reflected by the large number of proposals, contained in some 170 documents, submitted. These were divided on the broad basis of radiotelegraphy, radiotelephony and operational, for considera-

tion by Committees and their Working Groups.

#### Steering Committee - Committee 1

The programme of meetings of the various Committees arranged by the Steering Committee ensured the smooth working of the Conference and enabled its work to be completed within the time limit set by the Administrative Council.

#### Credentials Committee - Committee 2

This Committee verified the credentials of delegates conferring on them the right to vote or to sign the Final Acts of the Conference. In all, the credentials of the representatives of some 68 countries were examined and found to be in order.

#### **Budget Control Committee - Committee 3**

The control exercised by this Committee over the organization, the facilities available to the delegates and the over-all expenditure of the Conference, ensured that the budget approved by the Administrative Council was not exceeded.

The Committee drew attention to difficulties met with, due to the sometimes inadequate number of interpreters and to the smallness of some of the rooms in the Maison des Congrès.

#### Radiotelegraphy - Committee 4

The technical aspects of the maritime mobile radiotelegraphy service were the main concern of Committee 4, and included provisions for selective calling, oceanography, narrow-band direct-printing telegraph and data transmission systems and the revision of the Table of frequencies in Appendix 15.

#### Selective Calling

(See also under Operational - Committee 6)

To meet the immediate needs of Administrations, the technical characteristics of the Sequential Single-Frequency Code (SSFC) system were adopted for international usage. However, some Administrations thought that the future operational needs of the maritime mobile service would necessitate the development of other types of selective calling systems, and a recommendation (Recommendation No. MAR 8) was adopted, urging the International Radio Consultative Committee (CCIR) to complete its studies of this aspect of the subject as soon as possible.

The frequencies agreed for selective calling were:

500	kc/s
2182	kc/s
2170.5	kc/s*
4434.9	kc/s
6518.6	kc/s
8802.4	kc/s
13182.5	kc/s
17328.5	kc/s
22699.0	kc/s
156.8	Mc/s

#### Oceanography

After lengthy discussions it was agreed, with some countries entering reservations, to accommodate the frequency requirements for oceanographic communications in the exclusive maritime mobile bands. A sub-band 3.5 kc/s wide in each of the 4, 6, 8, 12, 16 and 22 Mc/s radiotelegraph bands was set aside for use by ship stations for the transmission of oceanographic data, and provision was made for the use of these sub-bands by buoy stations and stations interrogating the buoys. The frequencies agreed were:

4162.9	to	4165.6	kc/s	10 frequencies spaced 0.3 kc/s
6244.9	to	6247.6	kc/s	10 frequencies spaced 0.3 kc/s
8328.4	to	8331.1	kc/s	10 frequencies spaced 0.3 kc/s
12 479.9	to 1	2 482.6	kc/s	10 frequencies spaced 0.3 kc/s
16 636.9	to 1	6 639.6	kc/s	10 frequencies spaced 0.3 kc/s
22 160.9 (	to 2	2 163.6	kc/s	10 frequencies spaced 0.3 kc/s

To ensure the efficient use of these frequencies it was resolved that the International Oceanographic Commission (IOC) and the World Meteorological Organization (WMO) be invited to develop jointly with the International Frequency Registration Board (IFRB), and in consultation with ITU Members and Associate Members, as appropriate, a co-ordinated plan designed to meet existing and future requirements of all interested Member countries, for use by stations in the collection of data relating to oceanography in a world-wide system. The manner in which the IFRB should treat notifications

dealing with frequency assignment for oceanographic stations was also laid down.

Narrow-band direct-printing telegraph and data transmission systems

Provision was made for the development by Administrations of narrow-band directprinting telegraph and data services between ship and shore. The characteristics of the equipment intended for use in these services and the type of emission to be used (Class F1 emission, with a total frequency shift of 170 c/s) were agreed. The frequencies allotted were:

4166.	5 to	4172	kc/s	12 frequencies spaced 0.5 kc/
6248.	5 to	6258	kc/s	20 frequencies spaced 0.5 kc/
8332	to 8	3341.5	kc/s	20 frequencies spaced 0.5 kc/
12 484	to 12	2 503	kc/s	20 frequencies spaced 1 kc/s
16 641	to 16	660	kc/s	20 frequencies spaced 1 kc/s
22 165	to 22	2 184	kc/s	20 frequencies spaced 1 kc/s

It was thought that as the development of these services was at such an early stage, it was premature for the Conference to lav down regulations for the orderly use of the frequencies, and that this should be considered by a World Administrative Radio Conference recommended to be held in 1973. However, to ensure that this Conference has at its disposal adequate background information, any Administration bringing into operation such a service, should notify the IFRB (for inclusion in the Master International Frequency Register - MIFR), and the Secretary-General (for inclusion in the List of Coast Stations) the frequencies on which ships wishing to participate in the service will be required to transmit. The entries in the MIFR will be shown as coast station "receive" frequencies, and will be recorded for information only, bearing no date, and will not prejudice any decisions of a future World Administrative Radio Conference.

#### Revision of Appendix 15

The Table of frequencies assignable to ship radiotelegraph stations using the maritime mobile service bands between 4 and 27.5 Mc/s was revised to accommodate

oceanographic data transmission, directprinting telegraph and data transmission systems and to provide additional channels for radiotelephony.

The frequencies for these services were obtained by reducing the bands assignable as working frequencies to high and low traffic ships. This was offset in the case of the high traffic ship band by reducing the spacing between frequencies. In the 25 Mc/s band the frequency spacing was reduced to 1.5 and provision was made for six calling frequencies.

The reduction in the low traffic ship band means that the use of frequencies above 4229 kc/s, 6343.5 kc/s, 8458 kc/s, 12687 kc/s, 16916 kc/s and 22370 kc/s must be discontinued as soon as possible, and in any event not later than 1 February, 1970. The bands released will be used to accommodate the coast radiotelegraph assignments which have been displaced to provide the necessary coast radiotelephone frequencies for additional radiotelephone duplex channels. The band limits agreed for coast radiotelegraph stations were:

4 231	-	4	361	kc/s
6 345	-	6	514	kc/s
8 459.5	-	8	728.5	kc/s
12 689	-	13	107.5	kc/s
16 917.5	-	17	255	kc/s
22 374	_	22	624.5	kc/s

Arrangements have been made (Resolution No. MAR 10) for the transfer between 2 and 28 February, 1970, of the assignments concerned without change of registration status.

The continued use of harmonic relationship in the high traffic, calling and low traffic ship bands came under discussion and Administrations were recommended to study, in the light of advancing techniques, the problems relating to the future use of harmonic relationship in ship's radio equipment and to the determination of the optimum spacing and number of channels in these bands, with the object of submitting their proposals for consideration by the next World Administrative Radio Conference competent to deal with the matter.

In addition, Administrations were recommended to study whether the use of synthesized transmitters by ship stations would make it desirable to modify the present method of assignment of frequencies for low traffic ships to allow more

<sup>\*</sup> The frequency 2170.5 kc/s will replace 2182 kc/s for selective calling not later than 1 April, 1977

flexibility in the choice of actual working frequencies.

Frequencies to be assigned for the transmission by television of port radar images to ships

In the absence of a definite requirement for the transmission by television of port radar images from shore-to-ship in congested waters, it was recommended that Administrations and the Inter-Governmental Maritime Consultative Organization (IMCO) should study the operational need and parameters for such systems and inform the Secretary-General of the ITU of the results of these studies. If such an operational need did exist, the CCIR should be invited to determine the most suitable order of frequencies required and the technical parameters to be met by such systems, in order that Administrations may pursue the question at the next World Administrative Radio Conference competent to deal with the matter.

The possible use of the high traffic bands by tankers of 12 500 tons gross

The regulations (Nos. 1156 and 1157 of the Radio Regulations, Geneva 1959) concerning the use of the high traffic and low traffic bands by ship stations were amended to permit Administrations to make such assignments depending on traffic requirements.

#### Miscellaneous

Provision was also made for:

- the use of Class A7J emissions in the bands authorized for use by the maritime mobile service between 14 and 160 kc/s;
- 2) the use of Class A2H emissions in the band 405 to 535 kc/s, and on 8364 kc/s;
- the use of emergency position indicatingradiobeacons on 2182 kc/s;
- 4) the cessation of the use of 143 kc/s as a calling frequency;
- 5) the use by coast stations of the band between 140 and 146 kc/s on a permitted basis.

#### Radiotelephony - Committee 5

This Committee considered proposals, both technical and administrative, for the use of

single sideband techniques, the introduction of 25 kc/s channel spacing in the VHF band, the use of space communication technique, and other matters relating to the maritime mobile radiotelephone service.

The use of single sideband techniques

Measures for the introduction of single sideband techniques in the maritime mobile service in the bands between 1605 and 4000 kc/s, and in the exclusive HF bands were considered at great length. Technical characteristics for SSB transmitters using Classes A3A and A3J emissions were included in a new Appendix 17A, and provision was made for Class A3H emission for compatibility during the transition period from DSB to SSB, and thereafter on 2182 kc/s. New frequency tolerances were included in Appendix 3.

Appendix 17 (Table of DSB radiotelephone transmitting frequencies in the HF bands) was slightly revised to facilitate the provision of the new HF radiotelephone channels made available by the revision of Appendix 15, Sections A and B, and a new Table of SSB transmitting frequencies was also devised. A slight revision of the coast station transmitting frequencies in Appendix 25 to become effective in 1970

was also agreed.

An early decision of the Conference was that some form of planning in the maritime mobile HF radiotelephone bands should be retained, although it was considered that there was insufficient time during the 1967 Conference to work out a new plan. Consequently proposals for a Conference to be held in 1973, to replan Appendix 25, preceded by a preparatory meeting to fix technical standards, were adopted. This Conference will also consider the continuation of independent sideband operation (Class A3B) and other matters related to the maritime mobile radiotelephone service.

Time-tables for the transition to SSB were agreed covering the bands 1605 kc/s to 4000 kc/s and 4000 to 23 000 kc/s respectively.

In the bands between 1605 and 4000 kc/s new installations of double sideband radiotelephone equipment in ship stations should cease as from 1 January, 1973 and Administrations were asked to endeavour to discontinue such installations at the earliest possible date after 1 April, 1969.

An exception was made in respect of apparatus provided solely for distress, urgency and safety purposes using 2182 kc/s.

Coast stations should be capable of single sideband operation at the earliest date, and discontinue double sideband emissions as early as possible — in any case not later than 1 January, 1975.

Provision was, however, made for coast and ship stations equipped for single sideband operation also to be equipped for the use of Class A3H emission until 1 January, 1982, for compatibility with reception by double sideband equipment, and also for continued use of Class A3H emission on the carrier frequency 2182 kc/s beyond 1 January, 1982.

As from 1 January, 1982, the use of Class A3A and A3J emissions only are authorised, with the following exceptions:

- a) Class A3 and A3H emission for ship, survival craft stations on the carrier frequency 2182 kc/s;
- b) Class A3H emission for coast stations on the carrier frequency 2182 kc/s;
- c) in Regions 1, 3 and in Greenland, in exceptional circumstances, Class A3H emission for coast stations sending safety messages on the carrier frequency 2170.5 kc/s;
- d) Classes of emission A2H, A2A and A2J for coast stations for selective calling on the carrier frequency 2170.5 kc/s;
- e) the classes of emission specified in the new Appendix 20A for emergency position-indicating radio beacons.

The provisions concerning the transition to SSB in the MF bands was the subject of Resolutions Nos. MAR 4 and MAR 5 of the Final Acts.

In the bands between 4000 and 23 000 kc/s, new installations of double sideband radiotelephone equipment in ship stations should cease as from 1 January, 1972, but Administrations will endeavour to discontinue the installation of double sideband equipment at the earliest possible date after 1 April, 1969.

As from 1 January, 1972, coast stations will cease all double sideband emissions, and as from 1 January, 1978, Class A3A and A3J emissions only will be authorised for both coast and ship stations.



General view of the main conference hall

In order to ensure compatibility during the transitional period of conversion from double sideband to single sideband, coast stations and ship stations equipped for single sideband operation will, until 1 January, 1978, be able to use Class A3H emission in addition to Class A3A and A3J emissions (Resolution No. MAR 6 refers).

#### Appendix 17

Arising from the foregoing decisions Appendix 17 was revised, and arranged in three sections:

Section A — Table of duplex (two-frequencies) double sideband transmitting frequencies (in kc/s)

Section B — Table of duplex (two-frequencies) single sideband transmitting frequencies (in kc/s)

Section C — Table of simplex (one-frequency) single sideband transmitting frequencies (in kc/s).

The existing frequencies appearing in Appendix 25 allotted to coast stations will be changed in order that the separation between the transmitting frequencies of coast and ship stations should remain constant in each band, and the new frequencies (see Annex 1 of Resolution No.

MAR 11) will be brought into use on I March, 1970. The detailed arrangements for the transfer of frequencies are contained in Resolution No. MAR 11, and a timetable for the general change of frequencies in Resolution No. MAR 12 of the Final Acts.

As the result of an extension of the bands allocated exclusively to the maritime mobile service for radiotelephony, new duplex channels will be available to the maritime mobile service and will be contained in Section III of Appendix 25 (MOD). These new channels will become available on 1 March, 1970 and during the interim period between this date and the date of entry into force of the new frequency allotment plan (see "Revision of Appendix 25" below) they should be used for single sideband operation, and also for double sideband operation where technically feasible, in accordance with the timetable for conversion to single sideband operation; the peak envelope power of the transmitters shall be limited to 5 kW per speech channel for coast stations, and to 1.5 kW for ship stations. For coast stations using Class A3H emission a peak envelope power of 7 kW may be used; for Class A3 emission a mean power of 10 kW may be used.

#### Revision of Appendix 25

The proposed World Administrative Radio Conference to be convened in 1973 would

prepare a new frequency allotment plan for high-frequency coast radiotelephone stations covering the channels in the present Appendix 25 as well as the new channels contained in the new Section III of Appendix 25 (MOD) previously mentioned. In addition, provisions were made for the orderly use of the new radiotelephone channels made available by the present Conference (see Resolution No. MAR 15). In this respect it was resolved that, in general, precedence should be given to those countries which had no allotments in Appendix 25; had no assignments to HF coast radiotelephone stations recorded in the Master Register, and were in urgent need of frequencies for maritime radiotelephony in that band. The procedure so used will be discontinued on the date of entry into force of the new frequency allotment plan to be prepared by the 1973 Radio Conference. It will be of an interim nature and will not prejudge the decision to be taken by the 1973 Radio Conference.

#### Appendix 18

Future expansion of maritime mobile radiotelephone services in the band 156-174 Mc/s was provided for by the reduction of the channel spacing from 50 kc/s to 25 kc/s to increase the number of available channels from 28 to 57. The new channels will be interleaved mid-way between the existing 50 kc/s channels given in the Table of transmitting frequencies in Appendix 18 of the Radio Regulations, Geneva, 1959. This table was revised to include the new channels which were allocated to services on an international basis. The numbering of the existing channels was retained to avoid any possible confusion; the numbers of channels 1 to 9 were, however, amended to read 01 to 09 to provide two digits for use in selective calling. The new interleaved channels were numbered 60 to 88 to avoid duplication with numbering systems in use by various countries for other services.

The technical standards for equipment with 25 kc/s channel spacing were laid down in a new Section B of Appendix 19 of the Radio Regulations and the relevant tolerances were inserted in Appendix 3. The Conference adopted a time-table for the transition from 50 kc/s to 25 kc/s channel spacing, taking into account the need to ensure a reasonable economic life for





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existing equipment. This provided that modification of existing transmitters to  $\pm$  5 kc/s deviation, and of receivers to increase the audio gain, where necessary, may commence on 1 January, 1972, and must be completed by 1 January, 1973, when all new equipment must conform to 25 kc/s standards. Up to this date coast stations should maintain capability to receive transmissions with a maximum deviation of  $\pm$  15 kc/s, and after which the modification of coast station receivers to meet the selectivity requirements for a channel spacing of 25 kc/s should take place as early as practicable.

All equipments must conform to 25 kc/s standards, and all interleaved channels may be generally introduced on 1 January, 1983. On this date the over-all guard band for 156.8 Mc/s will be reduced to 156.7625-156.8375 Mc/s.

It was also decided to fix the maximum power for new equipment at 25 watts throughout the world (No. 1379 of the Radio Regulations was modified accordingly and No. 1378 deleted).

Two of the new channels may be used for internal operational communications on board ships at low power (100 milliwatts), and subject to the national regulations of the Administration concerned when these channels were used in its territorial waters. The channels in question, Nos. 15 and 17, are in the present guard band for 156.8 Mc/s (Channel 16).

Other items

Coast radiotelephone stations — Common frequencies

It was recommended that proposals should be made by Administrations to the next appropriate Administrative Radio Conference concerning the possibility of the designation of common frequencies in the MF bands, for use by the coast radiotelephone stations for their communications with ships of other nationalities as it was not possible, for the time being, to designate such frequencies. In the meantime, frequencies for this purpose should be used according to special or regional arrangements.

Port operation services

The definition of the Port operation service was amended to permit the acceptance of messages relating to operational handling of ships.

Inland waterways

It was agreed that the VHF radiotelephone channels in Appendix 18, allocated to the maritime mobile service, could also be used for maritime mobile communications on inland waterways.

Use of the band 450-470 Mc/s.

As the frequency band 450-470 Mc/s was used in many countries for land mobile services, no agreement could be reached on the choice of a few frequencies which

could be used for ship radiotelephone communication throughout the world without interference to the land mobile services in the neighbourhood of ports.

Use of frequencies in the bands allocated exclusively to the maritime mobile service

A Resolution (No. MAR 9 of the Final Acts) was adopted, designed to bring about the cessation of emissions from out-of-band stations operating in the guard-bands of the calling and distress frequencies, and in the HF bands allocated exclusively to the maritime mobile service.

Use of space communication techniques in the maritime mobile service

A recommendation was adopted, inviting:

- Administrations to determine the foreseeable operational requirements of the maritime mobile service that could be accommodated by means of space communication techniques;
- IMCO to continue to study the requirements and other considerations where benefit might accrue to the safety and navigation of ships at sea through application of space techniques; and
- 3) the CCIR to study the technical aspects of systems which offer the potential of fulfilling these maritime requirements and to recommend a practical system with particular attention to the environment in which ships operate.

Delegates preparing their documents...

Exchanging notes before a meeting ...

It also invited both Administrations and the CCIR in these studies to consider a technically suitable frequency band higher in the spectrum than band 8 and of sufficient bandwidth to accommodate the over-all needs of the maritime mobile service. It was suggested, in this connection, that particular attention might be given to bands 9 and 10 for the link between the mobile station and the relaying satellite.

#### Operation - Committee 6

The review of operational requirements included consideration of the pertinent portions of the revised International Code of Signals; the signals and miscellaneous abbreviations to be used in the maritime mobile service (Appendices 13 and 16); operational provisions for selective calling; radiotelegraph and radiotelephone procedures, including those related to distress and safety; emergency position-indicating radio-beacons; a review of the maritime radio operators' certificates, and service documents.

The International Code of Signals, and revision of Appendices 13 and 16 of the Radio Regulations

The Figure Code in Appendix 16 was modified to conform with that in the International Code of Signals (INTERCO). An examination of the revised International Code of Signals prepared by the IMCO in relation to the maritime mobile Q codes and abbreviations given in Appendix 13 revealed, however, that a number of pro-

cedural and operational signals had been adopted which had a similar significance to those in Appendix 13, and in a number of cases identical abbreviations had been adopted which had quite different meanings. Some of these abbreviations had been used in the maritime mobile radio-communication service for many years.

An attempt was made to align the codes and abbreviations in the Radio Regulations with those in the INTERCO, and to give effect to proposals for modifications to the communication procedures, but as there was some doubt as to the competence of the Conference to amend Appendix 13 which applied to all services, a new Appendix 13A was prepared for use by the Maritime Mobile Service both for radiotelegraphy and radiotelephony. All the codes and abbreviations necessary for the maritime mobile service, including additions proposed and agreed by Committee 6 to meet the needs of new services were included in this Appendix. An attempt was made to reduce the differences between the codes used, and those given in the INTERCO, and, as far as possible, to avoid duplication. Because the carriage of the INTERCO was not yet mandatory, it was not considered advisable to delete all the operational Q signals referring to search and rescue that had a similar significance to signals in the INTERCO. Such signals were marked with an asterisk in Appendix 13A to draw attention to the fact that the signal was one which has a similar meaning to a signal appearing in the INTERCO.

A resolution was adopted relating to the principle that the ITU was responsible for determining the choice and conditions for use of international signals relating to radiocommunication procedures, and that the IMCO was responsible for determining the choice and conditions for use of international signals relating to navigation and search and rescue. This resolution also invited the IMCO to consider the differences existing between the Radio Regulations and the revised International Code of Signals. These differences included in Appendix 13A:

- those signals relating to EPIRB's for which no provision had been made in the INTERCO;
- signals with identical or almost identical meaning but with different abbreviations or signals;

- 3) identical abbreviations or signals having quite different meanings, and
- 4) identical abbreviations or signals having only a slight difference of meaning.

Amendments were also made to the Radio Regulations, consequential upon the introduction of the new Appendix 13A for radiotelegraphy and radiotelephony.

Radiotelegraph and radiotelephone procedures

The calling and working procedures for radiotelegraph and radiotelephone services both for radiocommunication, and distress and safety, were modified as considered necessary to meet present-day needs. These amendments included a revision of the calling procedure for HF radiotelegraphy designed to reduce unnecessary signalling caused by prolonged calls.

#### Special calling frequencies

The frequencies 4186.5, 6279.75, 8373, 12 559.5, 16 746 and 22 262.5 kc/s were designated for optional use as special calling frequencies using a separate procedure.

Frequencies for call, reply and safety purposes in the bands between 4000 and 23 000 kc/s

The frequency 4136.3 kc/s was designated as a call, reply and safety frequency in the zone lying between the parallels 33° North and 57° South. In the zone of Regions 1 and 3 lying between the parallels 33° North and 57° South the frequency 6204 kc/s was designated for call, reply and safety purposes.

#### Additional Radio Regulations

Minor modifications were also made to various articles in the Additional Radio Regulations, concerning press and meteorological radiotelegrams; retransmissions, advices of non-delivery, and retention periods of radiotelegrams.

#### Categories of ship stations

The categories of ship stations for the international public correspondence service were increased from three to four as follows:

First category: continuous service; Second category: 16 hours a day; Third category: 8 hours a day; and Fourth category: service the duration of which is either shorter than that of stations of the third category, or is not fixed by the Radio Regulations.

#### Distress watchkeeping

It was generally agreed that the safety of ships, especially of those fitted with radio-telephony only, would be improved if ships fitted with both radiotelegraphy and radiotelephony maintained watch on the radiotelephony international distress frequency as well as on the radiotelegraphy distress frequency. Resolution No. MAR 17 was adopted, inviting the IMCO to consider this matter as part of the study on the maritime safety system currently being undertaken with the object of the eventual amendment of the pertinent provisions of the International Convention for the Safety of Life at Sea (London, 1960).

# Designation of the frequency 156.8 Mc/s as a distress frequency

A proposal to designate 156.8 Mc/s as a world-wide distress frequency was not agreed. It was noted that a study of the maritime mobile distress systems had been initiated by the IMCO, in which the ITU will co-operate, and that the results of this study should be available for consideration before additional provisions were made to the distress procedures in the Radio Regulations.

## Selective Calling Devices (see Report of Committee 4)

In order to meet the operational needs of Administrations for a selective calling system in the Maritime Mobile Service it was considered that a single international system should be adopted operating on all bands allocated to the maritime mobile service, but this system did not rule out the possibility of using national systems operating on frequencies other than international calling frequencies. It was recognized that the final objective of a single international system could not be attained during the life-time of the new provisions of the Radio Regulations contained in the Final Acts of the present Conference. It was agreed that for such a system to be fully effective, ship stations should be able to identify the calling station, but it was not considered that this should necessarily

be compulsory during the lifetime of the new provisions. It was recommended that the selective calling system should be such as to enable a coast station to contact a ship, irrespective of the type of radio equipment used by the ship, or the nature of the traffic to be exchanged.

Two major problems arose; the type of system to be used, and agreement on the allocation of ship's selective call numbers on a national basis. The sequential single frequency code system was eventually adopted, but the development of other systems was not precluded - (see report on Committee 4). The method of allocation adopted was that blocks of selective call numbers should be supplied to Administrations by the Secretary-General on request. This procedure would be reviewed at the next competent conference. The necessary amendments were made to the Radio Regulations to permit and regulate the use of selective calling devices.

### Emergency position-indicating radiobeacon stations

Provision was made for the introduction of emergency position-indicating radiobeacons, by adopting a definition (RR 68A) for such stations and the signal characteristics of the types of EPIRB's recommended by the CCIR (Section VIIIA of Article 36.) Technical characteristics for EPIRB's operating on 2182 kc/s were also agreed (Appendix 20A). Provision was made for tone modulated keyed emissions on medium frequencies and for swept-tone modulation on very high frequencies. A resolution was also adopted covering the use of 121.5 Mc/s and 243 Mc/s.

#### Operator's certificates for ship stations

It was agreed that provision should be made for the introduction of a radio-communication operator's general certificate, as an alternative to the present first and second class certificates, and a Resolution No. MAR 16, was adopted with a covering regulation in Article 23 of the Radio Regulations, to this effect.

This resolution, in considering that many radiotelegraph operators were holders of the second class certificate, that the higher morse code speed qualification of the first class certificate might not be necessary in the future, and that there was a future need for greater emphasis on the practical maintenance of radiocommunication equip-

ment in service, expressed the opinion that Administrations should consider the desirability of replacing the present two classes of radiotelegraph operator's certificate by the proposed single class of certificate. It was resolved that Administrations wishing to issue a radiocommunication operator's general certificate for the maritime mobile service were authorized to do so, subject to the maintenance of technical and operating standards detailed in Annex 1 to the resolution. Further annexes were agreed covering the necessary qualifying service and conditions of employment.

The United States of America, in accepting the proposal, were unable to subscribe to the implication that the ship radio operator should have any responsibility for calibration of the radio direction finder apparatus, and emphasized that acceptance of the resolution was with the understanding that nothing was intended or implied that would abridge the rights of an Administration to determine the type of examination necessary to assess the ability of certificate holders to operate, maintain and repair radio equipment.

#### Service Documents

#### Manual for the maritime mobile service

A manual for use by the maritime mobile service will, in future, be carried by all ships taking part in the public correspondence service. The carriage of the Radio Regulations will no longer be compulsory. The manual will contain those provisions of the Radio Regulations (including its Appendices) and the Additional Radio Regulations, as revised by the World Administrative Radio Conference, Geneva, 1967; the Telegraph Regulations and the Telephone Regulations; and the International Telecommunication Convention, which are applicable or useful to stations in the maritime mobile service. The Secretary-General will publish the manual and make it available by 1 October, 1968, at the latest. In so doing the Secretary-General may consult the Administrations of the United States of America, France, Italy, Netherlands, the United Kingdom of Great Britain and Northern Ireland and Sweden. The possibility of issuing the manual in a loose leaf form will also be considered.

#### List of ship stations

The List of ship stations will, starting with the 1969 edition, be prepared with the aid



Signature of the Final Acts

(Photos: ITU)

of a computer. The layout and presentation of the document will be slightly changed, but the new method will permit easier access to statistics and should lead to economies in the long-term.

#### General

It was recommended that, arising from the partial revisions of the Radio Regulations and Additional Radio Regulations by the Space, Aeronautical, and Maritime Conferences, the Secretary-General should consult all Administrations as to the desirability of carrying out a reprint of these Regulations, together with the desirability of issuing the new publication in loose leaf form to facilitate any future partial revisions.

In addition, it was recommended:

- that those provisions of the Radio Regulations and of the Additional Radio Regulations which relate to the maritime mobile service, be segregated from those relating to other services and regrouped in logical sequence; and
- 2) that the Administrative Council should bear in mind the desirability of including this task in the Agenda of the first World Administrative Radio Conference competent to deal with this matter, in particular the Conference proposed for 1973. In addition, the Secretary-General should ask all Administrations to take this recommendation into account in connection with any studies they might be making in accordance with Administrative Council Decision No. 346.

The Secretary-General and IFRB were requested to study this question and to submit their suggestions to Administrations.

#### Editorial Committee - Committee 7

The task of perfecting the form of the Regulations without altering the sense and of comparing them with existing tests is always a difficult one. It is a measure of the effectiveness of this Committee that so few references back were necessary.

The Committee put forward suggestions, which were later adopted, for:

- (i)the preparation of a manual for use by the maritime mobile service;
- (ii) the re-editing of the Radio Regulations:
- (iii) the segregation of the provisions in the Radio Regulations relating to the maritime mobile service from those of other services, and of the re-grouping of these provisions in logical sequence.

It also laid down the structure of the Final Acts.

The forecast of the Secretary-General at the opening Plenary Meeting on 18 September that the forthcoming weeks would be a period of intense activity was well fulfilled. The results also confirm the Chairman's opening remarks in which he forecast we would all be able to look back upon this Conference as a landmark in the expansion and development of the maritime mobile service. The decisions on the many important matters considered reflect a wide degree of mutual co-operation and goodwill.

(Original language: English)

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