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Union Activities

HF Broadcasting Conference

The Second Session of the World Administrative Radio Conference for the planning of the HF bands allocated to the broadcasting service—HFBC(2) was held from 2 February to 8 March 1987 at the Geneva International Conference Centre.

Over 650 delegates from 116 countries took part in the Conference together with representatives of the International Association of Broadcasters (AIR), the International Radio and Television Organization (OIRT), the Asia-Pacific Broadcasting Union (ABU), the Arab States Broadcasting Union (ASBU), the European Broadcasting Union (EBU), the International Amateur Radio Union (IARU) and the Union of National Radio and Television Organizations of Africa (URTNA).

At its opening plenary session, the Conference elected Mr J. K. Björnsjö (Sweden) as its Chairman and Messrs M. Ali-Belhadj (Algeria), Xu Conghua (China), S. Martínez Londoño (Colombia), S. M. Ghandourah (Saudi Arabia), L. H. Marks (United States) and A. Badalov (USSR) as Vice-Chairmen.

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General view of the Conference Hall

Structure of the Conference

The Conference approved the agenda as proposed by the Administrative Council in its Resolution No. 912 and set up seven committees. Several working and sub-working groups were established on an *ad hoc* basis to resolve specific questions allocated to them by committees.

Committee 1—Steering Committee

The Chairman of the Steering Committee is the Chairman of the Conference, assisted by the Vice-Chairmen of the Conference as well as the Chairmen and Vice-Chairmen of each Committee.

Terms of reference: to co-ordinate all matters connected with the smooth execution of work and to plan the order and number of meetings, avoiding overlapping wherever possible in view of the limited number of members of some delegations.

Commitee 2—Credentials Committee

Chairman:
Mr S. K. Chemai (Kenya)

Vice-Chairman:
Mr J. Szekely (Hungary)

Terms of reference: to verify the credentials of delegations and to report on its conclusions to the Plenary Meeting within the time specified by the latter.

Committee 3—Budget Control Committee

Chairman:
Dr M. K. Rao (India)

Vice-Chairman:
Mr E. D. Ducharme (Canada)

Terms of reference: to determine the organization and the facilities available

to the delegates, to examine and approve the accounts of expenditure incurred throughout the duration of the Second Session of the Conference and to report to the Plenary Meeting the estimated total expenditure of the Second Session as well as the estimated costs entailed by the execution of the decisions of the Conference.

Committe 4—Technical Committee

Chairman:
Mr J. Rutkowski (Poland)

Vice-Chairman:
Mr Y. Tadokoro (Japan)

Terms of reference:

- to prepare, for adoption, technical standards and any appropriate procedures for future single-sideband (SSB) operation including a schedule for its progressive introduction;
- to review and, where necessary, prepare revisions of and recommend action to be taken on Resolutions and Recommendations of the World Administrative Radio Conference (WARC-79) relevant to technical studies, without adverse impact on other radio services operating in accordance with the Radio Regulations.

Committee 5—Planning Method and Associated Procedures Committee

Chairman:
Mr C. T. Ndiongue (Senegal)

Vice-Chairman:
Mr C. Terzani (Italy)

Terms of reference:

- to consider one or more trial seasonal plans, developed by the International Frequency Registration Board (IFRB), for the purpose of refining and adopting the planning method;
- to prepare for adoption the procedures [1] for the preparation and implementation of seasonal plans for double-sideband (DSB) operation based on the requirements submitted by administrations;
- if possible, to draw up one or more basic plans for the first seasons in accordance with the above-mentioned procedures.

Committee 6—Regulatory Committee

Chairman:
Mr R. Blois (Brazil)

Vice-Chairman:
Mr G. R. Roessler (Fed. Rep. of Germany)

Terms of reference:

- to review and, where necessary, prepare revisions of the relevant provisions [2] of the Radio Regulations relating to the use of the HF bands allocated exclusively to the broadcasting service;
- to review and, where necessary, prepare revisions of and recommend action to be taken on Resolutions and Recommendations of the WARC-79 relevant to regulatory provisions, without adverse impact on other radio services operating in accordance with the Radio Regulations.

Committee 7—Editorial Committee

Chairman:
Mr D. Sauvet-Goichon (France)

Vice-Chairmen:
Sir John A. N. Graham (United Kingdom)

Mr J. A. Prieto Tejeiro (Spain)

Terms of reference: to perfect the form of the texts prepared in the various Committees of the Conference, without altering the sense, for submission to the Plenary Meeting.

Results of the Conference

The Conference had two main objectives:

a) to consider one or more trial seasonal plans developed on the basis of the technical criteria and planning principles adopted by the First Session held in 1984;

b) to adopt the procedures for the preparation and implementation of seasonal plans based on the requirements submitted by administrations.

However, the analysis of the trial plans demonstrated that the HFBC planning system was not able to include all the requirements submitted by administrations (some 18 000 requirements were submitted by approximately 65% of the ITU Members). In addition, the high occurrence of frequency discontinuity within the timeframe of broadcasting service proved to be unsatisfactory to a vast majority of delegations.

It emerged that, to ensure adequate frequency continuity and to enable the implementation of all requirements, improvements had to be introduced in the HFBC planning system, and the associated testing had to be carried out before such an improved planning system could be used in combination with a consultation procedure.[3]

As a result, the Conference decided that the ITU should modify and test the exist-

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[1] In the form of guidelines and flow charts to be developed into definitive regulatory provisions by Committee 6.

[2] Including regulatory provisions relating to planning procedures.

[3] A plan is a system by which appropriate frequency assignments are selected, having regard to all countries' requirements of the countries when so requested. A consultation procedure implies that each administration chooses frequencies to be used and, once incompatibilities are identified by the IFRB as a result of the analysis of all notified frequencies, administrations solve them bilaterally.

ing planning system and associated software in accordance with the Resolutions and Recommendations taken at the present session.

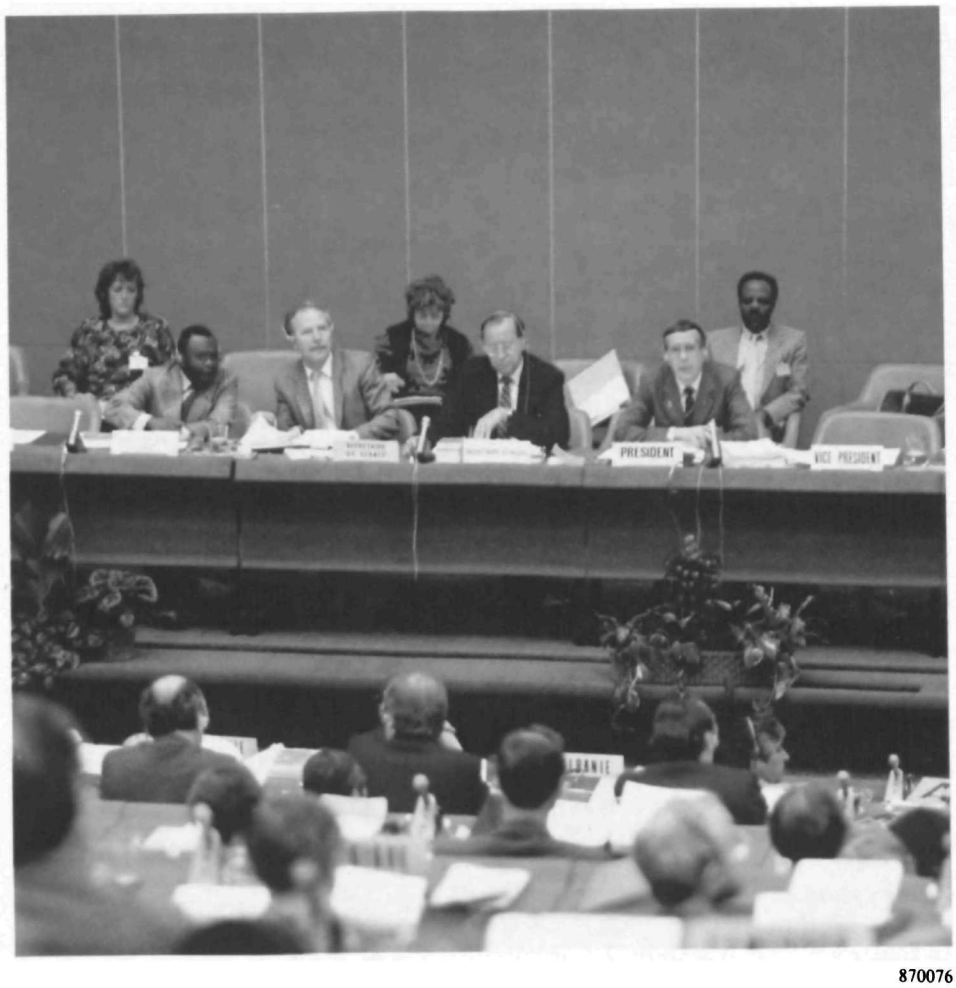
The new planning system, comprising at the same time planning and consultation procedures, will be submitted for adoption, if acceptable, by a world administrative radio conference scheduled for 1992.

Pending the final adoption of the HFBC planning system by a future competent world administrative radio conference foreseen for 1992, the present co-ordination procedure in accordance with the provisions of the Radio Regulations, known as Article 17, will continue to apply.

The dual planning procedure

The HFBC(2) Conference decided to improve the HFBC planning system with a view to applying it in certain parts of bands and to apply a consultation procedure in the remaining parts of the HF bands.

Once the system has become effective, 1880 kHz will follow the application of the consultation procedure (60%) and 1250 kHz will be subject to the improved planning system (40%). A total of 3130 kHz are available for short-wave broadcasting in bands between 6 and 26 MHz.



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View of the rostrum. From left to right: Messrs J. Jipguep, Deputy Secretary-General of the ITU; D. Schuster, Secretary of plenary meetings; R. E. Butler, Secretary-General of the ITU; J. K. Björnsjö, Chairman of the Conference

The improvements to the HFBC system are intended to solve two major shortcomings identified in the planning system developed so far: suspended requirements and lack of frequency continuity. With the introduction of transfer rules, it should be possible to implement all requirements. The transfer rules provide for the processing of requirements which could not otherwise be included in the plan under the consultation procedure.

As regards frequency continuity, it was decided that the continuity of use of the same frequency within an hour and from one hour to the following hour within a requirement was to be a basic feature of the system and should be applied automatically to all submitted requirements.

The consultation procedure will have the following essential features:

- administrations may submit the frequencies they intend to use or may request the IFRB to select the appropriate frequencies on their behalf;
- the IFRB will undertake a number of calculations, *inter alia,* to identify the appropriate bands and to determine the number of appropriate frequencies necessary for each requirement (if not already indicated by the submitting administration);
- taking into account all available data including the results of monitoring observations, the IFRB will make recommendations on how to eliminate the incompatibilities. These recommendations will be sent together with the draft seasonal schedule and any other information deemed necessary by an administration which so requests.

Planning principles included in the Radio Regulations

The Conference could not adopt the HFBC planning system as developed so far because the results were considered unacceptable. However, the Conference made a strong commitment to move towards adequately planned HF bands.

The principles included in the Radio Regulations ensure the equality of rights of all countries, large or small, the equitable access to these bands as well as a more efficient utilization of that part of the frequency spectrum. The principles provide for:

- all broadcasting requirements, current or future, to be treated on an equitable basis so as to enable each administration to provide a satisfactory service;
- national and international broadcasting requirements to be treated on an equal basis;
- the continuity, in the planning procedure, of the utilization of a frequency or frequency band, as far as practicable, provided it does not prevent equal and technically optimum treatment of all broadcasting requirements;
- the planning process to be flexible to take into account new requirements and allow modifications to the existing requirements;
- single-sideband (SSB) transmissions, provided the level of interference caused to double-sideband (DSB) transmissions appearing in the plan is not increased;
- only one frequency to be used to meet a given broadcasting requirement in a given service area with a view to arriving at a more efficient spectrum utilization; when this is not possible, the number of frequencies used is to be kept to the minimum required to provide a satisfactory reception;
- the processing of requirements which cannot be included in the plan at the desired quality level, on the understanding that lower quality levels will be acceptable;
- the satisfaction, on an equal basis, of a minimum of broadcasting requirements submitted, with a level of reliability to be adopted by the 1992 Conference.

These principles will come into effect when the Final Acts of the HFBC(2) Conference enter into force on 1 September 1988 at 00h01 co-ordinate universal time (UTC).

The 1992 World Administrative Radio Conference

The World Administrative Radio Conference to be convened not later than 1992, will have to consider the results of the improved HFBC planning system and consultation procedure, including the effects of the interaction of the two systems and decide on improvements, for adoption. On the basis of their analysis of test results, the Conference will decide on the date of introduction of the dual approach as soon as possible after 1992.

In addition, the Conference will be requested to take steps to settle the question of the processing of national broadcasting requirements taking into account the need for longer transmission periods and the difference between international requirements. Furthermore, the 1992 Conference will be given the task of establishing a long-term programme of action with a view to applying the HFBC planning system to all HF bands allocated exclusively to short-wave broadcasting.

The Final Acts

In addition to a preamble and a final protocol, the Final Acts of the HFBC(2) Conference consist of the modifications to Articles 8, 12, 17 and 30 of the Radio Regulations made as a result of the decisions of the Conference as well as modifications to the following Appendices of the Radio Regulations: Appendix 2 (Information to be provided when submitting HF broadcasting requirements to the IFRB) and Appendix 7 (Certain technical criteria applicable to HF broadcasting). Furthermore, a new Appendix is added on the DSB and SSB system specifications.

The Final Acts also include seven Resolutions and seven Recommendations on the following subjects:

- a Resolution on the transition from double-sideband (DSB) to single-sideband (SSB) emissions in the HF bands allocated to the broadcasting service. All DSB emissions should cease no later than 31 December 2015 at 23h59 UTC, date to be reviewed periodically in the light of the latest available statistics on the world-wide distribution of SSB transmitters and synchronous demodulator receivers;
- a Resolution instructing the IFRB to organize periodic specialized monitoring programmes in the short-wave bands with a view to identifying stations causing harmful interference;
- a Resolution on the improvements the IFRB is requested to bring to the HFBC planning system and the consultation procedure in accordance with the provisions contained in the Annex to the Resolution;
- a Resolution on the programme of action and associated provisions relating to the improvement, testing, adoption and practical implementation of the planning system for the HF bands. This Resolution includes in its Annex a graphic representation of the programme of action from 1987 to 1994;
- a Resolution on the revision, replacement and abrogation of Resolutions and Recommendations of WARC-79 (Resolutions Nos. 8 and 641, Recommendations Nos. 503, 500 and 501);
- a Resolution on the procedure to be applied by the IFRB in the revision of the relevant parts of its technical standards used in the HF bands;
- a Resolution on the type of antennas to be used for the planning of the HF bands allocated exclusively to the broadcasting service;
- a Recommendation on the introduction of transmitters and receivers

capable of both DSB and SSB modes of operation. New transmitters installed after 31 December 1990 should, as far as possible, be capable of working either in both SSB and DSB modes or in SSB mode only;

— a Recommendation drawing the attention of manufacturers to the need of producing in the future low-cost broadcast receivers capable of covering all HF bands and, if possible, providing digital frequency display;

— a Recommendation on the possibility of extending the frequency spectrum allocated exclusively to short-wave broadcasting by a future world administrative radio conference;

— a Recommendation on the need to include in a future competent world administrative radio conference the consideration of the special requirements for national broadcasting;

— a Recommendation establishing a group of experts selected from individuals proposed by administrations to assist the IFRB in carrying out the tasks relating to the planning system;

— a Recommendation inviting the International Radio Consultative Committee (CCIR) to accelerate the studies defined in its regular work programme on the use of synchronized transmitters for broadcasting in the HF bands with a view to arriving at CCIR Recommendations on this subject;

— a Recommendation inviting the CCIR to undertake, in co-operation with administrations, studies on the HF propagation prediction method and to propose improvements with a view to recommending, at a later stage if necessary, an improved method to be used in the future for the HF bands allocated exclusively to the broadcasting service.