

accommodating the mutual needs of both MSS systems and existing FS facilities. Successful implementation of the transition arrangements in the United States will go a long way to assist other countries, particularly developing countries, in planning for this process and, thereby, ensure that 2 GHz MSS systems become a global reality.

Together with other investors, two U.S. firms, COMSAT and ICO's prime contractor, Hughes Aircraft, have each made a major investment to develop and implement new MSS technology in the 2 GHz bands to bring global mobile personal communications services to the marketplace by year 2000. By adopting a gradual transition arrangement for 2 GHz MSS, the FCC will enable systems such as ICO to compete vigorously and fairly by year 2000 with regional systems such as AMSC and with the Big LEO MSS systems, all of which already have been licensed by the Commission. Moreover, by making the MSS 2 GHz bands usable for MSS in this fashion, the Commission will ensure that additional spectrum is available beyond the L-band and the Big LEO bands at 1.6/2.4 GHz to accommodate the documented demand for MSS services worldwide.

We believe that the steps set out above will fulfill the Commission's objectives in this proceeding to bring the benefits of 2 GHz MSS technology to users throughout the United States and around the world as rapidly as possible and in a manner that fairly balances the interests of MSS and FS systems and promotes the delivery of new, competitive MSS services to the American public.

V. CONCLUSION

For the foregoing reasons, COMSAT requests that the Commission adopt the proposals and recommendations advanced by COMSAT in these Supplemental Comments on the NPRM to allocate spectrum at 2 GHz for global MSS systems.

Respectfully Submitted,

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ATTACHMENT 1

RESOLUTION COM5-10

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 (Geneva, 1995),

considering

- a) that the World Administrative Radio Conference (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;
- a)bis 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) is subject to a date of entry into force of 1 January 2000 or 1 January 2005, in accordance with the provisions of Nos. S5.389A, S5.389C and S5.389D of the Radio Regulations, as adopted by this Conference;
- b) 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;
- c) 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;
- d) 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;
- e) that in response to Resolution 113 (WARC-92) the 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;
- f) 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;
- g) that some countries utilize these bands in application of Article 48 of the Constitution of the International Telecommunication Union (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 No. [S9.11bis].

recognizing

- a) that WARC-92 identified the bands 1 885 - 2 025 MHz and 2 110 - 2 200 MHz for worldwide use by FPLMTS, the satellite component being limited to the frequencies 1 980 - 2 010 and 2 170 - 2 200 MHz, and that the development of FPLMTS can offer great potential in helping the developing countries develop more rapidly their telecommunications infrastructure;
- b) that in Resolution **22 (WARC-92)**, "Assistance to the Developing Countries to Facilitate the Implementation of Changes in Frequency Band Allocations Which Necessitate the Transfer of Existing Assignments", 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, 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, the characteristics of typical stations may be notified in accordance with No. [S11.17 (1223)] without restriction up until 1 January 2000.

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 Radiocommunication 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,

requests

1 the ITU-R to conduct, as a matter of urgency, further studies, in conjunction with the Radiocommunication Bureau, to:

1.1 develop and provide to administrations the necessary tools in a timely manner to assess the impact of interference in the detailed coordination of mobile-satellite systems;

1.2 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;

2 the Telecommunication Development Sector 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 WRC and/or WDC,

instructs the Director of the Radiocommunication Bureau

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

CHART A - FCC ACTIONS TO IMPLEMENT WRC-95 TRANSITION ARRANGEMENTS FOR 2 GHz BANDS IN THE U.S.

Immediately, Adopt WRC-95 Allocations for MSS in the 2 GHz Bands:

- 1) 1990-2025 MHz for MSS Earth-to-space**
- 2) 2160-2200 MHz for MSS space-to-Earth**

Immediately, Freeze All New Licenses::

- 1) Broadcast Auxiliary Service (BAS) Licenses in the 1990-2025 MHz Band;**
- 2) Fixed Service (FS) Licenses in the 2160-2200 MHz Band**

By 1 January 2000, Require:

- 1) BAS Operators to Vacate the 1990-2008 MHz Band (Channel 1);**
- 2) FS and MSS Operators to Coordinate in the 2160-2200 MHz Band**

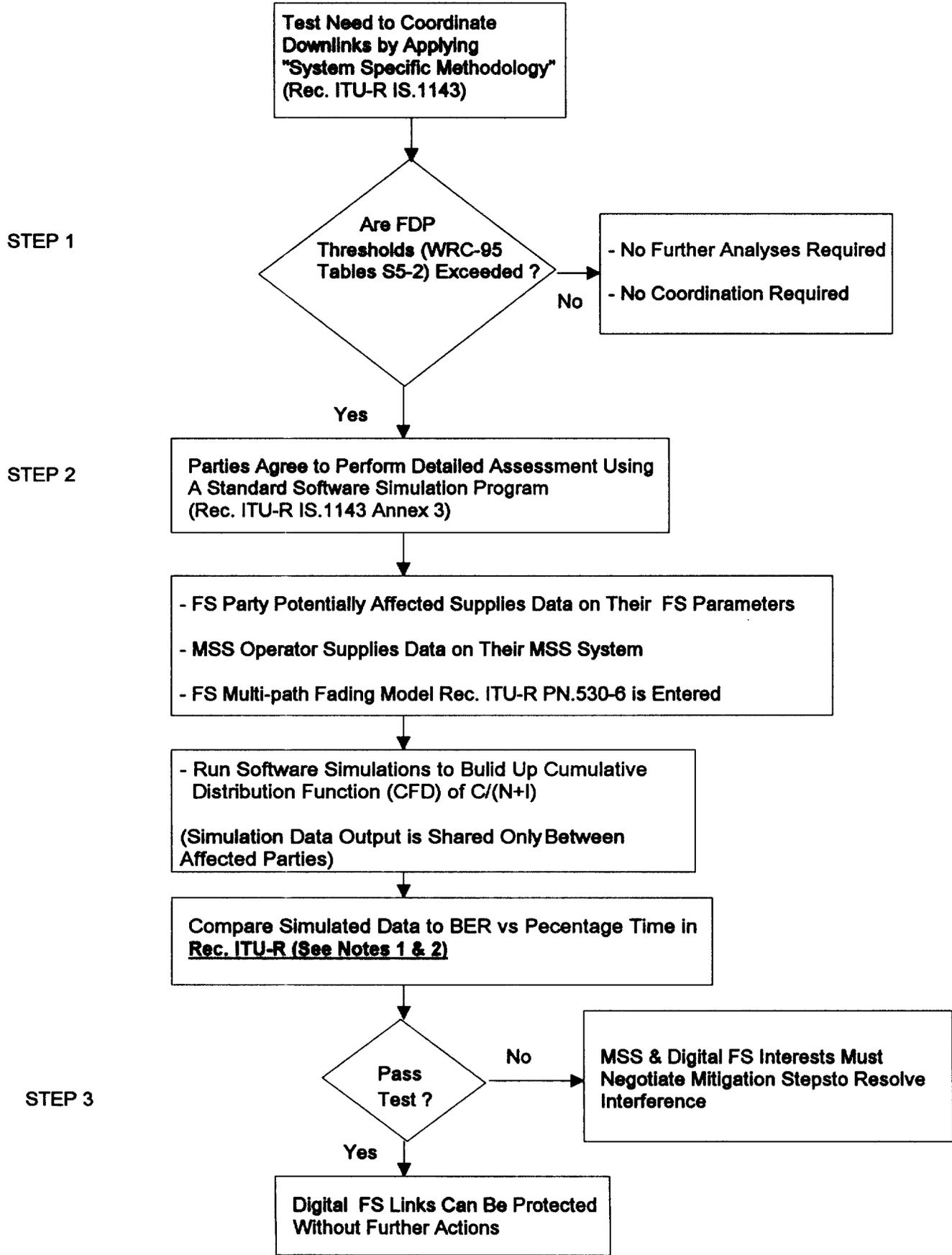
After 1 January 2000, Require:

- 1) BAS Operators to become secondary in the 2008-2025 MHz Band (Channel 2) as necessary to accommodate MSS systems operating before the year 2005;**
- 2) FS and MSS Operators to Coordinate in the 2160-2200 MHz Band**

As of 1 January 2005, Require:

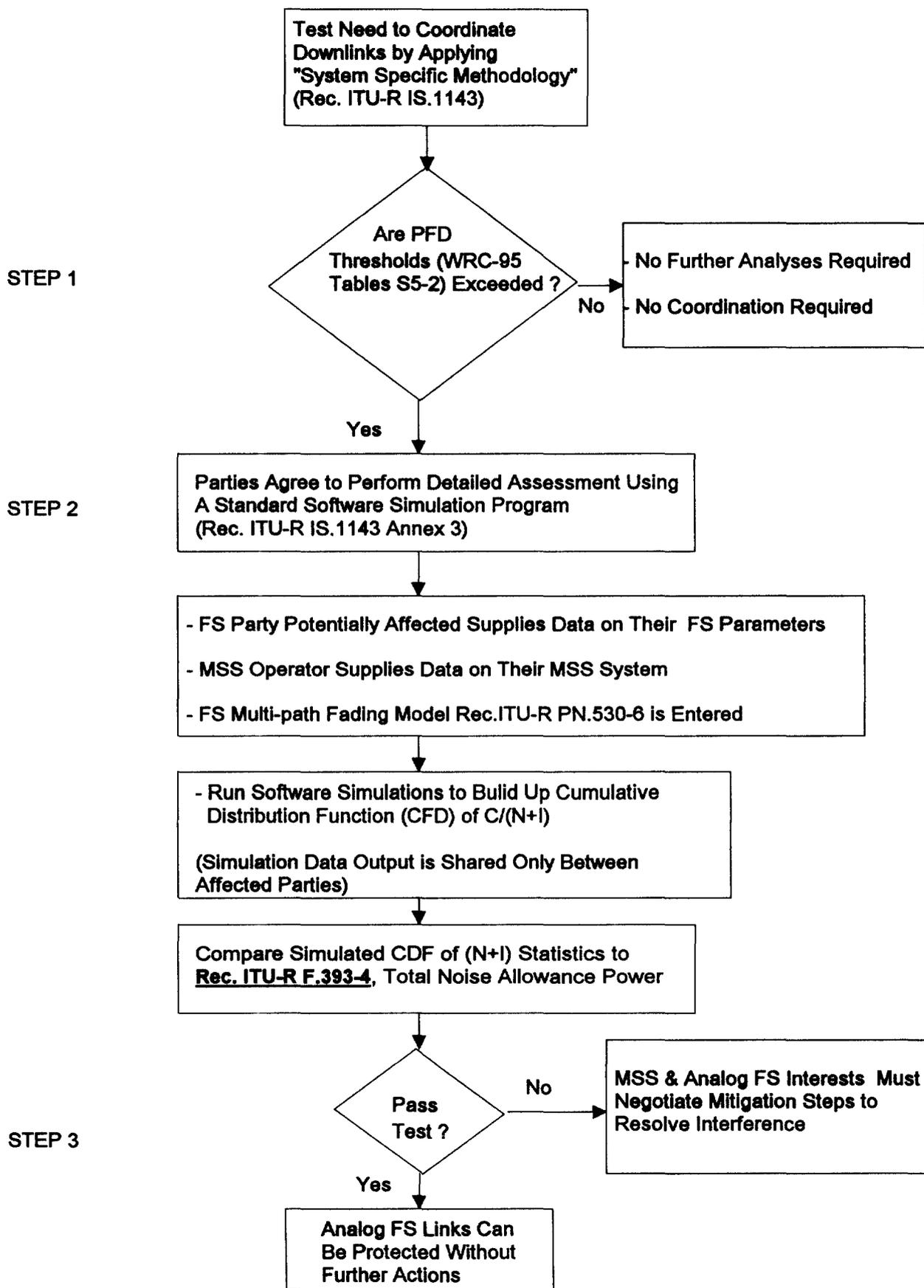
All BAS and FS Operations to cease in the 1990-2025 MHz and 2160-2200 MHz Bands

CHART B - ACTIONS TO COORDINATE MSS DOWNLINKS INTO EXISTING DIGITAL FS RECEIVE STATIONS



Notes: 1) Rec. ITU-R F.697-1 for digital FS system in the local grade portion of ISDN
 2) Rec. ITU-R F.634-2 or F.594-3 for digital system in the high grade portion of ISDN

CHART C - ACTIONS TO COORDINATE MSS DOWNLINKS INTO EXISTING ANALOG FS RECEIVE STATIONS



CERTIFICATE OF SERVICE

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