

RES122-3

resolves

- 1 to urge administrations to facilitate coordination between HAPS in the fixed service operating in the bands 47.2-47.5 GHz and 47.9-48.2 GHz and other co-primary services in their territory and adjacent territories;
- 2 that, on a provisional basis, the procedures of Article S9 shall be used for coordination between satellite systems and systems using HAPS in the bands 47.2-47.5 GHz and 47.9-48.2 GHz;
- 3 to invite WRC-03 to review the results of the studies specified below and consider refinement of the regulatory provisions that might facilitate a broader application of these high altitude platform technologies.

requests ITU-R

- 1 to study the regulatory provisions that might be needed in order to address those cases where the deployment of HAPS in the territory of one administration may affect neighbouring administrations;
- 2 to continue to carry out studies on the appropriate technical sharing criteria for the situations referred to in *considering j)* above;
- 3 to conduct studies, as a matter of urgency, and taking into account the requirements of other fixed-service systems and other services, on the feasibility of identifying suitable frequencies, in addition to the 2 x 300 MHz paired band at 47 GHz, for the use of HAPS in the fixed service in the range 18-32 GHz in Region 3, focusing particularly, but not exclusively, on the bands 27.5-28.35 GHz and 31.0-31.3 GHz.

instructs the Director of the Radiocommunication Bureau

- 1 that notices concerning HAPS that were received by the Bureau prior to 22 November 1997, and provisionally recorded in the Master International Frequency Register in accordance with the provisional rule of procedure issued by the Board, shall be maintained;
- 2 that from 22 November 1997, and pending review of the sharing studies in *considering j)* and review of the notification process by WRC-03, the Bureau shall accept notices in the bands 47.2-47.5 GHz and 47.9-48.2 GHz only for HAPS in the fixed service and for feeder links for the broadcasting-satellite service, shall continue to process notices for fixed-satellite service networks (except for feeder links for the broadcasting-satellite service) for which complete information for advance publication has been received prior to 27 October 1997, and shall inform the notifying administrations accordingly.

MOD

RESOLUTION 124 (Rev.WRC-2000)

**Protection of the fixed service in the frequency band 8025-8400 MHz
sharing with geostationary-satellite systems of the Earth
exploration-satellite service (space-to-Earth)**

The World Radiocommunication Conference (Istanbul, 2000),

considering

- a) that prior to WRC-97, the band 8025-8400 MHz was allocated to the Earth exploration-satellite service (space-to-Earth) on a secondary basis in Regions 1 and 3, except for those countries listed in former No. **S5.464**;
- b) that the power flux-density limits given in Table **S21-4** of Article **S21** apply to emissions from space stations of the Earth exploration-satellite service (space-to-Earth);
- c) that, for those administrations where the secondary allocation applied before WRC-97, geostationary orbital avoidance was not required for the fixed service and, therefore, the power flux-density limits given in Table **S21-4** of Article **S21** may give rise to excessive interference to the fixed service;
- d) that WRC-97 adopted provisional power flux-density limits as specified in No. **S5.462A** which are lower than those shown in Table **S21-4** of Article **S21** to protect the fixed service;
- e) that, prior to WRC-97, no studies had been conducted in this frequency band by ITU-R on the power flux-density values to apply to space stations of geostationary-satellite systems in the Earth exploration-satellite service where geostationary orbital avoidance had not been implemented by stations of the fixed service,

considering further

- a) that the band 8025-8400 MHz is used extensively by the fixed service in accordance with ITU-R radio-frequency channel arrangements for the 8 GHz band (see Recommendation ITU-R F.386) and is also used by some countries for television outside broadcast applications;
- b) that Recommendation ITU-R F.1502, which was developed in response to Resolution 124 (WRC-97) and approved by the Radiocommunication Assembly (Istanbul, 2000), recommends power flux-density limits different from those in No. **S5.462A**.

resolves

to invite a future competent world radiocommunication conference to review No. **S5.462A**, taking into account Recommendation ITU-R F.1502, and to take appropriate action.

MOD

RESOLUTION 127 (Rev.WRC-2000)

Studies relating to consideration of allocations in bands around 1.4 GHz for feeder links of the non-geostationary-satellite systems in the mobile-satellite service with service links operating below 1 GHz

The World Radiocommunication Conference (Istanbul, 2000),

considering

- a)* that the agenda of WRC-97 included consideration of the adoption of additional allocations for the non-geostationary (non-GSO) mobile-satellite service (MSS);
- b)* that the Report of the 1999 Conference Preparatory Meeting (CPM-99) stated that the Radiocommunication Bureau has identified 25 non-GSO MSS networks as at 26 November 1999 at frequencies below 1 GHz, at some stage of coordination under Resolution 46, and that many of the proposed networks cannot be implemented in the existing allocations because there is not enough spectrum;
- c)* that CPM-97 stated that due to the extreme sensitivity of radio astronomy observations interference from unwanted (spurious and out-of-band) emissions can be a problem, but also noted that interference to radio astronomy can be avoided using various techniques including low-power transmitter levels, choice of modulation, symbol shaping, output filtering and band limiting filters, the use of which can minimize the band separation necessary to meet the recommended interference threshold levels for out-of-band emissions;
- d)* that factors taken into account by post-CPM-97 activities in order to protect the passive services around 1.4 GHz from out-of-band emissions include: the use of narrow-band non-GSO MSS feeder-link transmissions; the use of spectrum-efficient modulation methods, such as Gaussian filtered minimum shift keying, having inherently rapid roll-off of out-of-band emissions; the use, where necessary, of band-pass filters in satellite transmitters and MSS feeder-link transmitting earth stations; and guardbands where necessary;
- e)* that factors taken into account by post-CPM-97 activities concerning sharing with the radiolocation service include the use of conventional techniques that may be applied in MSS satellite receivers, such as intermediate frequency limiters and time diversity, which have long been employed to protect radiolocation receivers, and techniques such as transmitted waveforms employing time diversity, which have been employed to protect receivers in other services from high-power pulsed radar transmitters;

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f) that, since CPM-97, ITU-R studies have been carried out, containing theoretical analyses, with a view to determining if the operation of non-GSO MSS feeder links in bands around 1.4 GHz would be compatible with the Earth exploration-satellite (passive), radio astronomy and space research (passive) services;

g) that the theoretical analyses have indicated that sufficient reduction of out-of-band and spurious emissions could be achieved to protect the sensitive science services in the band 1 400-1 427 MHz;

h) that it is necessary to conduct additional tests and measurements of feeder-link transmissions from systems having the characteristics, performance and reliability of equipment that would be used in operational systems;

i) that such additional tests and measurements will be completed prior to WRC-03,

recognizing

that the bands near 1.4 GHz are extensively used by many other services operating in accordance with the Radio Regulations, including fixed and mobile services,

noting

a) that Resolution **214 (Rev.WRC-2000)** states under *resolves* 1 that further studies are urgently required on operational and technical means to facilitate sharing between non-GSO MSS and other radiocommunication services having allocations and operating below 1 GHz;

b) that, since WRC-95, ITU-R studies have been carried out on sharing between space and terrestrial services and feeder links near 1.4 GHz for non-GSO MSS systems with service links below 1 GHz,

invites ITU-R, as a matter of urgency,

1 to continue studies, and to carry out additional tests and demonstrations to validate the studies on operational and technical means to facilitate sharing, in portions of the band 1 390-1 393 MHz, between existing and currently planned services and feeder links (Earth-to-space) for non-GSO MSS systems with service links operating below 1 GHz;

2 to carry out additional tests and demonstrations to validate the studies on operational and technical means to facilitate sharing, in portions of the band 1 429-1 432 MHz, between existing and currently planned services and feeder links (space-to-Earth) for non-GSO MSS systems with service links operating below 1 GHz;

3 to carry out additional studies, including the measurement of emissions from equipment that would be employed in operational systems to protect passive services in the band 1 400-1 427 MHz from unwanted emissions from feeder links near 1.4 GHz for non-GSO MSS systems with service links operating below 1 GHz;

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resolves

to recommend that WRC-03 consider, on the basis of completion of studies referred to in *invites ITU-R* 1, 2 and 3, additional allocations for feeder links on a worldwide basis for non-GSO MSS systems with service links below 1 GHz.

urges administrations

to participate actively in such studies, with the involvement of interested parties.

MOD

RESOLUTION 128 (Rev.WRC-2000)

**Protection of the radio astronomy service in the
42.5-43.5 GHz band**

The World Radiocommunication Conference (Istanbul, 2000),

considering

- a) that WRC-97 added a primary allocation to the fixed-satellite service (FSS) (space-to-Earth) in the band 40.5-42.5 GHz in Regions 2 and 3 and in certain countries in Region 1, that this conference has extended this allocation to include all of Region 1, and that this band is adjacent to the band 42.5-43.5 GHz which is allocated, *inter alia*, to the radio astronomy service for both continuum and spectral line observations;
- b) that there is also a worldwide primary allocation to the broadcasting-satellite service (BSS) in the 40.5-42.5 GHz band;
- c) that unwanted emissions from GSO BSS and FSS (space-to-Earth) space stations in the band 42-42.5 GHz may result in harmful interference to the radio astronomy service in the band 42.5-43.5 GHz;
- d) that aggregate unwanted emissions from non-GSO BSS and FSS (space-to-Earth) space stations in the band 41.5-42.5 GHz may result in harmful interference to the radio astronomy service in the band 42.5-43.5 GHz;
- e) that various technical and operational means may be used to reduce unwanted emissions from these space stations;
- f) that a limited number of radio astronomy stations worldwide require protection in the band 42.5-43.5 GHz, and that there may be means to limit the susceptibility of radio astronomy stations to interference.

recognizing

- a) that WRC-97 required that FSS systems not be implemented in the band 41.5-42.5 GHz band until technical and operational measures have been identified and agreed within ITU-R to protect the radio astronomy service from harmful interference in the band 42.5-43.5 GHz;
- b) that this conference has established provisional power flux-density limits for out-of-band emissions from BSS and FSS stations in accordance with No. **S5.RAS**,

resolves

that, notwithstanding any further studies, the power flux-density limits in No. **S5.RAS** shall be applied to BSS and FSS stations for which complete coordination (GSO) or notification (non-GSO) information, as appropriate, has been received by the Bureau after the end of WRC-2000 and before the end of WRC-03.

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invites ITU-R

- 1 to study, as a matter of urgency and in time for WRC-03, the provisional power flux-density limits given in No. **S5.RAS**;
- 2 to identify technical and operational measures in the band 41.5-42.5 GHz, including possible mitigation techniques, that may be implemented to protect stations in the radio astronomy service operating in the band 42.5-43.5 GHz, including geographical separation and out-of-band emission limits to be applied to BSS and FSS space stations, as well as measures that may be implemented to reduce the susceptibility of stations in the radio astronomy service to harmful interference.

urges administrations

- 1 to participate actively in the aforementioned studies by submitting contributions to ITU-R;
- 2 when planning to implement BSS or FSS space stations in the band 41.5-42.5 GHz for which complete coordination (GSO) or notification (non-GSO) has been received prior to this conference, to take into consideration the provisions of No. **S5.RAS** in order to protect the radio astronomy service in the band 42.5-43.5 GHz.

recommends

that WRC-03 take appropriate action based on those studies.

MOD

RESOLUTION 207 (Rev.WRC-2000)

Measures to address unauthorized use of and interference to frequencies in the bands allocated to the maritime mobile service and to the aeronautical mobile (R) service

The World Radiocommunication Conference, (Istanbul, 2000),

considering

- a) that the HF frequencies currently used by the aeronautical and maritime mobile services for distress, safety and other communications, including allotted operational frequencies, suffer from harmful interference and are often subject to difficult propagation conditions;
- b) that WRC-97 considered some aspects of the use of the HF bands for distress and safety communications in the context of the Global Maritime Distress and Safety System (GMDSS), especially with regard to regulatory measures;
- c) that unauthorized operations using maritime and aeronautical frequencies in the HF bands are continuing to increase and are already a serious risk to HF distress, safety and other communications;
- d) that some administrations have resorted to, for example, transmitting warning messages on operational HF channels as a means of deterring unauthorized users;
- e) that provisions of the Radio Regulations prohibit the unauthorized use of certain safety frequencies for communications other than those related to safety;
- f) that enforcing compliance with these regulatory provisions is becoming increasingly difficult with the availability of low-cost HF SSB transceivers;
- g) that monitoring observations of the use of frequencies in the band 2 170-2 194 kHz and in the bands allocated exclusively to the maritime mobile service between 4 063 kHz and 27 500 kHz and to the aeronautical mobile (R) service between 2 850 kHz and 22 000 kHz show that a number of frequencies in these bands are still being used by stations of other services, many of which are operating in contravention of No. S23.2;
- h) that, in certain situations, HF radio is the sole means of communication for the maritime mobile service and that certain frequencies in the bands mentioned in *considering g* are reserved for distress and safety purposes;
- i) that, in certain situations, HF radio is the sole means of communication for the aeronautical mobile (R) service and that this is a safety service;
- j) that this conference has reviewed the use of the HF bands by the aeronautical mobile (R) and maritime mobile services with a view to protecting operational, distress and safety communications,

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considering in particular

a) that it is of paramount importance that the distress and safety channels of the maritime mobile service be kept free from harmful interference, since they are essential for the protection of the safety of life and property;

b) that it is also of paramount importance that channels directly concerned with the safe and regular conduct of aircraft operations be kept free from harmful interference, since they are essential for the safety of life and property.

resolves to invite ITU-R and ITU-D, as appropriate

1 to study possible technical and regulatory solutions to assist in the mitigation of interference to operational distress and safety communications in the maritime mobile service and aeronautical mobile (R) service;

2 to increase regional awareness of appropriate practices in order to help mitigate interference in the HF bands, especially on distress and safety channels;

3 to report the results of the above studies to the next competent conference,

urges administrations

1 to ensure that stations of services other than the maritime mobile service abstain from using frequencies in distress and safety channels and their guard bands and in the bands allocated exclusively to that service, except under the conditions expressly specified in Nos. **S4.4**, **S5.128**, **S5.129**, **S5.137** and **S4.13** to **S4.15**; and to ensure that stations of services other than the aeronautical mobile (R) service abstain from using frequencies allocated to that service except under the conditions expressly specified in Nos. **S4.4** and **S4.13**;

2 to make every effort to identify and locate the source of any unauthorized emission capable of endangering human life or property and the safe and regular conduct of aircraft operations, and to communicate their findings to the Radiocommunication Bureau;

3 to participate in the monitoring programmes that the Radiocommunication Bureau may organize pursuant to this resolution;

4 to make every effort to prevent unauthorized transmissions in bands allocated to the maritime mobile service and the aeronautical mobile (R) service;

5 to request their competent authorities to take, within their respective jurisdiction, such legislative or regulatory measures which they consider necessary or appropriate in order to prevent stations from unauthorized use of distress and safety channels or from operating in contravention of No. **S23.2**;

6 to take all necessary steps in such cases of contravention of No. **S23.2** to ensure the cessation of any transmissions contravening the provisions of the Radio Regulations on the frequencies or in the bands referred to in this resolution;

7 to participate actively in the studies requested by this resolution,

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instructs the Radiocommunication Bureau

1 to continue to organize monitoring programmes, at regular intervals, in the maritime distress and safety channels and their guard bands and in the bands allocated exclusively to the maritime mobile service between 4 063 kHz and 27 500 kHz and to the aeronautical mobile (R) service between 2 850 kHz and 22 000 kHz, with a view to ensuring the timely distribution of monitoring data and identifying the stations of other services operating on these channels or in these bands;

2 to seek the cooperation of administrations in identifying the sources of those emissions by all available means and in securing the cessation of those emissions;

3 when the station of another service transmitting in a band allocated to the maritime mobile service or to the aeronautical mobile (R) service has been identified, to inform the administration concerned;

4 to include the problem of interference to maritime and aeronautical distress and safety channels on the agenda of relevant regional radiocommunication seminars,

instructs the Secretary-General

to bring this resolution to the attention of the International Maritime Organization and the International Civil Aviation Organization and to invite them to participate in these studies.

MOD

RESOLUTION 214 (Rev.WRC-2000)

Sharing studies relating to consideration of the allocation of bands below 1 GHz to the non-geostationary mobile-satellite service

The World Radiocommunication Conference (Istanbul, 2000),

considering

- a) that the agenda of this conference included consideration of additional allocations on a worldwide basis for the non-geostationary mobile-satellite service (non-GSO MSS) below 1 GHz;
- b) that the 1999 Conference Preparatory Meeting, in its Report, indicated that for the non-GSO MSS below 1 GHz there is not enough spectrum currently allocated to allow development of all the systems currently in coordination, and that, in order to meet projected MSS requirements below 1 GHz, a range of an additional 7 to 10 MHz will be required in the near future although, as well, it recognized that a number of these systems may not be implemented for reasons not connected with spectrum availability;
- c) that there is an urgent need to make usable spectrum available on a worldwide basis for non-GSO MSS systems operating below 1 GHz;
- d) that some non-GSO MSS systems are already operated by some administrations in existing MSS allocations and are at an advanced stage of consideration for operation in many other administrations, and that studies have been conducted within ITU-R on sharing between non-GSO MSS and certain terrestrial services which demonstrate the feasibility of sharing in the cases studied;
- e) that issues concerning the technical and operational means to facilitate sharing between the terrestrial services and non-GSO MSS in the bands below 1 GHz remain to be studied;
- f) that the requirements for the introduction of these new technologies have to be balanced with the needs of other services having allocations below 1 GHz;
- g) that the bands below 1 GHz are extensively used by administrations for many services, although the extent to which they are used by each administration varies throughout the world;
- h) that the bands 410-430 MHz and 440-470 MHz are extensively used by existing services in Region 1, in many countries in Region 3, and in some countries in Region 2, and new terrestrial systems are planned to be introduced in these bands;
- i) that studies of certain bands have not yet been completed,

noting

- a) that additional studies may identify suitable bands below 1 GHz and appropriate sharing techniques to be considered for worldwide allocations to non-GSO MSS;

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- b)* that constraints on the duration of any single transmission from an individual MSS mobile earth station and constraints on the period between consecutive transmissions from an individual MSS mobile earth station operating on the same frequency may facilitate sharing with terrestrial services;
- c)* that interference mitigation techniques, such as the dynamic channel activity assignment system described in Recommendation ITU-R M.1039, may be used by non-GSO MSS systems below 1 GHz in the Earth-to-space direction to promote compatibility with terrestrial systems when operating in the same frequency band;
- d)* that new technologies employed by some radiocommunication services, especially within the terrestrial mobile and broadcasting services, which require spectrum below 1 GHz, may have an impact on the sharing possibilities;
- e)* that substantial progress has been made, with recently completed ITU-R studies of sharing between the non-GSO MSS below 1 GHz in the Earth-to-space direction and specific existing services, but studies on some important issues nevertheless remain to be completed;
- f)* that non-GSO MSS systems operating below 1 GHz have undergone advance publication by the Radiocommunication Bureau and that administrations may seek to implement further such systems;
- g)* that the use of some sharing techniques such as those referred to in *noting c)* results in non-GSO MSS systems which have significantly greater spectrum requirements in the Earth-to-space direction than in the space-to-Earth direction,

resolves

- 1 that further studies are urgently required on operational and technical means to facilitate sharing between the non-GSO MSS and other radiocommunication services having allocations and operating below 1 GHz;
- 2 that WRC-03 be invited to consider, on the basis of the results of the studies conducted within ITU-R and the studies referred to in *resolves 1* above, additional allocations on a worldwide basis for the non-GSO MSS below 1 GHz;
- 3 that relevant entities and organizations be invited to participate in these sharing studies,
invites ITU-R
 - 1 to study and develop Recommendations on, as a matter of urgency, the performance requirements, sharing criteria and technical and operational issues relating to sharing between existing and planned systems of allocated services and non-GSO MSS below 1 GHz;
 - 2 to carry out studies, as a matter of urgency, in preparation for WRC-03, having regard to *noting c)*;
 - 3 as a matter of urgency, to carry out studies in preparation for WRC-03 with respect to interference mitigation techniques, such as the dynamic channel activity assignment system described in Recommendation ITU-R M.1039, necessary to permit the continued development of all of the services to which the bands are allocated;
 - 4 to bring the results of these studies to the attention of WRC-03 and the relevant preparatory meetings.

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urges administrations

1 to participate actively in these studies, with the involvement of both terrestrial and satellite interests;

2 to submit to ITU-R reports on their technical studies and on their operational and frequency sharing experience with non-GSO MSS systems operating below 1 GHz,

encourages administrations

to consider the use of dynamic channel assignment techniques, such as those described in Recommendation ITU-R M.1039.

MOD

RESOLUTION 216 (Rev.WRC-2000)

Possible broadening of the secondary allocation to the mobile-satellite service (Earth-to-space) in the band 14-14.5 GHz to cover aeronautical applications

The World Radiocommunication Conference (Istanbul, 2000),

considering

- a) that the band 14-14.5 GHz was allocated to the land mobile-satellite service (Earth-to-space) on a secondary basis prior to WRC-97;
- b) that WRC-97 replaced this by an allocation to the mobile-satellite service (Earth-to-space), except aeronautical mobile-satellite, on a secondary basis;
- c) that the band 14-14.5 GHz is also allocated to the fixed-satellite (Earth-to-space), radionavigation, fixed and mobile, except aeronautical mobile, services;
- d) that the services in *considering c)* need to be protected consistent with their allocation status;
- e) that there is a demand for use on board aircraft of aeronautical mobile-satellite service capabilities in order to provide two-way communication and data transmission functions;
- f) that such demand justifies the consideration of possible broadening of the allocation to include aeronautical applications on a secondary basis at a future competent conference;
- g) that studies on the feasibility of such a broadening of the allocation must be completed before the aforementioned competent conference, with the participation of relevant entities and organizations;
- h) that Recommendation 34 (WRC-95) states that future world radiocommunication conferences, whenever possible, should allocate frequency bands to the most broadly defined services with a view to providing maximum flexibility in spectrum use,

resolves

that [WRC-03] should examine the possibility of broadening the secondary allocation to the mobile-satellite service (Earth-to-space), except aeronautical mobile-satellite, in the 14-14.5 GHz band to include aeronautical use, if the ITU-R studies demonstrate that such a secondary service can be operated without causing interference to the primary services.

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invites ITU-R

to complete, in time for WRC-03, the technical and operational studies on the feasibility of sharing of the band 14-14.5 GHz between the services referred to in *considering c)* above and the aeronautical mobile-satellite service, with the latter service on a secondary basis,

instructs the Director of the Radiocommunication Bureau

to invite relevant entities and organizations to participate in these studies.

MOD

RESOLUTION 300 (Rev.WRC-2000)

Use and notification of the paired frequencies reserved for narrow-band direct-printing telegraphy and data transmission systems in the HF bands allocated on an exclusive basis to the maritime mobile service

(See Appendix S17 (Part B, Section II))

The World Radiocommunication Conference (Istanbul, 2000),

considering

- a)* that certain sections of the HF bands allocated to the maritime mobile service have been reserved for narrow-band direct-printing telegraphy and data transmission systems for use on a paired frequency basis only;
- b)* that Appendix S17 (Part B, Section II) contains a channelling arrangement in the maritime mobile HF bands for narrow-band direct-printing telegraphy and data systems (paired frequencies);
- c)* that WMARC-74 and WARC-Mob-87 established a provisional procedure for the use and notification of paired frequencies for narrow-band direct-printing telegraphy and that the application of this procedure by administrations and by the Radiocommunication Bureau was satisfactory;
- d)* that WRC-95 and WRC-97 modified the relevant procedures for examination of the frequency assignments in the non-planned bands,

resolves

that paired frequencies in the HF bands reserved for narrow-band direct-printing telegraphy between coast stations and ship stations shall be used by these stations, notified to the Bureau and recorded in the Master International Frequency Register in accordance with the standard procedures of Article S11 as from 3 June 2000,

instructs the Bureau

to review the frequency assignments referred to in this resolution, which are currently recorded in the Master Register, and to modify the related findings so as to reflect the standard examination and recording procedures as stipulated in Article S11.

MOD

RESOLUTION 342 (Rev.WRC-2000)

New technologies to provide improved efficiency in the use of the band 156-174 MHz by stations in the maritime mobile service

The World Radiocommunication Conference (Istanbul, 2000),

considering

- a) that the agenda of this conference included the consideration of the use of new technologies for the maritime mobile service in the band 156-174 MHz and the consequential revision of Appendix **S18**;
- b) Recommendation **318 (Mob-87)**, particularly *noting b) and c)* thereof;
- c) that Appendix **S18** identifies frequencies to be used for distress and safety communications on an international basis;
- d) that the introduction of new technology in the maritime mobile service shall not disrupt distress and safety communications in the VHF band including those established by the International Convention for the Safety of Life at Sea (SOLAS), 1974, as amended;
- e) that the date for full implementation of GMDSS was 1 February 1999;
- f) that ITU-R is conducting studies on improving efficiency in the use of this band, and that these studies are still ongoing;
- g) that changes made in Appendix **S18** should not prejudice the future use of these frequencies or the capabilities of systems or new applications required for use by the maritime mobile service;
- h) that the congestion on Appendix **S18** frequencies calls for the implementation of efficient new technologies;
- i) that the use of new technology on maritime VHF frequencies will make it possible to better respond to the emerging demand for new services;
- j) that ITU-R has approved Recommendation ITU-R M.1312 relating to a long-term solution for improved efficiency in the use of the band 156-174 MHz by stations in the maritime mobile service;
- k) that ITU-R has approved Recommendation ITU-R M.1371 relating to technical characteristics for a universal shipborne automatic identification system using time-division multiple access in the VHF maritime mobile band;
- l) that there is a need to maintain some duplex channels for specific applications.

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noting

- a) that the global maritime market may not be of a sufficient size to warrant the development of a new system solely for the maritime service;
- b) that digital systems have been successfully implemented in the land mobile service,

noting also

that this conference has modified Appendix **S18**, including the addition of Note *o*), to permit the possible use on a voluntary basis of various channels or bands created by the conversion of some duplex channels to simplex channels, for the initial testing and the possible future introduction of new technologies,

resolves

- 1 that, in order to provide full worldwide interoperability of equipment on ships, there should be one technology, or more than one interoperable worldwide technology, implemented under Appendix **S18**;
- 2 that, as soon as the ITU-R studies are complete, a future competent conference should consider any necessary changes to Appendix **S18** to enable the use of new technologies by the maritime mobile service,

invites ITU-R

to finalize the following studies:

- a) identify the future requirements of the maritime mobile service;
- b) identify suitable technical characteristics of the system or interoperable systems to replace existing technology;
- c) identify necessary modifications to the table of frequencies contained in Appendix **S18**;
- d) recommend a transition plan for the introduction of new technologies;
- e) recommend how new technologies can be introduced while ensuring compliance with the distress and safety requirements.

instructs the Secretary-General

to communicate this resolution to the International Maritime Organization and the International Association of Lighthouse Authorities.

MOD

RESOLUTION 533 (Rev.WRC-2000)

Implementation of the decisions of WRC-2000 relating to processing of proposed networks submitted under Articles 4, 6 and 7 of Appendices S30 and S30A to the Radio Regulations

The World Radiocommunication Conference (Istanbul, 2000).

considering

- a)* that this conference revised the Appendix **S30** (downlink) Regions 1 and 3 Plan which, through decisions of WRC-2000, has been structured into a WRC-2000 Regions 1 and 3 **APS30/Plan** and a WRC-2000 Regions 1 and 3 **APS30/List**¹;
- b)* that similarly, this conference revised the 14.5-14.8 GHz and 17.3-18.1 GHz Appendix **S30A** Regions 1 and 3 (feeder-link) Plan and structured it into a R1/R3 feeder-link Plan and a R1/R3 feeder-link List;
- c)* that the R1/R3 downlink Plan and the initial R1/R3 downlink List (and the associated R1/R3 feeder-link Plan and initial R1/R3 feeder-link List) were analysed and were confirmed to be compatible with each other;
- d)* that compatibility must be ensured between the R1/R3 downlink Plan (and the associated R1/R3 feeder-link Plan) and:
- the other services in all three Regions having primary allocations in the bands used by the R1/R3 Plans;
 - the Region 2 Plan;
- e)* that this conference has adopted new sharing criteria and associated calculation methods which are included in, or referenced in, the Annexes to Appendices **S30/S30A**;
- f)* that existing systems* and Part B** systems included in the R1/R3 downlink and feeder-link Plans and the Lists as established by WRC-2000 have been determined to be compatible with the other services in the three Regions having primary allocations in the bands used by the R1/R3 Plans, and with the Region 2 Plan;

¹ Hereinafter within this resolution the WRC-2000 Regions 1 and 3 Appendix **S30** Plan is indicated as the "R1/R3 downlink Plan" and the WRC-2000 Regions 1 and 3 List of additional uses associated with the Appendix **S30** Plan is indicated as the "R1/R3 downlink List". Similar terminology has also been followed in relation to Appendix **S30A**.

* Whenever the term "existing" is used in this document, it refers to the notified assignments that are in conformity with Appendices **S30** and **S30A**, which have been brought into use and for which the date of bringing into use has been confirmed to the Bureau before 1700 hours (Istanbul time) on 12 May 2000.

** Whenever the term "Part B" is used in this document, it refers to the assignments for which the procedures of Article 4 of Appendices **S30** and **S30A** have been successfully completed and for which due diligence information has been provided (when required) before 1700 hours (Istanbul time) on 12 May 2000, but which have not been brought into use and/or the date of bringing into use has not been confirmed to the Bureau.

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g) that during WRC-2000 the R1/R3 downlink Plan (and the associated R1/R3 feeder-link Plan) were not analysed in order to identify any incompatibility with the other services in the three Regions having primary allocations in the bands used by the R1/R3 Plans, and with the Region 2 Plan;

h) that since assignments in the initial R1/R3 downlink List (and the associated R1/R3 feeder-link List) have completed coordination with the other services in the three Regions having primary allocations in the bands used by the R1/R3 Plans, and with the Region 2 Plan, using the compatibility criteria in force at the time of WRC-2000, there will be no additional compatibility requirements associated with entries in the initial R1/R3 downlink List or the R1/R3 feeder-link List;

i) that proposed additional assignments would only enter the evolving R1/R3 downlink List after they have satisfied all compatibility requirements with the R1/R3 downlink Plan, with the existing R1/R3 downlink List, with other Appendix **S30** Article 4 submissions with prior dates of receipt, with the other services in the three Regions having primary allocations in the bands used by the R1/R3 Plans, and with the Region 2 Plan;

j) that proposed additional assignments would only enter the evolving R1/R3 feeder-link List after they have satisfied all compatibility requirements with the R1/R3 feeder-link Plan, with the existing R1/R3 feeder-link List, with other Appendix **S30A** Article 4 submissions with prior dates of receipt, with the other services in the three Regions with primary allocations in the same band, and with the Region 2 Plan,

recognizing

that the Radiocommunication Bureau needs clear instructions from this conference on how to deal with the large number of Appendices **S30** and **S30A** Article 4 submissions that have either been processed or are currently being processed which might affect the Regions 1 and 3 downlink and feeder-link Plans and Lists, other Appendices **S30/S30A** Article 4 submissions with prior dates of receipt, the other services in the three Regions having primary allocations in the bands, and the Region 2 Plan,

resolves

1 that following WRC-2000 the Bureau shall compute the reference situations of the R1/R3 downlink Plan and the R1/R3 downlink List and the R1/R3 feeder-link Plan and R1/R3 feeder-link List as at 3 June 2000 and publish this information in a circular letter;

2 that as from 3 June 2000 the Bureau shall use the revised Appendices **S30/S30A** as adopted at this conference in its examination of submissions received after the conference;

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3 that the Bureau shall review, in date of receipt order, all Special Sections already published* in order to determine the requirement for coordination with respect to the R1/R3 downlink Plan, the R1/R3 feeder-link Plan, the R1/R3 downlink List and the R1/R3 feeder-link List and with other Article 4 submissions which have dates of receipt prior to the date of APS30/E, or APS30A/E, Special Section in question, using the revised Appendices **S30/S30A** as adopted by this conference:

- within four months from the date of publication of the above-mentioned corrigenda, possibly affected administrations should provide comments to the Bureau and to the notifying administration and shall indicate any still valid coordination agreements;
- the existing time period for bringing the modifications into use, i.e. five years plus a possible extension of three years, will continue to be counted as from the date of receipt of the modification by the Bureau of the complete Annex 2 information pertaining to the request for modification, but shall be extended by a period equal to the time between 3 June 2000 and the date of publication of the relevant corrigenda to the Special Section;

4 that as from the end of this conference the Bureau shall process all as yet unpublished requests for modifications under Article 4 which were received prior to 3 June 2000 - in the same date order of receipt by the Bureau of the complete information on the request for modification and, using the revised Appendices **S30/S30A** as adopted at this conference, identify for each as yet unpublished request for modification the list of administrations whose agreement is required and publish this list of affected administrations:

- within four months from the date of the above publication, possibly affected administrations should provide comments to the Bureau and to the notifying administration and shall indicate any still valid coordination agreements;
- the existing time period for bringing the modifications into use, i.e. five years plus a possible extension of three years, will continue to be counted as from the date of receipt of the modification by the Bureau of the complete Annex 2 information pertaining to the request for modification, but shall be extended by a period equal to the time between 3 June 2000 and the date of publication of the last relevant corrigenda to the Special Sections described in *resolves 3*;

5 that in examining the requirement for coordination of other services in all three Regions with the WRC-2000 Regions 1 and 3 Plans and Lists in the cases described in *resolves 3*, the following methodology shall be applied in accordance with Resolution **53 (Rev.WRC-2000)** and Article 11 of Appendix **S30** and Article 9A of Appendix **S30A**:

- protection from fixed-satellite service assignments already published. The Bureau shall review all relevant Special Sections of the series (for example, APS30/C) previously published, and publish corrigenda where required;

* See also Notes 5a and 6 in Article 11 of Appendix **S30** and Notes 5 and 6 in Article 9A of Appendix **S30A** with respect to assignments in the Region 2 Plan.

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- protection from fixed-satellite service assignments not yet processed. The Bureau shall determine the requirement for coordination and publish the request in its IFIC. The administrations responsible for the fixed-satellite service assignments shall then initiate coordination with the affected assignments in the WRC-2000 Plans and Lists;
- protection from terrestrial assignments already in process. The Bureau shall determine the requirement for coordination and publish the request in its IFIC. The administration responsible for the terrestrial assignments shall then initiate coordination with the affected assignments in the WRC-2000 Plans and Lists.

MOD

RESOLUTION 644 (Rev.WRC-2000)

Telecommunication resources for disaster mitigation and relief operations

The World Radiocommunication Conference (Istanbul, 2000),

considering

- a) that ITU, in the same spirit as reflected in Articles 40 and 46 of its Constitution has specifically recognized the importance of the international use of radiocommunications in the event of natural disasters, epidemics, famines and similar emergencies;
- b) that the Plenipotentiary Conference of the International Telecommunication Union (Minneapolis, 1998), in endorsing Resolution 19 of the World Telecommunication Development Conference (Valetta, 1998), adopted Resolution 36 (Rev.Minneapolis, 1998) on telecommunications in the service of humanitarian assistance;
- c) that administrations have been urged to take all practical steps to facilitate the rapid deployment and effective use of telecommunication resources for disaster mitigation and disaster relief operations by reducing and, where possible, removing regulatory barriers and strengthening transborder cooperation between States,

recognizing

- a) the potential of modern telecommunication technologies as an essential tool for disaster mitigation and relief operations and the vital role of telecommunications for the safety and security of relief workers in the field;
- b) the particular needs of developing countries and the special requirements of the inhabitants of remote areas,

noting

that the Intergovernmental Conference on Emergency Telecommunications (ICET-98), held from 16 to 18 June 1998 in Tampere, Finland, adopted the Convention on the Provision of Telecommunication Resources for Disaster Mitigation and Relief Operations (Tampere Convention),

resolves

to invite the ITU Radiocommunication Sector to continue to study, as a matter of urgency, those aspects of radiocommunications that are relevant to disaster mitigation and relief operations, such as decentralized means of communications that are appropriate and generally available, including amateur radio facilities and mobile and portable satellite terminals,

instructs the Director of the Radiocommunication Bureau

to support administrations in their work towards the implementation of Resolution 36 (Rev.Minneapolis, 1998) and the Tampere Convention.

(MOD)

RESOLUTION 703 (Rev.WRC-2000)

**Calculation methods and interference criteria recommended by the ITU-R
for sharing frequency bands between space radiocommunication and
terrestrial radiocommunication services or between space
radiocommunication services***

* WRC-2000 reviewed this resolution and decided to recommend that WRC-03 review the need for this resolution and, until that time, the implementation of the resolution should be suspended, except that once a year the Director will send a list of ITU-R Recommendations as identified according to *resolves* 1 to all administrations for information.

MOD

RESOLUTION 706 (Rev.WRC-2000)

Operation of the fixed service in the band 90-110 kHz

The World Radiocommunication Conference (Istanbul, 2000).

considering

- a)* the need to protect phased pulse hyperbolic radionavigation systems (Loran-C) operating in the band 90-110 kHz used as a safety service for both maritime and aeronautical services;
- b)* the studies made by the ITU-R in this band;
- c)* that harmful interference affecting safety of flight and ship navigation may be caused to this service by the operation of the fixed service having a secondary allocation in this band;
- d)* that the World Administrative Radio Conference for the Mobile Services (Geneva, 1987) (Mob-87) removed the allocation for the maritime mobile service from this band,

noting

that Mob-87 was not competent to affect significantly the allocation of the fixed service,

resolves

to invite the next competent conference to review the fixed service allocation in this band with a view to its possible deletion.

MOD

RESOLUTION 716 (Rev.WRC-2000)

Use of the frequency bands 1 980-2 010 MHz and 2 170-2 200 MHz in all three Regions and 2 010-2 025 MHz and 2 160-2 170 MHz in Region 2 by the fixed and mobile-satellite services and associated transition arrangements

The World Radiocommunication Conference (Istanbul, 2000),

considering

- a) that WARC-92 allocated the bands 1 980-2 010 MHz and 2 170-2 200 MHz for the mobile-satellite service with a date of entry into force of 1 January 2005, these allocations being co-primary with fixed and mobile service allocations;
- b) that the use of the frequency bands 1 980-2 010 MHz and 2 170-2 200 MHz in all three Regions and 2 010-2 025 MHz and 2 160-2 170 MHz in Region 2 by the mobile-satellite service (MSS), in accordance with the provisions of Nos. **S5.389A**, **S5.389C** and **S5.389D** of the Radio Regulations, as adopted by WRC-95 and WRC-97, is subject to a date of entry into force of 1 January 2000, 1 January 2002 (for Region 2) or 1 January 2005;
- c) that these bands are shared with the fixed and mobile¹ services on a primary basis and that they are widely used by the fixed service in many countries;
- d) that the studies made have shown that, while sharing of the MSS with the fixed service in the short to medium term would be generally feasible, in the long term sharing will be complex and difficult in both bands, so that it would be advisable to transfer the fixed service stations operating in the bands in question to other segments of the spectrum;
- e) that for many developing countries, the use of the 2 GHz band offers a substantial advantage for their radiocommunication networks and that it is not attractive to transfer these systems to higher frequency bands because of the economic consequences that this would entail;
- f) that ITU-R has developed a new frequency plan for the fixed service in the 2 GHz band, set out in Recommendation ITU-R F.1098 which will facilitate the introduction of new fixed service systems in band segments that do not overlap with the above-mentioned MSS allocations at 2 GHz;
- g) that sharing between fixed service systems using tropospheric scatter and Earth-to-space links in the MSS in the same frequency band segments is generally not feasible;
- h) that some countries utilize these bands in application of Article 48 of the Constitution (Geneva, 1992).

¹ This resolution does not apply to the mobile service. In this respect, the use of these bands by the mobile-satellite service is subject to coordination with the mobile service under the provisions of Resolution 46 (Rev.WRC-97) or No. S9.11A, as applicable.

RES716-2

recognizing

- a) that WARC-92 identified the bands 1 885-2 025 MHz and 2 110-2 200 MHz for worldwide use by International Mobile Telecommunications-2000 (IMT-2000), the satellite component being limited to the bands 1 980-2 010 MHz and 2 170-2 200 MHz, and that the development of IMT-2000 can offer great potential in helping the developing countries develop more rapidly their telecommunication infrastructure;
- b) that WARC-92 resolved to request the Telecommunication Development Bureau (BDT), when formulating its immediate plans for assistance to the developing countries, to consider the introduction of specific modifications in the radiocommunication networks of the developing countries and that a future world development conference should examine the needs of developing countries and should assist them with the resources needed to implement the required modifications to their radiocommunication networks,

resolves

- 1 to request administrations to notify to the Radiocommunication Bureau the basic characteristics of frequency assignments to existing or planned fixed stations requiring protection, or those typical² of existing and planned fixed stations brought into use before 1 January 2000 in the frequency bands 1 980-2 010 MHz and 2 170-2 200 MHz in all three Regions and 2 010-2 025 MHz and 2 160-2 170 MHz in Region 2;
- 2 that administrations proposing to bring an MSS system into service must take account of the fact that, when coordinating their system with administrations having terrestrial services, such administrations may have existing or planned installations covered by Article 48 of the Constitution;
- 3 that in respect of stations of the fixed service taken into account in the application of Resolution **46 (Rev.WRC-97)/S9.11A** administrations responsible for MSS networks operating in the bands 1 980-2 010 MHz and 2 170-2 200 MHz in all three Regions and 2 010-2 025 MHz and 2 160-2 170 MHz in Region 2 shall ensure that unacceptable interference is not caused to fixed service stations notified and brought into use before 1 January 2000;
- 4 that to facilitate the introduction and future use of the 2 GHz bands by the MSS:
- 4.1 administrations are urged to ensure that frequency assignments to new fixed service systems, to be brought into operation after 1 January 2000, do not overlap with the 1 980-2 010 MHz and 2 170-2 200 MHz in all three Regions and 2 010-2 025 MHz and 2 160-2 170 MHz in Region 2 MSS allocations, for example by using the channel plans of Recommendation ITU-R F.1098:

² With respect to the notification of frequency assignments to stations in the fixed and mobile services, it was possible to notify the characteristics of typical stations in the fixed service in accordance with No. **S11.17** without restriction up until 1 January 2000.

RES716-3

4.2 administrations are urged to take all practicable steps to phase out troposcatter systems operating in the band 1 980-2 010 MHz in all three Regions and 2 010-2 025 MHz in Region 2 by 1 January 2000. New troposcatter systems shall not be brought into operation in these bands:

4.3 administrations are encouraged, where practicable, to draw up plans for the gradual transfer of the frequency assignments to their fixed service stations in the bands 1 980-2 010 MHz and 2 170-2 200 MHz in all three Regions and 2 010-2 025 MHz and 2 160-2 170 MHz in Region 2 to non-overlapping bands, giving priority to the transfer of their frequency assignments in the band 1 980-2 010 MHz in all three Regions and 2 010-2 025 MHz in Region 2, considering the technical, operational and economical aspects:

5 that administrations responsible for the introduction of mobile-satellite systems should take into account and address the concerns of affected countries, especially developing countries, to minimize the possible economic impact of transition measures in respect to existing systems:

6 to invite the Bureau to provide assistance to developing countries requesting it for the introduction of specific modifications to their radiocommunication networks that will facilitate their access to the new technologies being developed in the 2 GHz band as well as in all coordination activities:

7 that administrations responsible for the introduction of mobile-satellite systems urge their mobile-satellite system operators to participate in the protection of terrestrial fixed services especially in the least developed countries,

invites ITU-R

to conduct, as a matter of urgency, further studies, in conjunction with the Bureau, to:

- develop and provide to administrations the necessary tools in a timely manner and not later than WRC-03 to assess the impact of interference in the detailed coordination of mobile-satellite systems;
- develop the necessary planning tools as soon as possible to assist those administrations considering a replanning of their terrestrial fixed networks in the 2 GHz range not later than WRC-03.

invites ITU-D

to evaluate, as a matter of urgency, the financial and economic impact on the developing countries of the transfer of fixed services, and to present its results to a future competent world radiocommunication conference and/or world telecommunication development conference,

invites the Director of the Telecommunication Development Bureau

to implement *invites ITU-D* by encouraging joint activities between the relevant study groups of both ITU-D and ITU-R,

instructs the Director of the Radiocommunication Bureau

to submit a report on the implementation of this resolution to world radiocommunication conferences.

MOD

RESOLUTION 723 (Rev.WRC-2000)

**Consideration by a future competent world radiocommunication conference
of issues dealing with allocations to science services**

The World Radiocommunication Conference (Istanbul, 2000),

considering

- a) that this conference recognized the importance of proper consideration of science service issues based on technical and operational criteria developed in radiocommunication study groups;
- b) that circumstances did not enable the completion of all necessary studies relating to a number of proposals concerning science services;
- c) that a deficiency in telecommand (uplink) frequency allocations exists, compared to available telemetry (downlink) allocations in the 100 MHz to 1 GHz range;
- d) that certain existing allocations may provide the means to satisfy requirements for space research applications without the need for additional frequency allocations, subject to the determination of the appropriate allocation status and/or sharing conditions.

resolves

to recommend that WRC-03 consider the following matters:

- 1) provision of up to 3 MHz of frequency spectrum for the implementation of telecommand links in the space research and space operations services in the frequency range 100 MHz to 1 GHz;
- 2) to consider incorporating in the Table of Frequency Allocations the existing primary allocation to the space research service in the band 7 145-7 235 MHz under No. **S5.460**;
- 3) to review the allocations to the space research service (deep space) (space-to-Earth) and the inter-satellite service, taking into account the coexistence of these two services in the frequency range 32-32.3 GHz, with a view to facilitating satisfactory operation of these services;
- 4) to review existing allocations to space science services near 15 GHz and 26 GHz, with a view to accommodating wideband space-to-Earth space research applications,

invites ITU-R

to complete the necessary studies, as a matter of urgency, taking into account the present use of allocated bands, with a view to presenting, at the appropriate time, the technical information likely to be required as a basis for the work of the conference,

RES723-2

instructs the Secretary-General

to bring this resolution to the attention of the international and regional organizations concerned.

MOD

RESOLUTION 727 (Rev.WRC-2000)
**Use of the frequency band 420-470 MHz by the
earth exploration-satellite (active) service**

The World Radiocommunication Conference (Istanbul, 2000),

considering

- a) that the United Nations Conference on Environment and Development (UNCED) (Rio de Janeiro, 1992) identified an urgent need for assessment and systematic observations of forest cover and rate of forest degradation in tropical and temperate regions;
- b) that, during WRC-97, many countries agreed to the principle that ITU should take action in response to the need identified by UNCED;
- c) that frequencies around 450 MHz have been identified as having the unique capability to penetrate the canopy of forests and to determine the ground-trunk interaction;
- d) that a bandwidth of about 6 MHz is considered necessary to provide the required resolution.

recognizing

- a) that WRC-97 considered a proposal for a secondary allocation for the earth exploration-satellite (active) service within the frequency band 432-438 MHz;
- b) that CPM-97 concluded that spaceborne sensors cannot be considered technically compatible with terrestrial tracking radars without restriction on the spaceborne sensors;
- c) that measures may be needed to minimize interference to fixed, mobile, mobile-satellite, amateur, amateur-satellite and space operation services.

resolves

- 1 to invite ITU-R to study, as a matter of urgency, emission criteria, specific sharing criteria and operational characteristics for active spaceborne sensors in the frequency band 420-470 MHz, and develop a relevant Recommendation;
- 2 to invite ITU-R to develop an ITU-R Report by the date of a future Conference Preparatory Meeting on the specific emission and operational characteristics used by the Earth exploration-satellite (active) service in order to minimize the potential interference to existing services, and in order to support the selection of a frequency band having the optimal sharing scenarios;
- 3 that, on the basis of proposals from administrations, and taking into account the results of the ITU-R studies, the ITU-R Report mentioned in *resolves* 2, and a future CPM Report, a future competent world radiocommunication conference should consider provision of up to 6 MHz of frequency spectrum to the Earth exploration-satellite (active) service in the frequency band 420-470 MHz.

MOD

RESOLUTION 728 (Rev.WRC-2000)

Studies relating to consideration of allocations in the broadcasting band 470-862 MHz to non-geostationary mobile-satellite services

The World Radiocommunication Conference (Istanbul, 2000),

considering

- a) that the agenda of this conference included consideration of the adoption of additional allocations for non-geostationary mobile-satellite services (non-GSO MSS);
- b) that the Report of the 1999 Conference Preparatory Meeting (CPM-99) stated that the Radiocommunication Bureau has identified at least 22 non-GSO MSS networks as at 28 April 1999 at frequencies below 1 GHz, at some stage of coordination under Resolution 46, and that many of the proposed networks cannot be implemented in the existing allocations because there is not enough spectrum;
- c) that CPM-97 considered the protection requirements for analogue television in the band 470-862 MHz against a narrow-band MSS signal in the most sensitive and least sensitive portions of an analogue television channel and the protection requirements for a digital television channel, based on existing Recommendations ITU-R BT.655-4, ITU-R BT.417-4 and ITU-R IS.851-1;
- d) that CPM-97 stated that the protection ratios for a narrow-band interfering signal in the least sensitive parts of an analogue television channel are to be verified by further studies;
- e) that CPM-97 stated the region of lower protection requirements and commensurately higher permissible interfering power flux-density levels as being 100 kHz from the band edges of an analogue television channel, at least in some countries;
- f) that CPM-97 stated that the interfering effects of a non-GSO MSS transmission will depend on its specific characteristics (e.g. duty-cycle, duration, periodicity, etc.), that interference contributions from sources other than MSS (even those from other broadcasting stations) have to be taken into account, that slightly lower values of field strength to be protected may need to be assumed in countries where television networks are relatively sparse, and that studies on sharing are necessary;
- g) that the permissible aggregate interfering power flux-density resulting from these protection requirements, in some portions of an analogue television channel, may be useful in determining the feasibility of sharing with non-GSO MSS transmitter space-to-Earth links;
- h) that these bands are also allocated in part to fixed and mobile terrestrial systems and radionavigation systems;
- i) that, in many countries, the channels assigned for analogue television may also be used for digital television, and that during the transition period of parallel operation of analogue and digital television networks the usage of this band for television will increase;

RES728-2

j) that ITU-R studies are currently under way to determine television broadcasting requirements under Question ITU-R 268/11 and sound broadcasting requirements under Question ITU-R 224/10.

noting

a) that on completion of studies, parts of the bands now allocated to the broadcasting service between 470 MHz and 862 MHz might be considered suitable for worldwide allocation to non-GSO MSS space-to-Earth transmissions;

b) that the bandwidth required in these television channels may be 1-2% of the total band 470-862 MHz to be shared with the above systems;

c) the need to protect the radio astronomy service in the band 608-614 MHz against interference from MSS transmissions, including unwanted emissions,

resolves

1 to invite ITU-R to carry out additional studies to determine operational and technical means that may facilitate co-frequency sharing between narrow-band non-GSO MSS (space-to-Earth) transmissions and the services to which the band 470-862 MHz is allocated, including the bands where the broadcasting service is also allocated, and including consideration of digital television systems and parallel transmissions during the transition period;

2 to recommend that [WRC-06] consider, on the basis of the results of the studies referred to in *resolves* 1, the possibility of making additional allocations on a worldwide basis for the non-GSO MSS.

urges administrations

to participate actively in such studies, with the involvement of interested parties.

ADD

RESOLUTION [COM4/1] (WRC-2000)

**Process to keep the technical bases
of Appendix S7 current**

The World Radiocommunication Conference (Istanbul, 2000),

considering

- a) that Appendix S7 to the Radio Regulations provides the method for the determination of the coordination area of an earth station, and the assumed technical coordination parameters for unknown terrestrial stations or earth stations;
- b) that the technical coordination parameters are contained in Tables 7, 8 and 9 of Annex 7 to Appendix S7;
- c) that the technical coordination parameter tables are based on Recommendation ITU-R SM.1448;
- d) that ITU-R studies on methods for the determination of the coordination area of an earth station are continuing, and the conclusions of these studies could lead to revision of Appendix S7: these methods under study are:
 - methods considering the cumulative impact in determining the coordination areas for high-density earth stations (fixed and mobile);
 - methods to address the modelling of VHF/UHF frequencies for percentages of time less than 1%;
 - methods to address propagation mode (2) water vapour density for both radio climatic Zones B and C;
 - refinements to propagation mode (2) to address elevation angle dependency and the displacement of the centre of the propagation mode (2) contour from the coordinating earth station;
- e) that the technical coordination parameter tables may also need to be modified when changes are made to the Table of Frequency Allocations at future WRCs, or due to changes in technology or in applications;
- f) that the technical coordination parameter tables do not include values for all the necessary parameters of certain space radiocommunication services and terrestrial radiocommunication services sharing frequency bands with equal rights,

recognizing

- a) that Recommendation ITU-R SM.1448 was developed by ITU-R as a basis for the revision of Appendix S7;
- b) that there is a need for future WRCs to keep Appendix S7 current with the latest techniques and to ensure protection of other radiocommunication services sharing the same frequency bands with equal rights, particularly through revision of the tables of technical coordination parameters.

RES[COM4/1]-2

invites ITU-R

- 1 to continue its study, as required, of the technical bases used for determination of the coordination area of an earth station, including recommended values for the missing entries in the tables of technical coordination parameters (Annex 7 to Appendix S7);
- 2 to maintain the relevant ITU-R texts in a format which would facilitate the future revision of Appendix S7;
- 3 to assess the significance of changes to the technical bases.

resolves

- 1 that when ITU-R concludes, based on its studies of the methods in *considering d)* for determination of the coordination area of an earth station and/or the values of technical coordination parameters, that a revision of Appendix S7 is warranted, the matter shall be brought to the attention of the Radiocommunication Assembly;
- 2 that, if the Radiocommunication Assembly confirms the improvements of the methods in *considering d)* for determination of the coordination area of an earth station and/or the values of technical coordination parameters which have been presented by ITU-R, the Director of the Radiocommunication Bureau shall identify the matter in the Director's report to the following WRC.

invites

- 1 WRCs, when presented with any significant changes through the Director's report, to consider the revision of Appendix S7 in light of the recommendation of the Radiocommunication Assembly, pursuant to *resolves* 1 and 2 above;
- 2 each WRC, when modifying the Table of Frequency Allocations, to consider any consequential changes that may be required to the technical coordination parameters of Annex 7 to Appendix S7 and, if necessary, request ITU-R to study the matter.

ADD

RESOLUTION [COM4/2] (WRC-2000)

Evaluation of the administrative due diligence procedure for satellite networks

The World Radiocommunication Conference (Istanbul, 2000),

considering

- a)* that WRC-97 adopted Resolution **49** (WRC-97) establishing administrative due diligence procedures applicable to some satellite radiocommunication services with effect from 22 November 1997;
- b)* that the Plenipotentiary Conference adopted Resolution **85** (Minneapolis, 1998) on evaluation of the administrative due diligence procedure for satellite networks;
- c)* that Resolution **85** (Minneapolis, 1998) instructs the Director of the Radiocommunication Bureau to inform WRC-2000 about the effectiveness of the administrative due diligence procedure, in accordance with Resolution **49** (WRC-97);
- d)* that Resolution **85** (Minneapolis, 1998) resolves that WRC-2000 shall evaluate the results of the implementation of administrative due diligence and shall inform the next Plenipotentiary Conference, in 2002, of its conclusions in that regard;
- e)* the report of the Director of the Radiocommunication Bureau on administrative due diligence applicable to some satellite networks;
- f)* the proposals made to this conference to strengthen administrative due diligence, and to adopt financial due diligence procedures.

noting

- a)* that the Bureau has not encountered any administrative difficulty in applying the provisions and in gathering and publishing information;
- b)* that the Bureau has taken action pursuant to *resolves* 6 of Resolution **49** (WRC-97) to cancel the submissions, and accordingly publish the related special sections, in respect of 36 satellite networks;
- c)* that, for all of these cancellations, the maximum (nine-year) period for bringing into use pursuant to *resolves* 1 and 2 of Resolution **51** (WRC-97) and No. **S11.44** had been reached and hence the submissions would have been cancelled in any event;
- d)* that, when requested to provide due diligence information (triggered by the original date of bringing into use of their satellite networks), administrations have generally requested, wherever possible, extensions of the regulatory period for bringing into use up to the maximum limit authorized by the Radio Regulations;

RES[COM4/2]-2

e) that the effect of administrative due diligence may not, therefore, be fully apparent until at least 21 November 2003.

recognizing

that administrative due diligence has not yet had any impact on the problem of reservation of orbit and spectrum capacity without actual use,

resolves

1 that further experience is needed in the application of the administrative due diligence procedures adopted by WRC-97, and that several years may be needed to see whether the procedure produces satisfactory results;

2 that it is premature to consider the adoption, among other procedures, of any financial due diligence procedures,

instructs the Director of the Radiocommunication Bureau

to report to the 2002 Plenipotentiary Conference on the results of the implementation of the administrative due diligence procedure,

instructs the Secretary-General

to bring this resolution to the attention of the 2002 Plenipotentiary Conference.

ADD

RESOLUTION [COM4/3] (WRC-2000)

**Provisions relating to earth stations located on board vessels
which operate in fixed-satellite service networks in the
bands 3 700-4 200 MHz and 5 925-6 425 MHz**

The World Radiocommunication Conference (Istanbul, 2000),

considering

- a) that there is a demand for global wideband satellite communication services on vessels;
- b) that the technology exists that enables earth stations on board vessels (ESVs) to use fixed-satellite service (FSS) networks operating in the 3 700-4 200 MHz and 5 925-6 425 MHz bands;
- c) that ESVs have the potential to cause unacceptable interference to other services in the band 5 925-6 425 MHz;
- d) that ESVs operating in these bands require considerably less than the full bandwidth in this FSS allocation and only a portion of the visible geostationary arc;
- e) that there are a limited number of geostationary FSS systems that have global coverage;
- f) that the number of vessels equipped with ESVs may be such as to place a heavy coordination burden on some administrations, especially those in developing countries;
- g) that in order to ensure the protection and future growth of other services, ESVs shall operate with requisite technical and operational constraints;
- h) that, based on appropriate assumptions, a minimum distance can be calculated beyond which an ESV will not have the potential to cause unacceptable interference to other services in this band,

noting

- a) that ESVs may operate in fixed-satellite service networks in the bands 3 700-4 200 MHz and 5 925-6 425 MHz under No. S4.4 of the Radio Regulations and shall not claim protection from, nor cause interference to, other services having allocations in the band;
- b) that there is no need for new regulatory procedures for ESVs operating at specified fixed points,

recognizing

- a) that progress has been made within ITU-R in determining the technical and operational provisions under which ESVs could operate;
- b) that further studies are needed,

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resolves

1 to invite ITU-R to continue to study, as a matter of urgency, the regulatory, technical and operational constraints to be applied to ESV operations, having regard to the provisional guidelines for ESV use in Annex 1 and the provisional technical guidelines given in Annex 2 and, in particular, to determine the appropriate value for the minimum distance from ESV stations beyond which these stations are assumed not to have the potential to cause unacceptable interference to stations of other services of any administration and beyond which no coordination would be required;

2 to invite ITU-R, as a matter of urgency:

- to develop Recommendations on methods for coordination between terrestrial services and ESVs;
- to study the feasibility of mitigation techniques, such as various frequency arrangements or dual-band systems, as a way to avoid the need for detailed coordination of ESVs without constraining existing services;
- to study, as a complement to the 3 700-4 200 MHz and 5 925-6 425 MHz bands, the use of other FSS allocations for ESVs transmitting in the 6 GHz and 14 GHz bands;

3 to invite WRC-03 to assess, in the light of these studies, the provisions under which ESVs could operate in FSS networks in the bands 3 700-4 200 MHz and 5 925-6 425 MHz, without causing unacceptable interference to radiocommunication services operating in accordance with the Radio Regulations;

4 that, until a decision is adopted for ESVs by WRC-03, agreement between the administrations licensing ESVs and affected administrations should be reached on a bilateral or multilateral basis, in accordance with the guidelines in Annexes 1 and 2;

5 that, until a decision is adopted for ESVs by WRC-03, administrations licensing ESVs that enter into bilateral or multilateral agreements under *resolves* 4 above should ensure that, as part of the licensing process, ESVs operate in compliance with such agreements, taking into consideration the interests of concerned neighbouring countries.

encourages concerned administrations

to cooperate with administrations which license ESVs while seeking agreement under *resolves* 4,

encourages ESV licensing administrations

to consider registering their ESV frequency assignments in the Master International Frequency Register, for information purposes only,

urges all administrations

to participate actively in the above-mentioned studies by submitting contributions,

instructs the Secretary-General

to bring this resolution to the attention of the Secretary-General of the International Maritime Organization and to invite IMO to participate in the work on this issue.

ANNEX 1 TO RESOLUTION [COM4/3] (WRC-2000)

Provisional guidelines for ESV use

- 1 The administration that issues the licence for the use of ESVs in these bands (licensing administration) shall ensure that such stations do not cause unacceptable interference to the services of other concerned administrations.
- 2 Operators of ESVs shall comply with the technical guidelines listed in Annex 2 and/or those agreed by the licensing and concerned administrations.
- 3 ESVs shall not claim protection from transmissions of other services operating in accordance with the Radio Regulations.
- 4 Any transmissions from ESVs within an agreed distance, as identified in *resolves* 1 of this resolution, shall be based upon the prior agreement of the concerned administration.
- 5 Administrations which issue ESV licences shall ensure that ESV operators endeavour to provide the necessary assistance to the concerned administrations in order to facilitate the agreement.
- 6 Administrations, in determining the distance referred to in item 4 above, are encouraged to exclude those parts of their territory, such as remote small islands, where other services in the band 5 925-6 425 MHz are neither operating nor planned.
- 7 If an administration changes its actual or planned deployment of stations in other services, it may require revision of the agreement with the ESV licensing administration(s).
- 8 The ESV system should include means of identification and automatic mechanisms to terminate transmissions whenever the station operates outside its authorized geographic (see item 4 above) or operational limits.
- 9 ESVs should be equipped so as to enable the licensing administration under the provisions of Article **S18** to verify earth station performance and to terminate ESV transmissions immediately upon request by an administration whose services may be affected.
- 10 When ESVs operating beyond the territorial waters but within a specified distance (as referred to in item 4 above) fail to comply with the terms required by the concerned administration pursuant to items 2 and 4, then that administration may:
 - request the ESV to comply with such terms or cease operation immediately; or
 - request the licensing administration to require such compliance or immediate cessation of the operation.
- 11 Any licensing authority that licenses ESVs should maintain at all times a point of contact that may be contacted by a concerned administration.

ANNEX 2 TO RESOLUTION [COM4/3] (WRC-2000)

**Provisional technical guidelines applicable to ESVs operating in
the bands 3 700-4 200 MHz and 5 925-6 425 MHz**

Minimum diameter of ESV antenna:	2.4 m
Maximum half-power beamwidth of ESV antenna:	1.5°
Minimum elevation angle of ESV antenna:	10°
Maximum necessary bandwidth per vessel:	2.346 MHz
Maximum necessary bandwidth in a single operating area:	36 MHz (see Note)
Maximum ESV transmitter power spectral density at the input to the antenna:	17 dB(W/MHz)
Tracking accuracy of ESV antenna:	0.2°

NOTE – The actual bandwidth required in an operating area will depend on the number of ESVs that would be present simultaneously in that area, and in many areas the required bandwidth will be less than 36 MHz. In addition, because ESVs are frequency agile, the necessary bandwidth per vessel (2.346 MHz) can be generally identified anywhere within the 4/6 GHz bands and does not have to be contiguous with bandwidth of other ESVs.

ADD

RESOLUTION [COM4/4] (WRC-2000)

Temporary procedures for improving satellite network coordination and notification procedures

The World Radiocommunication Conference (Istanbul, 2000),

considering

- a) Resolution 86 (Minneapolis, 1998) of the Plenipotentiary Conference;
- b) that there is now such a large backlog of satellite network coordination requests pending with the Radiocommunication Bureau that, at current processing rates and with no new filings, it could take the Bureau more than three years to absorb it;
- c) that 95 per cent of this backlog consists of coordination requests for geostationary-satellite networks.

recognizing

- a) that, in view of the processing delays, an administration may have to wait three years for the Bureau to publish a coordination request and, because of the five-year limit for bringing a network into use, can thus be faced with a short time window in which to effect coordination;
- b) that extraordinary measures are needed to enable the Bureau to absorb the backlog in processing satellite network coordination requests;
- c) that the current breakdown of ITU's satellite coordination process seriously undermines the ability of such networks to provide services and compromises the role of ITU in this process;
- d) that this conference needs to take extraordinary measures to ensure the continued viability and credibility of the ITU satellite coordination process.

resolves

1 that, for those networks for which complete coordination information is received by the Bureau on or after 3 June 2000, the Bureau and administrations shall apply the following provisions, as revised by this conference:

- a) Nos. **S9.36**, **S9.36.2**, **S9.41** and **S9.42**;
- b) Section D of Annex 2A to Appendix **S4**;
- c) No. **S9.7** (GSO/GSO) in Table **S5-1** of Appendix **S5**;

2 that, as from 3 June 2000, for those networks for which complete coordination information has been received by the Bureau prior to 3 June 2000 but not yet published in a special

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section of the International Frequency Information Circular (IFIC), the Bureau and administrations shall apply the following provisions, as revised by this conference:

a) Nos. **S9.36**, **S9.36.2**, **S9.41** and **S9.42**;

b) Section D of Annex 2A to Appendix **S4**;

c) No. **S9.7** (GSO/GSO) in Table **S5-1** of Appendix **S5**;

3 that, when the Bureau, under No. **S11.32**, conducts its examination of notifications of satellite networks in respect of compliance with the coordination procedure, it shall base its findings on the coordination requirements set by No. **S9.7** (GSO/GSO) in Table **S5-1** of Appendix **S5**, as revised by this conference, only for those networks published and coordinated pursuant to the provisions of this resolution;

4 that an administration in need of assistance may inform the Bureau that it has previously filed systems which might be affected by the proposed satellite network, and may request the Bureau's assistance, under No. **S9.41**, in determining the need for coordination by applying the provisions of No. **S9.7** (GSO/GSO) in Table **S5-1** of Appendix **S5** (items 1, 2 and 3 of the frequency band column), as revised by this conference; this request shall be considered as a disagreement, pending the results of the analysis by the Bureau of the need for coordination;

5 that, as from 3 June 2000, all notice forms (**APS4/II** and **III**), radio astronomy notices (**APS4/TV**) and API (**APS4/V** and **VI**) and due diligence information (Resolution **49 (WRC-97)**) for satellite networks and earth stations submitted to the Radiocommunication Bureau pursuant to Articles **S9** and **S11** shall be submitted in electronic format which is compatible with the BR electronic notice form capture software (SpaceCap)¹:

a) all notice forms submitted between 3 June and 3 September 2000 may initially be submitted in paper format if administrations deem it necessary;

b) these forms must be resubmitted in electronic format not later than 3 October 2000, without any modification in relation to the paper filing, in order to retain the date of receipt of the original filing; the Bureau will not compare the paper and electronic filing, but both filings will be made available to administrations who may report inconsistencies to the Bureau until 1 March 2001;

c) if these notice forms are not resubmitted in electronic format by 3 October 2000, they shall be considered as incomplete and returned to the administration;

d) all notice forms initially submitted after 3 September 2000 shall be submitted in electronic format; if the data for these notice forms are not received in electronic format, the notice forms shall be considered as incomplete and returned to the administration;

¹ Administrations of developing countries making no more than three filings a year may continue to submit filings on paper until 3 June 2001.

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6 that, as from 3 June 2000, all graphical data associated with the submissions addressed in *resolves 5* should be submitted in graphics data format which is compatible with the BR data capture software (GIMS); submission of graphics in paper form will, however, continue to be accepted.

instructs BR

1 to keep Member States periodically informed of the results of these measures, and report on them to the next competent conference;

2 together with administrations, to monitor, in the interval until WRC-03, whether assistance to administrations in applying the provisions of this resolution has been effective, or whether any further actions are necessary;

3 to make available coordination requests and notifications, "as received", on its International Frequency Information Circular (IFIC) CD-ROM, within 30 days of receipt, and also on its website;

4 to provide administrations with the latest versions of the capture and validation software and any necessary technical means, training and manuals, along with any assistance requested by administrations to enable them to comply with *resolves 5* and *6* above;

5 to integrate the validation software with the capture software to the extent practicable.

urges administrations

1 to resubmit in electronic format notices previously submitted in paper format, after consultation with the Bureau;

2 to submit, as soon as practicable, the graphical data relating to their notices in a format compatible with the BR graphic data capture software.

ADD

RESOLUTION [COM4/5] (WRC-2000)
**Modification of the procedures and requirements
for advance publication**

The World Radiocommunication Conference (Istanbul, 2000),

considering

- a) Resolution **86** (Minneapolis, 1998) of the Plenipotentiary Conference;
- b) that there is concern among a number of administrations that some of the current procedures and requirements for advance publication may give rise to inequalities in the satellite filing and coordination process,

resolves

- 1 that, as of 3 June 2000, the Bureau and administrations shall apply the provisions of Nos. **S9.2** and **S9.5B**, as revised by this conference;
- 2 that any request for coordination or modifications to a previously submitted API received by the Bureau after 3 June 2000 shall be examined in accordance with the provisions of No. **S9.2** as revised by this conference.

ADD

RESOLUTION [COM4/6] (WRC-2000)

Use of the band 2 630-2 655 MHz in certain Region 3 countries by non-GSO satellite systems in the broadcasting-satellite service (sound)

The World Radiocommunication Conference (Istanbul, 2000),

considering

- a) that the band 2 535-2 655 MHz is allocated under No. **S5.418** to the broadcasting-satellite service (sound) in certain Region 3 countries;
- b) that the provisions of Resolution **528** currently limit the use of this band by systems in the broadcasting-satellite service (sound) to the upper 25 MHz of the band;
- c) that, prior to WRC-2000, there were no coordination procedures applicable to non-GSO broadcasting-satellite (sound) systems in this band in relation to other non-GSO or GSO satellite networks;
- d) that satellite technology has now advanced to the stage where non-GSO systems in the broadcasting-satellite service (sound) are technically and economically feasible when operated with high elevation angles;
- e) that satellite systems in the broadcasting-satellite service as described in *considering d)* can be used for the delivery of high-quality, spectrally efficient broadcasting-satellite (sound) service to portable and mobile terminals;
- f) that non-GSO systems in the broadcasting-satellite service (sound) in the band 2 630-2 655 MHz in Region 3 have been notified to ITU and are expected to be brought into use in the near future;
- g) that, prior to WRC-2000, the protection of existing terrestrial services was addressed through the coordination procedures of No. **S9.11**;
- h) that the provision cited in *considering g)* may be inadequate to ensure the future deployment of terrestrial services in this band,

resolves

- 1 that any broadcasting-satellite service (sound) system using non-GSO orbits brought into operation in the band 2 630-2 655 MHz in Region 3 shall be operated such that the minimum elevation angle over the service area is not less than 40°, for the purposes of sharing with terrestrial services;
- 2 that, before an administration notifies to the Bureau or brings into use a frequency assignment for a broadcasting-satellite service (sound) system using non-GSO satellites in the band 2 630-2 655 MHz, for which complete Appendix **S4** coordination information, or notification

information, has been received after 2 June 2000, it shall seek the agreement of any administration having a primary allocation to terrestrial services in the same frequency band on whose territory the power flux-density exceeds the following thresholds:

-128	dB(W/m ²) in 1 MHz	for 0° ≤ θ ≤ 5°
-128 + 0.75 (θ - 5)	dB(W/m ²) in 1 MHz	for 5° < θ ≤ 25°
-113	dB(W/m ²) in 1 MHz	for 25° < θ ≤ 90°

where θ is the angle of arrival of the incident wave above the horizontal plane, in degrees;¹

3 that the elevation angle value in *resolves* 1 and the power flux-density threshold values in *resolves* 2 shall be applied provisionally until the end of WRC-03; any broadcasting-satellite service (sound) system using non-GSO satellites in the band 2 630-2 655 MHz, for which complete Appendix S4 coordination information, or notification information, has been received after 2 June 2000, shall be subject to the elevation angle and power flux-density threshold values determined by WRC-03 unless Resolution 49 information has been supplied for that system by the beginning of WRC-03;

4 that systems in the broadcasting-satellite service (sound) using non-GSO satellites shall be limited to national services unless agreement has been reached to include the territories of other administrations in the service area;

5 that, as of 3 June 2000, the Bureau and administrations shall apply the provisions of Nos. S5.[XXX1] (WRC-2000), S5.[XXX2] (WRC-2000) and S5.[XXX3] (WRC-2000), as well as No. S5.418, as revised by this conference,

invites ITU-R

1 to conduct the necessary studies in time for WRC-03 to develop calculation methodologies and sharing criteria to be used by administrations in applying the provisions of Nos. S5.[XXX1], S5.[XXX2] and S5.[XXX3];

2 to conduct the necessary technical and regulatory studies in time for WRC-03 relating to frequency sharing between systems in the broadcasting-satellite service (sound) and terrestrial services in the band 2 535-2 655 MHz with a view avoiding placing undue constraints on either service,

instructs the Radiocommunication Bureau

in its examination of requests for coordination for any broadcasting-satellite service (sound) system using non-GSO satellites in the 2 630-2 655 MHz band, for which complete Appendix S4 coordination information, or notification information, has been received after 2 June 2000, to determine if the power flux-density thresholds given in *resolves* 2, and taking into account *resolves* 3, are exceeded on the territory of any administration other than the notifying administration and, if so, to inform both the notifying and the affected administrations.

¹ These values relate to the pfd and angles of arrival which would be obtained under free-space propagation conditions.

ADD

RESOLUTION [COM4/8] (WRC-2000)

Administrative procedures for cost recovery for satellite network filings

The World Radiocommunication Conference (Istanbul, 2000),

considering

- a) Resolution **88** (Minneapolis, 1998) of the Plenipotentiary Conference;
- b) Decision 482 of the Council, which provides for one free entitlement per year per administration of a satellite filing;
- c) Decision 482 of the Council, which instructed this conference to consider whether, in light of the Council decision, any relevant amendments to the Radio Regulations with respect to the procedures covered by the Council decision may be necessary;
- d) that this conference, pursuant to Resolution **88** (Minneapolis, 1998) and Council Decision 482, identified the following note associated with Nos. **S9.2B** and **S9.38** in Article **S9**, § 4.2.8 of Appendix **S30**, §§ 4.1.5 and 4.2.8 of Appendix **S30A** and the title of Article 6 of Appendix **S30B**:

“If the payments are not received in accordance with the provisions of Council Decision 482, as amended, on the implementation of cost recovery for satellite network filings, the Bureau shall cancel the publication, after informing the administration concerned. The Bureau shall inform all administrations of such action, and that the network specified in the publication in question no longer has to be taken into consideration by the Bureau and other administrations. The Bureau shall send a reminder to the notifying administration, not later than 60 days prior to due date of the payment if payment has not been received by that date. This provision was identified in reply to Resolution **88** (Minneapolis, 1998) of the Plenipotentiary Conference (Minneapolis, 1998) and shall enter into force at a date to be determined by the forthcoming plenipotentiary conference.”,

considering further

- a) that some Member States are of the view that the rights and obligations of Member States are specified in the Constitution and that any modification of these rights based on financial considerations should be decided by the Plenipotentiary Conference;
- b) that other Member States consider that despite the financial implications, a WRC may adopt and decide on provisions such as those referred to in *considering d)* above;
- c) that a non-payment would result in an inequitable situation between the Member State concerned and the other Member States,

resolves

to recommend that the 2002 Plenipotentiary Conference consider the extent to which the provisions identified by WRC-2000 satisfy the purpose of Resolution **88** (Minneapolis, 1988), and consider the date at which they shall enter into force.