VI MEETING OF PERMANENT
CONSULTATIVE COMMITTEE III:
RADIOCOMMUNICATIONS
9-13 December, 1996
Acapulco, Mexico

OEA/Ser.L/XVII.4.3
PCC.III/doc.580/96rev.1
January 10, 1997
Original: Spanish

FINAL REPORT

TABLE OF CONTENTS

FINAL REPORT
SIXTH MEETING OF THE PERMANENT CONSULTATIVE COMMITTEE III: RADIOCOMMUNICATIONS
PCC.III

The Sixth Meeting of the Permanent Consultative Committee III: Radiocommunications was held in Acapulco, Mexico, 9-13 December de 1996.

1. AGENDA

1. Approval of the agenda.
2. Appointment of the Drafting Committee for the Final Report.
3. Meeting and report of Working Group chairpersons on the following items:
   - 3.1 Regional data base on the use of radioelectric spectrum (in view of the promotion its common and harmonic use, including joint use aspects.)
   - 3.2 Low Earth Orbit satellites, below 1 GHz.
   - 3.3 Networks and services using small aperture terminals (VSAT.)
   - 3.4 Personal Communication Systems and Associated Systems (fixed wireless access - FWA - and its coexistence with PCS.)
   - 3.5 Radio-Amateur Service.
   - 3.6 World Radiocommunication Conference 1997.
   - 3.7 Mobile Service Satellite and Low Earth Orbit Satellites, above 1 GHz.
   - 3.8 Local Distribution Service/Multipoint Communication.
   - 3.9 Joint Work on Legal Matters (PCC.I, PCC.II, PCC.III.)
   - 3.10 Coordination of System Standards/Radiocommunication Services and Certification (together with PCC.I.)
4. Geo-stationary Orbit Satellite Systems.
5. Fixed Non-Geo-stationary Satellite Systems.
6. Stratospheric Communications Systems (SCS).
7. Entry into force of the Global Maritime Distress and Safety System (GMDSS) including regional mobile satellite service regional systems in the band 1.5/1.6 GHz band participating of GMDSS.
8. Report on the results of the Senior Telecommunication Officials Meeting, in compliance with the mandate given by the Summit at the Americas.
9. Report on the results of the World Telecommunication Policy Forum.
10. Human Resources.
11. Coordination of activities with PCCs I and II (in such aspects as PCS, VSAT, Radio Broadcasting, etc.)
12. Harmonization Activities of PCC.I and III to improve efficiency of standard coordination on wireless networks.
13. Agenda, venue and date for the Seventh PCC.III Meeting.
14. Other related matters.
15. Approval of the report of the Sixth Meeting.

II. MEETING AUTHORITIES

Chairman:	Mr. Luis Manuel Brown Hernández (Mexico)
Vicechairman:	Mr. João Carlos Fagundez Albernaz (Brazil)
Chairman of the Group for the Drafting of the Final Report:	Mr. Alonso Picazo (Mexico)
Secretary:	Mr. Roberto Blois Montes de Souza Executive Secretariat of CITEL, OAS

III RESOLUTIONS

PCC.III/RES. 41 (VI-96)

EXPANDING THE RANGE OF THE RADIO SPECTRUM DATABASE

The Sixth Meeting of the Permanent Consultative Committee III: Radiocommunications,

CONSIDERING:

a) that at the Miami Summit of the Americas, the 34 Heads of State from the Americas mandated that CITEL develop and carry out a work program to promote the compatible use of the radio spectrum;

b) that the Working Group on the Use of the Radio Spectrum was established to examine the use of the radio spectrum and how to facilitate its coordinated use;

c) that the Working Group has begun collecting information concerning the utilization of the radio spectrum in the 960-2500 MHZ range, pursuant to the guidelines agreed to in the Third Meeting of the PCC.III, with the aim of ensuring the timely development of a regional Radio Spectrum database.

d) that during the Fourth meeting of PCC.III it was decided that the Executive Secretary establish the appropriate contacts with the ITU Regional Office to coordinate the introduction of an action plan for the implementation of the said regional database; and

e) that given the extensive use of the radio spectrum below 960 MHZ for such wireless technologies as cellular, paging, two-way radio and low earth orbit satellites and the need to coordinate such a use to promote harmonization and interoperability in the region: the range of the database being collected needs to be extended downward to 137 MHZ.

RESOLVES:

a) That in the interest of such Regional harmonization, the range of the Radio Spectrum Database be expanded from 960 - 2500 MHZ to 137 MHZ - 2500 MHZ;

b) That CITEL member countries make every effort to send information to the CITEL Executive Secretariat concerning the utilization of the radio spectrum in the 137 - 2500 MHZ range, with priority on the original range of 960 - 2500 MHZ.

INSTRUCTS:

The CITEL Executive Secretariat to report to the CITEL membership on the status and progress made on Radio Spectrum Database, at the next PCC.III meeting and at future PCC.III meetings as appropriate.

PCC.III/RES. 42 (VI-96)

PROPOSED NEW WORK ITEM FOR PCC.III AND PCC.I ON SPECTRUM AND STANDARDS FOR UNLICENSED PERSONAL COMMUNICATIONS SYSTEMS

The Sixth Meeting of the Permanent Consultative Committee III: Radiocommunications,

CONSIDERING:

a.) That PCS/Wireless has been identified as a technical priority for CITEL as stated in COM/CITEL RES.8(II-94);

b.) That several CITEL countries are allocating spectrum for PCS in the 2 GHz band (1850-1990 MHZ) ;

c.) That there is a high level of interest in a number of CITEL countries in rapidly deploying PCS;

d.) That the WGSC has completed a substantial amount of work on PCS/Wireless standards coordination for the licensed A-F PCS sub-bands;

e.) That PCC.III/REC.11 (III-95) and PCC.III/REC.12 (III-95) recommend to assign the 1850 -1990 MHZ band for PCS, noting that the 1910-1930 MHZ frequency band is an unpaired band that is used in some countries for low power systems and that in some countries licenses are not required to operate in that band;

f.) That the Unlicensed PCS band is intended to address the need for in-building and campus-wide coverage without incurring the cost of air-time charges and without the costs and delays associated with obtaining a license;

g.) That the Unlicensed PCS allocation was created to foster the development of new innovative technologies such as, wireless PBX, wireless LANs, wireless laptop computers and wireless personal digital assistants; and

h.) That the PCC.III meeting in Asuncion, Paraguay adopted Resolution PCC.III/RES.33 (IV-96) corr.1 - entitled ✐Method to Harmonize Activities of PCC.I and PCC.III for Coordinating the Standardization of Wireless Networks,✍ which included a table listing items for the division of work activities and responsibilities between PCC.I and PCC.III, including joint responsibilities.

RECOGNIZING:

a.) That a common allocation of spectrum in the 2 GHz band in CITEL countries, along with selection of recognized standards, will allow obtaining the benefits of economy of scale and multiple vendors providing compatible equipment within a standard;

b.) That the WINForum, an industry consortium for Unlicensed PCS, has developed a spectrum etiquette that has been adopted by the USA and accepted in Canada that allows compatible Unlicensed PCS systems to operate simultaneously in the same frequency band without causing harmful interference;

c.) That several standards have been developed within the North American standards bodies that adhere to the spectrum etiquette developed by WINForum for Unlicensed PCS;

d.) That a study is currently underway within PCC.III on evaluating the appropriateness of using the 1910 - 1930 MHZ frequency band for Fixed Wireless Access systems;

e) The convenience of;

a) A study on how low power PCS can handle the telecommunications needs of the member countries of CITEL.

b) Developing a Coordinated Standard Document (CSD) for low power PCS.

RESOLVES:

1.) That PCC.III will consider developing a Recommendation on a technical and procedural framework that supports the operation of low power PCS devices and applications that in some countries do not require license.

2.) That PCC.III will consider developing a recommendation on air interface standards that are appropriate for use on Unlicensed PCS systems in the Region of the Americas.

PCC.III/RES.43 (VI-96)

ESTABLISHMENT OF A WORKING GROUP TO QUANTIFY ANY INCOMPATIBILITY ISSUES BETWEEN FWA AND PCS IN THE RANGE 1850-1990 MHZ

The Sixth Meeting of the Permanent Consultative Committee III: Radiocommunications,

CONSIDERING:

1. That the PCC.III has adopted Recommendations PCC.III/REC.11(III-95) and PCC.III/REC.12(III-95), related to the use of band 1850-1990 MHZ for Personal Communications Services;

2. That some countries have adopted or are developing regulatory framework for the use of band 1910-1930 MHZ on an unlicensed basis, subject to power limitations and clearly defined spectrum coordination framework;

3. Some countries have adopted and are using the band 1910-1930 MHZ for FWA systems.

RECOGNIZING:

The advantages obtained by having information regarding compatibility issues related to the use of different FWA and PCS technology in the range of 1850-1990 MHZ, for use by the member countries of CITEL.

RESOLVES:

1. To establish a Working Group to quantify any incompatibility issues between FWA and PCS in the range of 1850-1990 MHZ.

2. To designate Mr. Héctor Budé (Uruguay) as chairman of this Working Group and as ViceChairmen Mr Marco Rodolfo Pérez (Ericsson, Colombia) and Mr. Michael Lynch (Northern Telecom).

3. That the terms of reference are as follow:

   To provide a report on the results of the study on incompatibility between FWA and PCS in the 1850-1990 MHZ band.

   The following topics shall be included, but not limited to:

   a) Issues related to the use of FWA and PCS in adjacent bands.
   b) Issues related to the compatible use of the 1910-1930 MHZ band by both FWA and UPCS systems.
   c) Issues related to the compatible use of FWA technologies in the same band.

PCC.III/RES. 44 (VI-96)

ORGANIZATION OF PCC.III SEMINARS

The Sixth Meeting of Permanent Consultative Committee III: Radiocommunications,

CONSIDERING:

1. That the usefulness of seminars has received wide recognition within CITEL as an effective mechanism to focus the attention on important current topics and raise the level of understanding on them;

2. That Resolution PCC.III/RES.5 (II-95) provides guidelines for the submission of documents for PCC.III seminars;

3. That a number of successful seminars have been held within PCC.III on various relevant topics, such as PCS, Satellite and FWA.

RECOGNIZING:

That the usefulness and impact of seminars would be enhanced if there were agreed guidelines for the organization of seminars, while at the same time retaining flexibility.

RESOLVES:

1. That the selection of topics for PCC.III seminars shall occur as early as possible at the preceding meeting of PCC.III and the details be covered by a Resolution.

2. That for each seminar an organizer, or co-organizers, be nominated (if a specific individual cannot be identified at the preceding meeting of PCC.III, at least there should be an Administration or Associate Member nominated to take the responsibility).

3. That the responsibility of the organizer consists of coordinating the preparations for the various presentations at the seminar (including speakers, topics, length, order, style, question/answer period, etc.) and either chair the seminar or, in consultation with the chairman of PCC.III, nominate someone else to chair the seminar.

4. That the organizer must keep the CITEL Secretariat, the chairman of PCC.III and the chairmen of the relevant PCC.III working groups, informed on the progress of the organization of the seminar.

5. That the organizer must inform the presenters of the need to follow Resolution PCC.III/RES.5 (II-95).

6. That the agenda/plan for the seminar must be distributed by the CITEL Secretariat to members together with the agenda for the meeting of PCC.III.

PCC.III/RES. 45 (VI-96)

ACTIONS RESULTING FROM THE PLAN OF ACTION FOR THE AMERICAS

The Sixth Meeting of the Permanent Consultative Committee III: Radiocommunications,

NOTING:

Resolution COM/CITEL RES.31 (IV-96) that urges:

- in Item No. 5, that special attention be given by PCC.III to specific action items and commitments contained in the Plan of Action of the Senior Telecommunications Officials, and

- in Item No.7, that PCCs and its Working Groups use all necessary means to assure that they are working actively and efficiently towards complying with the identified action items.

KEEPING IN MIND:

That the mandate of PCC.III is to promote the harmonization of Radiocommunication services, taking into account the needs to reduce to a minimum the factors that produce harmful interference in the functioning and operation of networks and services, as well as to promote the use of modern technologies and the application of ITU-R standards and regulations.

CONSIDERING:

That tasks already undertaken by PCC.III are aligned with the general objectives included in the Plan of Action for the Americas.

RESOLVES:

In the tasks of PCC.III and its Working Groups, to take into consideration in fulfilling their mandates, the results of the Plan of Action for the Americas, giving special attention for those items identified by COM/CITEL in its resolution 31 (VI-96).

RECOMMENDS:

To the delegations participating in PCC.III, to provide information, to the degree possible, in fulfilling the commitments cited in the Plan of Action. Such information will be received by the Executive Secretariat of CITEL.

PCC.III/RES.46 (VI-96)

ESTABLISHMENT OF AN AD-HOC WORKING GROUP FOR THE IDENTIFICATION OF ALTERNATIVE FREQUENCY BANDS TO BE USED BY GEOSTATIONARY SATELLITES

The Sixth Meeting of the Permanent Consultative Committee III: Radiocommunications,

CONSIDERING:

1. That the Geostationary Satellite Systems have evolved providing better services.

2. That the technological developments permit the use of new frequency bands not traditionally employed.

3. The various needs in geostationary satellite communications issues of CITEL members.

TAKING INTO ACCOUNT:

That various CITEL members are considering the search of alternatives to use frequency bands for geostationary satellites.

RESOLVES:

1) To establish an Ad-hoc Working Group with the following mandate:

> To identify alternative frequency bands that could be used for different applications by the geostationary satellites without considering the traditionally used bands.

2) To designate Mr. Alonso Picazo D., from Mexico as the Coordinator of the Ad-hoc Working Group.

PCC.III/RES.47 (VI-96)

ON SUBMITTING JOINT DOCUMENTS TO THE ITU-R

The Sixth Meeting of the Permanent Consultative Committee III: Radiocommunications,

CONSIDERING:

That there is a need for a procedure to submit joint documents to the ITU-R, especially for World Radiocommunication Conferences.

RECOGNIZING:

That PCC.III Member Administrations have identified the benefits of submitting joint documents to the ITU-R.

RESOLVES:

a) That PCC.III adopts the procedure attached in the Annex for submitting joint documents to the ITU-R, especially for World Radiocommunication Conferences.

b) That this Resolution replaces Resolution PCC.III/RES. 17 (III-95).

INSTRUCTS:

The Executive Secretariat to request the representations before CITEL the name of a contact point and to distribute this resolution to all PCC.III members.

ANNEX

Procedures for Submitting Joint Documents to the ITU-R

1. PCC.III will identify approved documents for joint submission to the ITU-R.

2. The Administration who originates the approved document shall undertake the task of coordinating the approval of the document.

3. Administrations participating in the same PCC.III meeting may request during the meeting that their country name be placed on the approved document.

4. Alternatively, Administrations participating in the PCC.III meeting may request the originating Administration within two weeks after the closing of the meeting to place their country name on the document.

5. If three or more Administrations place their names on an approved document, the originating Administration shall transmit the document to the ITU-R, Director of the ITU Radiocommunication Bureau and to the CITEL Executive Secretariat on behalf of the PCC.III Administrations approving the document.

6. Upon receiving a copy of the document submitted to the ITU, the Secretariat shall transmit the joint document to all PCC.III Administrations whose names are not on the document, informing them that the document has been submitted to the ITU-R and indicating that the Administration may wish to consider requesting the ITU-R to add its name to the document.

7. Communications between Administrations shall take place through designated contact points before CITEL.

8. The authorization process to be used within an Administration is a matter to be determined by the Administration itself.

PCC.III/RES. 48 (VI-96)

AGENDA, VENUE AND DATE OF THE SEVENTH MEETING OF THE PCC.III

The Sixth Meeting of the Permanent Consultative Committee III: Radiocommunications,

DETERMINE:

1. To hold the Seventh Meeting of PCC.III in Cartagena de Indias, Colombia, 7 - 11 April, 1997.

2. To approve Draft Agenda for the Seventh Meeting of PCC.III, enclosed to this Draft Resolution .

DRAFT AGENDA

1. Approval of the agenda.
2. Appointment of the Drafting Committee for the Final Report.
3. Meeting and report of Working Group chairpersons on the following items:

    3.1 Preparation of the World Radiocommunication Conference 1997 (WRC-97)
    3.2 Regional data base on the use of radioelectric spectrum (in view of the promotion of its common and harmonic use, including sharing aspects.
    3.3 Geo-stationary Orbit Satellite Systems.
    3.4 Networks and services using small aperture terminals (VSAT).
    3.5 Personal Communication Systems and Associated Systems (Fixed Wireless Access - FWA - and its coexistence with PCS.)
    3.6 Radio-Amateur Service.
    3.7 Joint Work on Legal Matters and Administrative Procedures (PCC.I, PCC.II, PCC.III.)
    3.8 Local Multipoint Distribution/Communications Services.
    3.9 Coordination of System Standards/Radiocommunication Services and Certification (together with PCC.I.)
    3.10 Human Resources.
    3.11 Low Earth Orbiting Satellite Systems below 1 GHz.
    3.12 Quantifying incompatibility issues between Fixed Wireless Access and PCS Systems in the 1850-1990 MHz band.

4. Entry into force of the Global Maritime Distress and Safety System (GMDSS) including regional mobile satellite service regional systems in the 1.5/1.6 GHz band participating of GMDSS.
5. Discussions on the results of the World Telecommunication Policy Forum.
6. Coordination of activities with PCCs I and II (in such aspects as PCS, VSAT, Broadcasting, etc.)
7. Harmonization Activities of PCC.I and III to improve efficiency of standard coordination on wireless networks.
8. Mobile Satellite Systems above 1 GHz.
9. Stratospheric Telecommunications Systems.
10. Agenda, Venue and Date for the Eighth PCC.III Meeting.
11. Other related matters.
12. Approval of the report of the Seventh Meeting.

IV. RECOMMENDATIONS

PCC.III/REC. 22 (VI-96)

CONSIDERATIONS CONCERNING THE REGULATION OF GMPCS

The Sixth Meeting of Permanent Consultative Committee III: Radiocommunications,

CONSIDERING:

a) The need and opportunity to discuss aspects related to the regulations of the GMPCS service;

b) The position adopted by CITEL member countries at the World Telecommunication Policy Forum held in Geneva from October 20 to 23, 1996:

c) COM/CITEL Recommendation 2 (IV-96), concerning the World Telecommunication Policy Forum (WTPF);

d) The importance that administrations facilitate the early introduction of GMPCS.

RECOGNIZING:

The strength derived from common positions of CITEL member countries in other international fora,

RECOMMENDS:

1) That CITEL member countries consider amongst other things policing and regulatory elements identified in the Report of the WTPF for regulating GMPCS in the national context of each country.

2) That CITEL member countries consider the terms of the draft Memorandum of Understanding circulated by the ITU Secretary General through its November 13, 1996 letter, and actively participate in commenting on it and attending the relevant ITU meeting(s) with a view to promote both national and regional common interests.

PCC.III REC. 23 (VI-96)

STRATOSPHERIC TELECOMMUNICATIONS SYSTEMS (STS)

The Sixth Meeting of the Permanent Consultative Committee III: Radiocommunications,

CONSIDERING:

a) That information concerning STS has been presented to PCC.III to use parts of the frequency range 47.2 - 50.2 GHz;

b) That one Administration is considering 300 + 300 MHZ in the frequency range 47.2 - 50.2 GHz for STS;

c) That several Administrations are analyzing the possible implementation of STS;

d) That these systems correspond to the ITU definition of Fixed Service;

e) That there are international allocations to the Fixed Service in the range 47.2 - 50.2 GHz, on a co-primary basis with the Fixed-Satellite Service;

f) That STS offer possibilities for effective communications, in particular transmissions of videotelephone, teleconferencing and access to the Internet;

g) That preliminary technical studies indicate that STS and FSS cannot operate co-frequency and co-coverage;

h) That there is a need to remove regulatory uncertainties in order to take advantage of global economies of scale and also to ensure that there is appropriate spectrum available to accommodate STS;

j) That there is a need for an appropriate regulatory framework permitting common implementation of regulations for STS in the Americas;

k) That the possibility of being able to operate STS terminals without geographic constraint will be one of the most attractive features for potential users;

RECOMMENDS:

1. That CITEL Members identify an appropriate regulatory framework that could make spectrum available for STS noting that there are international allocations to the Fixed Service in the range 47.2 - 50.2 GHz, on a co-primary basis with the Fixed-Satellite Service and the steps to be taken to implement this regulatory framework;

2. That CITEL Members review the results of sharing studies including those provided in Document PCC.III 479/96;

3. That CITEL Members consider the appropriate bandwidth required for STS;

4. That if it is determined that WRC-97 action is required, such WRC-97 action should be defined at the next PCC.III meeting.

PCC.III/REC.24 (VI-96)

IMPROVEMENTS OF DISASTER COMMUNICATIONS IN THE AMERICAS

The Sixth Meeting of the Permanent Consultative Committee III: Radiocommunications,

CONSIDERING:

a) The Tampere Declaration, on Disaster Communications (Tampere, Finland, 1991);

b) The PTC.III/RES.5 (II-93), Communications in Emergency Situations;

c) The Resolution No. 7 (WTDC-94, Buenos Aires), on Disaster Communications;

d) The Resolution 36 (PP-94, Kyoto), Telecommunications for Disaster Mitigation and Disaster Relief Operations;

e) The Recommendation ITU-R M.1042, Disaster Communications in the Amateur and Amateur-Satellite Service;

f) The Question ITU-R 209/8, Contributions of the Mobile and Amateur Services and Associated Satellite Services to the Improvement of Disaster Communications;

g) The Draft Convention on the Provision of Telecommunication Resources for Disaster Mitigation and Relief Operations, to be held in Switzerland in early 1997 (1996 ITU Council Doc. 53);

h) The Declaration of Principles and the Plan of Action for the Americas (Senior Telecommunication Officials Meeting, Washington, DC, September 1996);

j) The ITU-R Document 8A/TEMP/32, Improvement of Disaster Communication in the Mobile, Amateur and Associated Satellite Services (November, 1996);

k) The UN Working Group on Emergency Telecommunications Workshop (Port-of-Spain, Trinidad, November 1996),

l) That at the IVth meeting of COM/CITEL in November, 1996, an ad hoc Working Group on the preparations for the ITU 1998 World Telecommunication Development Conference (WTDC-98) was established and ✌emergency telecommunications✍ was identified as one of the issues to be addressed by this Ad Hoc Working Group.

RECOGNIZING:

That the countries of the Americas frequently experience hurricanes, earthquakes, floods, tornados, volcanic eruptions and other natural disasters throughout the Americas requiring use of disaster communications,

RECOMMENDS:

1. That each country develop a consolidated national disaster preparedness plan to identify resources capable of providing emergency communication, outline steps needed to mitigate damage to such resources, establish means of providing temporary service, and make provisions for disaster recovery;

2. That Memoranda of Understanding (MOUs) in support of the national plan be exchanged between government and non-government organizations, including regional cooperation;

3. That disaster communication networks be exercised regularly at national and regional levels under simulated emergency conditions, including links to hurricane centers and the regional emergency centers;

4. That reports of strengths, weaknesses and suggested improvements resulting from such exercises be distributed to interested parties;

5. That the amateur and amateur-satellite services be recognized as particularly useful during the initial period following a natural disaster to exchange disaster relief messages and subsequently exchange disaster welfare inquiry messages on behalf of concerned relatives and friends of the people in the affected area;

6. That land mobile resources be strengthened to assist in disaster relief communications;

7. That mobile-satellite and fixed-satellite earth stations be integrated in the national plan;

8. That CITEL members consider means of roaming and free circulation of equipment and operators in support of disaster communications using the benefit of the OAS International Amateur Radio Permit (IARP), the Draft Convention on the Provision of Telecommunication Resources for Disaster Mitigation and Relief Operations, and draft Global Mobile Personal Communications Systems MOU (GMPCS) being developed following the 1996 World Telecommunication Policy Forum.

9. That CITEL in cooperation with ITU, IARU and other organizations prepare a workshop for participation of telecommunications administrations, the national organizations for emergency management, and national amateur radio organizations to achieve improved disaster communications preparedness.

PCC.III/REC. 25 (VI-96)

SHARING BETWEEN LOCAL MULTIPOINT DISTRIBUTION/ COMMUNICATION SERVICE (LMDS/LMCS) AND NON-GEOSTATIONARY MOBILE SATELLITE SERVICE (NGSO MSS) FEEDER LINKS

The Sixth Meeting of the Permanent Consultative Committee III: Radiocommunications,

CONSIDERING:

1. That a Working Group was established at the Fifth Meeting of the Permanent Consultative Committee III in August 1996 to study the various aspects of the implementation of LMDS/LMCS in the Americas and that the terms of reference of this Working Group include the preparation of guidelines needed for the implementation of LMDS/LMCS in the Americas (see Resolution PCC.III/RES.35 (V-96)).

2. That the 1995 World Radiocommunication Conference designated the 29.1-29.4 GHz band for use by NGSO MSS feeder links (Earth-to-space) on a coequal basis with geostationary networks in the Fixed Satellite Service subject to ITU Resolution 46 coordination procedures.

3. That NGSO MSS feeder links will be implemented globally and that licensing of NGSO MSS feeder link earth stations in the Americas is underway.

4. That specific sharing rules will be required to allow LMDS-type fixed systems to co-exist in the same bands used for feeder links to NGSO MSS systems.

5. That recently the U.S. approved a plan for national use of the Ka-band that provides for sharing of the 29.1-29.25 GHz band between LMDS (hub-to-subscriber only) and NGSO MSS feeder links. thereby reducing the potential for interference without adversely affecting the commercial viability of either service.

6. That these sharing rules were based on typical characteristics of LMDS systems and the space station and earth station characteristics of NGSO MSS feeder link networks currently under development.

7. That with the type of sharing rules adopted in the U.S., it will be possible for LMDS and NGSO MSS feeder links to co-exist in the same spectrum.

8. That these type of sharing rules can be used by other administrations in the Americas.

RECOMMENDS:

1. That CITEL administrations consider the sharing rules between LMDS and NGSO MSS feeder links attached in evaluating the domestic implementation of LMDS in the 29.1-29.25 GHz band.

A n n e x A

RULES ON SHARING BETWEEN LOCAL MULTIPOINT DISTRIBUTION SERVICE AND NON-GEOSTATIONARY MOBILE SATELLITE SERVICE FEEDER LINKS IN THE 29.1-29.25 GHz BAND

Rule 1. Definitions.

(a) Feeder link earth station complex. A complex that includes up to three (3) earth station groups, with each earth station group having up to four (4) antennas, located within a radius of 75 nautical miles of a given set of geographic coordinates provided by a non-geostationary mobile satellite service (NGSO MSS) operator.

(b) Local Multipoint Distribution Service Hub Station. A fixed point-to-multipoint radio station in a Local Multipoint Service System that provides one-way or two-way communication with Local Multipoint Distribution Service Subscriber Stations.

(c) Local Multipoint Distribution Service System. A fixed point to-multipoint radio system consisting of Local Multipoint Distribution Service Hub Stations and their associated Local Multipoint Distribution Service Subscriber Stations.

(d) Local Multipoint Distribution Service Subscriber Station. Any one of the fixed microwave radio stations located at users premises, lying within the coverage area of a Local Multipoint Distribution Service Hub Station, capable of receiving one-way communications from or providing two-way communications with the Local Multipoint Distribution Service Hub Station.

(e) Local Multipoint Distribution Service Backbone Link. A point-to-point radio service link in a Local Multipoint Distribution Service System that is used to interconnect Local Multipoint Distribution Service Hub Stations with each other or with the public switched telephone network.

Rule 2. LMDS Single Station EIRP Limit.

Point-to-point stations in the 29.1-29.25 GHz band for the LMDS backbone between LMDS hubs shall be limited to a maximum allowable e.i.r.p. density per carrier of 23 dBW/MHz in any one megahertz in clear air, and may exceed this limit by employment of adaptive power control in cases where link propagation attenuation exceeds the clear air value due to precipitation and only to the extent that the link is impaired.

Rule 3. LMDS Hub Transmitter EIRP Spectral Area Density Limit.

LMDS applicants shall demonstrate that, under clear air operating conditions, the maximum aggregate of LMDS transmitting hub stations in the authorized service area in the 29.1-29.25 GHz band will not transmit a co-frequency hub-to-subscriber e.i.r.p. spectral area density in any azimuthal direction in excess of X dBW/(MHz-km2) when averaged over any 4.375 MHz band, where X is defined in Table 1. Individual hub stations may exceed their clear air

e.i.r.p.s by employment of adaptive power control in cases where link propagation attenuation exceeds the clear air value and only to the extent that the link is impaired.

(a) The e.i.r.p. aggregate spectral area density is calculated as follows:

$10\log_{10} 1/A \; 3^{N}_{i=1}$ pigi dBW/MHz-km2

where:

N = number of co-frequency hubs in authorized service area
A = Authorized service area in km2
pi = spectral power density into antenna of i-th hub (in W/MHz)
gi = gain of i-th hub antenna at zero degree elevation angle

Each pi and gi are in the same 1 MHz within the designated frequency band.

(b) The climate zones in Table 1 are defined for different geographic locations as shown in Appendix 28 of the ITU Radio Regulations.

Table 1

Climate Zone	e.i.r.p. Spectral Density (Clear Air) (dBW/MHz-km2)
1	-23
2	-25
3,4,5	-26

Rule 4. Hub Transmitter e.i.r.p. Spectral Area Density Limit at Elevation Angles Above the Horizon.

LMDS applicants shall demonstrate that, under clear air operating conditions, the maximum aggregate of LMDS transmitting hub stations in the authorized service area in the 29.1-29.25 GHz band will not transmit a co-frequency hub-to-subscriber e.i.r.p. spectral area density in any azimuthal direction in excess of X dBW/(MHz-km2) when averaged over any 4.375 MHz band where X is defined in Table 2. Individual hub stations may exceed their clear air e.i.r.p.s by employment of adaptive power control in cases where link propagation attenuation exceeds the clear air value and only to the extent that the link is impaired.

(a) The e.i.r.p. aggregate spectral area density is calculated as follows:

$10\log_{10} 1/a \; 3^{N}_{i=1}$ e.i.r.p (ai) dBW/MHz-km2

where:
N = number of co-frequency hubs in authorized service area
A = Authorized service area in km2
e.i.r.p. (ai) = equivalent isotropic radiated spectral power density of the i-th hub (in W/MHz) at elevation angle a

Table 2

Elevation Angle (a)	Relative e.i.r.p. Density (dBW/MHz-km2)
O# a # 4.0	e.i.r.p.(a) = e.i.r.p.(0) + 20 log (sinx)(1/x) where x = (a + 1)/7.5
4.0 < a # 7.7	e.i.r.p.(a) = e.i.r.p.(0) - 3.85a + 7.7
a > 7.7	e.i.r.p.(a) = e.i.r.p.(0) - 22

where a is the angle in degrees of elevation above horizon, e.i.r.p.(0) is the hub e.i.r.p. area density at the horizon used in Rule 3. The nominal antenna pattern will be used for elevation angles between 0 and 8, and average levels will be used for angles beyond 8, where average levels will be calculated by sampling the antenna patterns in each 1 interval between 8 and 90, dividing by 83.

Rule 5. LMDS Power Reduction Techniques.

LMDS hub transmitters shall employ methods to reduce average power levels received by non-geostationary mobile satellite receivers, to the extent necessary to comply with other applicable rules, by employing the methods set forth below:

(a) Alternate Polarizations. LMDS hub transmitters in the LMDS service area may employ both vertical and horizontal linear polarizations such that 50 percent (plus or minus 10 percent) of the hub transmitters shall employ vertical polarization and 50 percent (plus or minus 10 percent) shall employ horizontal polarization.

(b) Frequency Interleaving. LMDS hub transmitters in the LMDS service area may employ frequency interleaving such that 50 percent (plus or minus 10 percent) of the hub transmitters shall employ channel center frequencies which are different by one-half the channel bandwidth of the other 50 percent (plus or minus 10 percent) of the hub transmitters.

(c) Alternative Methods. As alternatives to (a) and (b) above, LMDS operators may employ such other methods as may be shown to achieve equivalent reductions in average power density received by NGSO MSS satellite receivers.

Rule 6. LMDS subscriber transmissions.

LMDS licensees shall not operate transmitters from subscriber locations in the 29.1-29.25 GHz band.

Rule 7. Special requirements for operations in the band 29.1-29.25 GHz.

(a) A maximum of two (2) feeder link earth station complexes associated with any single NGSO MSS system may be placed into operation in country [X] in the band 29.1-29.25 GHz.

(b)(i) LMDS receive stations operating on frequencies in the 29.1-29.25 GHz band within a radius of 75 nautical miles of the geographic coordinates provided by a NGSO MSS operator for NGSO MSS feeder link earth station complex (the "feeder link earth station complex protection zone") shall accept any interference caused to them by such earth station complexes and shall not claim protection from such earth station complexes. NGSO MSS operators shall attempt to locate NGSO MSS feeder link earth station complexes in areas that will minimize to the extent practicable potential interference to LMDS systems.

(ii) LMDS licensees operating on frequencies in the 29.1-29.25 GHz band outside a feeder link earth station complex protection zone shall cooperate fully and make reasonable efforts to resolve technical problems with the NGSO MSS licensee to the extent that transmissions from the NGSO MSS operator's feeder link earth station complex interfere with an LMDS receive station.

PCC-III/REC. 26 (VI-96)

IDENTIFICATION OF SPECTRUM FOR FIXED WIRELESS ACCESS SYSTEMS IN THE AMERICAS

The Sixth Meeting of the Permanent Consultative Committee III: Radiocommunications,

CONSIDERING:

a) That Recommendation PCC.III/REC.10(III-95) on the identification of spectrum for Fixed Wireless Access (FWA) requested contributions on this topic;

b) That Document PCC.III-295/96, an input contribution that was received and discussed at the Fourth Meeting of PCC.III, proposed a draft Recommendation on Fixed Wireless Access in the Americas operating in the 3.4 - 3.7 GHz Band;

c) That the Fourth Meeting of PCC.III identified the following issues on FWA:

- the need to have multiple frequency bands harmonized for FWA;

- the need for each country to understand its FWA requirements in order to provide service in that country;

- the need to consider the applicability of systems based on standardized radio interfaces and other systems based on proprietary radio interface technologies;

- the desirability of the countries of the region to adopt solutions that favor economies of scale;

d) That the ITU-R is developing a "Land Mobile Service Handbook (including Wireless Access)" addressing FWA issues and providing technical and economic considerations on FWA, and that a draft version is available (Document PCC.III-296/96);

e) That cellular telephone services operate in the 824-894 MHZ band in most of the CITEL member countries;

f) That by Recommendation 12 (III-95), PCC.III recommended that, for the Americas, band 1850 - 1990 MHZ be designated for the operation of personal communication systems, and that by Recommendation 11 (III-95), PCC.III recommended considering sub-bands 1850 - 1910 MHZ paired with 1930 - 1990 MHZ, and sub-band 1910 - 1930 for not paired use;

g) That some countries have adopted or are developing regulatory framework for use of the band 1910-1930 MHZ on an unlicensed basis, subject to power limitation and clearly defined spectrum coordination framework;

h) That some countries have adopted and are using the 1910 - 1930 MHZ band for FWA systems;

i) That the 2 - 3 GHz band has been identified for multiple other applications and thus should be avoided for FWA harmonization;

j) That it is not feasible to adopt a single frequency band for FWA throughout the Region;

k) That the band 3.4 - 3.7 GHz is not available for Fixed Wireless Access use in the United States, as the band is used by high-powered radars in that country; and these radars are also operated on an international basis pursuant to the Radio Regulations.

RECOGNIZING :

a) That the usage of the range 3.4 - 3.7 GHz by the Fixed Service, Radiolocation Service, and Fixed-Satellite (space-to-Earth) Service is governed by the Radio Regulations;

b) That administrations will implement Fixed Wireless Access subject to spectrum availability, their own regulatory framework, and taking account of relevant frequency compatibility aspects of usage in neighboring countries;

c) That some countries in the Region are involved in the operation of airborne and maritime high-powered radars in the 3.4 - 3.7 GHz band.

RECOGNIZING FURTHER :

That studies are underway to quantify any incompatibility issues between FWA and PCS in the range 1850-1990 MHZ;

RECOMMENDS:

1) That Administrations consider making provisions for FWA applications in the bands 824-849 / 869-894 MHZ, 1850 - 1990 MHZ and 3.4-3.7 GHz ;

2) That until conclusion of studies referred to above, administrations intending to implement systems within the band 1850-1990 MHZ should consider the possible need to take technical and operational measures to facilitate introduction of compatible services;

3) That administrations consider implementation of FWA in the band 3.4-3.7 GHz with the understanding that:

   - they should establish appropriate sub-bands to promote orderly development of the service within their countries, and
   - in some countries there may be cases where FWA services may need to take technical and operational measures to coexist with radar usage in this band;

4) That PCC.III continue to study the suitability of additional frequency bands for use by the Fixed Wireless Service in the future.

PCC.III/REC. 27 (VI-96)

GLOBAL HARMONIZATION OF THE 2 GHZ MSS ALLOCATIONS

The Sixth Meeting of the Permanent Consultative Committee III: Radiocommunications,

CONSIDERING:

a) that WARC-92 allocated the bands 1980-2010 MHZ(E-s) and 2170-2200 MHZ (s-E) worldwide, and 1970-1980 MHZ (E-s) and 2160-2170 MHZ (s-E) in Region 2 to MSS on a co-primary basis with fixed and mobile services;

b) that WRC-95 changed the Region 2 MSS allocation from 1970-1980 MHZ to 2010-2025 MHZ (E-s), creating a 1990-2025/2165-2200 MHZ band pair;

c) that WRC-95 adopted Resolution 717 (WRC-95) recognizing the benefits of obtaining common primary world wide MSS allocation in the long term, and calling further review of the 2 GHz MSS allocations with the view to harmonizing the allocations while having due regard for the continuing protection of terrestrial services;

d) that ITU-R Recommendation 34 (WRC-95) recommends that future WRC's should, wherever possible, allocate frequency bands on a worldwide basis (aligned services, categories of services and frequency band limits) taking into account technical, operational, economic and other relevant factors;

e) that the CPM report to WRC-95 (Ref: Chapter 2, Section 1, Part D) states that one of the options to increase the amount of usable spectrum for MSS would be to reduce constraints, such as regional allocations, in the existing allocations;

f) that some administrations have established transition steps in the planning of their fixed systems affected by the MSS allocation;

g) that ITU-R Study Group 9 developed Recommendation ITU-R F.1098 containing new channeling plans for the "core bands", 2025-2110 MHZ and 2200-2290 MHZ, and that allows for the expansion outside of these bands;

h) that harmonization of MSS allocations would also facilitate development of both the terrestrial and satellite component of FPLMTS and make its deployment more cost effective;

i) that harmonization of the 2 GHz MSS allocations would facilitate the development of PCS in the 1850-1990 MHZ band in accordance with CITEL Recommendation PCC.III/REC.11(III-95);

j) that to make 2 GHz spectrum useable for MSS in the long term it would be desirable to refrain from assigning new fixed stations in the 2 GHz MSS allocations by 1 January 2000 in accordance with Resolves 4.1 of ITU-R Resolution 716; and

k) that it would also be desirable for CITEL administrations to develop long term plans for the migration of fixed stations from the 2 GHz MSS allocations in accordance with Resolves 4.3 of ITU-R Resolution 716.

RECOMMENDS:

1) The global harmonization of the 2 GHz MSS allocations through the inclusion of the Region 2 allocation in Region 1 and Region 3.

2) That fixed systems should use spectrum outside of the global and regional MSS allocations.

3) That CITEL administrations take account of Resolves 4.1, 4.2 and 4.3 of Resolution 716 (WRC-95).

INVITES:

CITEL members to consider the appropriate dates of implementations of different parts of the harmonized MSS allocations.

PCC.III/REC.28 (VI-96) [1]

800-900 MHZ trunking

The Sixth Meeting of the Permanent Consultative Committee III: Radiocommunications,

CONSIDERING:

a) That Trunking Services in the bands of 800-900 MHZ for use of private and public services and Public Safety entities are becoming more and more prevalent in the Region;

b) That harmonized band allocations within the Region will facilitate cross border and sub-regional commerce, as well as critical Public Safety communications during emergencies;

c) That non-harmonized allocations within the Region may preclude the realization of the benefits of Public Safety and Trunked public and private services;

d) That Public Safety entities are adopting advanced communications systems utilizing digital narrow band equipment; and

e) That to promote the orderly development and licensing of Trunking Services and Public Safety Services within this band, it would be useful to identify specific sub-bands along with recommended channelization,

RECOMMENDS:

[1] **This Recommendation substitutes the Recommendation PCC.III/REC.20 (V-96).**

1. That CITEL Member countries should consider the following sub-band designations and channel bandwidth indicated below when allocating spectrum for Trunking Services for use by private and public Services and Public Safety Services.

806 - 821 / 851- 866 MHZ:

. Private and Public Services
. Channel spacing 25 KHz
. Channel offset within channel groups 0.025 - 1.0 MHZ

821 - 824 / 866 - 869 MHZ:

. Public Safety & Public Services
(users who are directly involved with Public Safety, Security of State, and those services requiring close coordination with the Public Safety Services).
. Channel spacing 12.5 KHz

896 - 901 / 935 -940 MHZ:

. Private and Public Services
. Channel spacing 12.5 KHz
. Contiguous channel allocation.

2. A Band Plan for Private, Public and Public Safety Services in the frequency band of 806 - 869 MHz and 896-940 MHz, which is currently used by some Administrations is attached for consideration by members of PCC.III.

3. The CITEL member countries should also consider the harmonization of the five channels (Note 1 of Table 2) so that they may be used for the coordination and mutual help between public security services in the band 821-824/866-869 MHZ.

INSTRUCTS:

The Executive Secretary of CITEL to distribute this Recommendation to all members of PCC.III.

TABLE 1: CHANNEL DESIGNATION FOR 806-821/851-866 Mhz

Note: Only mobile transmit frequencies are listed; base transmit frequencies are 45 MHz higher.

Ch	F(MHz)	Ch	F(MHz)	Ch	F(MHz)	Ch	F(MHz)	Ch	F(MHz)	Ch	F(MHz)
1	806.0125	51	807.2625	101	808.5125	151	809.7625	201	811.0125	251	812.2625
2	806.0375	52	807.2875	102	808.5375	152	809.7875	202	811.0375	252	812.2875
3	806.0625	53	807.3125	103	808.5625	153	809.8125	203	811.0625	253	812.3125
4	806.0875	54	807.3375	104	808.5875	154	809.8375	204	811.0875	254	812.3375
5	806.1125	55	807.3625	105	808.6125	155	809.8625	205	811.1125	255	812.3625
6	806.1375	56	807.3875	106	808.6375	156	809.8875	206	811.1375	256	812.3875
7	806.1625	57	807.4125	107	808.6625	157	809.9125	207	811.1625	257	812.4125
8	806.1875	58	807.4375	108	808.6875	158	809.9375	208	811.1875	258	812.4375
9	806.2125	59	807.4625	109	808.7125	159	809.9625	209	811.2125	259	812.4625
10	806.2375	60	807.4875	110	808.7375	160	809.9875	210	811.2375	260	812.4875
11	806.2625	61	807.5125	111	808.7625	161	810.0125	211	811.2625	261	812.5125
12	806.2875	62	807.5375	112	808.7875	162	810.0375	212	811.2875	262	812.5375
13	806.3125	63	807.5625	113	808.8125	163	810.0625	213	811.3125	263	812.5625
14	806.3375	64	807.5875	114	808.8375	164	810.0875	214	811.3375	264	812.5875
15	806.3625	65	807.6125	115	808.8625	165	810.1125	215	811.3625	265	812.6125
16	806.3875	66	807.6375	116	808.8875	166	810.1375	216	811.3875	266	812.6375
17	806.4125	67	807.6625	117	808.9125	167	810.1625	217	811.4125	267	812.6625
18	806.4375	68	807.6875	118	808.9375	168	810.1875	218	811.4375	268	812.6875
19	806.4625	69	807.7125	119	808.9625	169	810.2125	219	811.4625	269	812.7125
20	806.4875	70	807.7375	120	808.9875	170	810.2375	220	811.4875	270	812.7375
21	806.5125	71	807.7625	121	809.0125	171	810.2625	221	811.5125	271	812.7625
22	806.5375	72	807.7875	122	809.0375	172	810.2875	222	811.5375	272	812.7875
23	806.5625	73	807.8125	123	809.0625	173	810.3125	223	811.5625	273	812.8125

24	806.5875	74	807.8375	124	809.0875	174	810.3375	224	811.5875	274	812.8375
25	806.6125	75	807.8625	125	809.1125	175	810.3625	225	811.6125	275	812.8625
26	806.6375	76	807.8875	126	809.1375	176	810.3875	226	811.6375	276	812.8875
27	806.6625	77	807.9125	127	809.1625	177	810.4125	227	811.6625	277	812.9125
28	806.6875	78	807.9375	128	809.1875	178	810.4375	228	811.6875	278	812.9375
29	806.7125	79	807.9625	129	809.2125	179	810.4625	229	811.7125	279	812.9625
30	806.7375	80	807.9875	130	809.2375	180	810.4875	230	811.7375	280	812.9875
31	806.7625	81	808.0125	131	809.2625	181	810.5125	231	811.7625	281	813.0125
32	806.7875	82	808.0375	132	809.2875	182	810.5375	232	811.7875	282	813.0375
33	806.8125	83	808.0625	133	809.3125	183	810.5625	233	811.8125	283	813.0625
34	806.8375	84	808.0875	134	809.3375	184	810.5875	234	811.8375	284	813.0875
35	806.8625	85	808.1125	135	809.3625	185	810.6125	235	811.8625	285	813.1125
36	806.8875	86	808.1375	136	809.3875	186	810.6375	236	811.8875	286	813.1375
37	806.9125	87	808.1625	137	809.4125	187	810.6625	237	811.9125	287	813.1625
38	806.9375	88	808.1875	138	809.4375	188	810.6875	238	811.9375	288	813.1875
39	806.9625	89	808.2125	139	809.4625	189	810.7125	239	811.9625	289	813.2125
40	806.9875	90	808.2375	140	809.4875	190	810.7375	240	811.9875	290	813.2375
41	807.0125	91	808.2625	141	809.5125	191	810.7625	241	812.0125	291	813.2625
42	807.0375	92	808.2875	142	809.5375	192	810.7875	242	812.0375	292	813.2875
43	807.0625	93	808.3125	143	809.5625	193	810.8125	243	812.0625	293	813.3125
44	807.0875	94	808.3375	144	809.5875	194	810.8375	244	812.0875	294	813.3375
45	807.1125	95	808.3625	145	809.6125	195	810.8625	245	812.1125	295	813.3625
46	807.1375	96	808.3875	146	809.6375	196	810.8875	246	812.1375	296	813.3875
47	807.1625	97	808.4125	147	809.6625	197	810.9125	247	812.1625	297	813.4125
48	807.1875	98	808.4375	148	809.6875	198	810.9375	248	812.1875	298	813.4375
49	807.2125	99	808.4625	149	809.7125	199	810.9625	249	812.2125	299	813.4625
50	807.2375	100	808.4875	150	809.7375	200	810.9875	250	812.2375	300	813.4875

TABLE 1 (continued)

Ch	F(MHz)	Ch	F(MHz)	Ch	F(MHz)	Ch	F(MHz)	Ch	F(MHz)	Ch	F(MHz)
301	813.5125	351	814.7625	401	816.0125	451	817.2625	501	818.5125	551	819.7625
302	813.5375	352	814.7875	402	816.0375	452	817.2875	502	818.5375	552	819.7875
303	813.5625	353	814.8125	403	816.0625	453	817.3125	503	818.5625	553	819.8125
304	813.5875	354	814.8375	404	816.0875	454	817.3375	504	818.5875	554	819.8375
305	813.6125	355	814.8625	405	816.1125	455	817.3625	505	818.6125	555	819.8625
306	813.6375	356	814.8875	406	816.1375	456	817.3875	506	818.6375	556	819.8875
307	813.6625	357	814.9125	407	816.1625	457	817.4125	507	818.6625	557	819.9125
308	813.6875	358	814.9375	408	816.1875	458	817.4375	508	818.6875	558	819.9375
309	813.7125	359	814.9625	409	816.2125	459	817.4625	509	818.7125	559	819.9625
310	813.7375	360	814.9875	410	816.2375	460	817.4875	510	818.7375	560	819.9875
311	813.7625	361	815.0125	411	816.2625	461	817.5125	511	818.7625	561	820.0125
312	813.7875	362	815.0375	412	816.2875	462	817.5375	512	818.7875	562	820.0375
313	813.8125	363	815.0625	413	816.3125	463	817.5625	513	818.8125	563	820.0625
314	813.8375	364	815.0875	414	816.3375	464	817.5875	514	818.8375	564	820.0875
315	813.8625	365	815.1125	415	816.3625	465	817.6125	515	818.8625	565	820.1125
316	813.8875	366	815.1375	416	816.3875	466	817.6375	516	818.8875	566	820.1375
317	813.9125	367	815.1625	417	816.4125	467	817.6625	517	818.9125	567	820.1625
318	813.9375	368	815.1875	418	816.4375	468	817.6875	518	818.9375	568	820.1875
319	813.9625	369	815.2125	419	816.4625	469	817.7125	519	818.9625	569	820.2125
320	813.9875	370	815.2375	420	816.4875	470	817.7375	520	818.9875	570	820.2375
321	814.0125	371	815.2625	421	816.5125	471	817.7625	521	819.0125	571	820.2625
322	814.0375	372	815.2875	422	816.5375	472	817.7875	522	819.0375	572	820.2875
323	814.0625	373	815.3125	423	816.5625	473	817.8125	523	819.0625	573	820.3125
324	814.0875	374	815.3375	424	816.5875	474	817.8375	524	819.0875	574	820.3375
325	814.1125	375	815.3625	425	816.6125	475	817.8625	525	819.1125	575	820.3625

326	814.1375	376	815.3875	426	816.6375	476	817.8875	526	819.1375	576	820.3875
327	814.1625	377	815.4125	427	816.6625	477	817.9125	527	819.1625	577	820.4125
328	814.1875	378	815.4375	428	816.6875	478	817.9375	528	819.1875	578	820.4375
329	814.2125	379	815.4625	429	816.7125	479	817.9625	529	819.2125	579	820.4625
330	814.2375	380	815.4875	430	816.7375	480	817.9875	530	819.2375	580	820.4875
331	814.2625	381	815.5125	431	816.7625	481	818.0125	531	819.2625	581	820.5125
332	814.2875	382	815.5375	432	816.7875	482	818.0375	532	819.2875	582	820.5375
333	814.3125	383	815.5625	433	816.8125	483	818.0625	533	819.3125	583	820.5625
334	814.3375	384	815.5875	434	816.8375	484	818.0875	534	819.3375	584	820.5875
335	814.3625	385	815.6125	435	816.8625	485	818.1125	535	819.3625	585	820.6125
336	814.3875	386	815.6375	436	816.8875	486	818.1375	536	819.3875	586	820.6375
337	814.4125	387	815.6625	437	816.9125	487	818.1625	537	819.4125	587	820.6625
338	814.4375	388	815.6875	438	816.9375	488	818.1875	538	819.4375	588	820.6875
339	814.4625	389	815.7125	439	816.9625	489	818.2125	539	819.4625	589	820.7125
340	814.4875	390	815.7375	440	816.9875	490	818.2375	540	819.4875	590	820.7375
341	814.5125	391	815.7625	441	817.0125	491	818.2625	541	819.5125	591	820.7625
342	814.5375	392	815.7875	442	817.0375	492	818.2875	542	819.5375	592	820.7875
343	814.5625	393	815.8125	443	817.0625	493	818.3125	543	819.5625	593	820.8125
344	814.5875	394	815.8375	444	817.0875	494	818.3375	544	819.5875	594	820.8375
345	814.6125	395	815.8625	445	817.1125	495	818.3625	545	819.6125	595	820.8625
346	814.6375	396	815.8875	446	817.1375	496	818.3875	546	819.6375	596	820.8875
347	814.6625	397	815.9125	447	817.1625	497	818.4125	547	819.6625	597	820.9125
348	814.6875	398	815.9375	448	817.1875	498	818.4375	548	819.6875	598	820.9375
349	814.7125	399	815.9625	449	817.2125	499	818.4625	549	819.7125	599	820.9625
350	814.7375	400	815.9875	450	817.2375	500	818.4875	550	819.7375	600	820.9875

TABLE 2: CHANNEL DESIGNATION FOR 821-824/866-869 MHz

Notes: 1. Only the mobile transmit frequencies are listed. Base transmit frequencies are 45 MHz higher.
2. * Denotes 25 kHz protection for the Public Service Mutual Aid Channels.

Ch	F(MHz)	Ch	F(MHz)	Ch	F(MHz)	Ch	F(MHz)	Ch	F(MHz)	Ch	F(MHz)
*	*	*	*	*	*	*	*	*	*	791	823.5000
601	821.0125	639	821.5125	677	822.0125	715	822.5125	753	823.0125	792	823.5125
*	*	*	*	*	*	*	*	*	*	793	823.5250
602	821.0375	640	821.5375	678	822.0375	716	822.5375	754	823.0375	794	823.5375
603	821.0500	641	821.5500	679	822.0500	717	822.5500	755	823.0500	795	823.5500
604	821.0625	642	821.5625	680	822.0625	718	822.5625	756	823.0625	796	823.5625
605	821.0750	643	821.5750	681	822.0750	719	822.5750	757	823.0750	797	823.5750
606	821.0875	644	821.5875	682	822.0875	720	822.5875	758	823.0875	798	823.5875
607	821.1000	645	821.6000	683	822.1000	721	822.6000	759	823.1000	799	823.6000
608	821.1125	646	821.6125	684	822.1125	722	822.6125	760	823.1125	800	823.6125
609	821.1250	647	821.6250	685	822.1250	723	822.6250	761	823.1250	801	823.6250
610	821.1375	648	821.6375	686	822.1375	724	822.6375	762	823.1375	802	823.6375
611	821.1500	649	821.6500	687	822.1500	725	822.6500	763	823.1500	803	823.6500
612	821.1625	650	821.6625	688	822.1625	726	822.6625	764	823.1625	804	823.6625
613	821.1750	651	821.6750	689	822.1750	727	822.6750	765	823.1750	805	823.6750
614	821.1875	652	821.6875	690	822.1875	728	822.6875	766	823.1875	806	823.6875
615	821.2000	653	821.7000	691	822.2000	729	822.7000	767	823.2000	807	823.7000
616	821.2125	654	821.7125	692	822.2125	730	822.7125	768	823.2125	808	823.7125
617	821.2250	655	821.7250	693	822.2250	731	822.7250	769	823.2250	809	823.7250
618	821.2375	656	821.7375	694	822.2375	732	822.7375	770	823.2375	810	823.7375
619	821.2500	657	821.7500	695	822.2500	733	822.7500	771	823.2500	811	823.7500

620	821.2625	658	821.7625	696	822.2625	734	822.7625	772	823.2625	812	823.7625
621	821.2750	659	821.7750	697	822.2750	735	822.7750	773	823.2750	813	823.7750
622	821.2875	660	821.7875	698	822.2875	736	822.7875	774	823.2875	814	823.7875
623	821.3000	661	821.8000	699	822.3000	737	822.8000	775	823.3000	815	823.8000
624	821.3125	662	821.8125	700	822.3125	738	822.8125	776	823.3125	816	823.8125
625	821.3250	663	821.8250	701	822.3250	739	822.8250	777	823.3250	817	823.8250
626	821.3375	664	821.8375	702	822.3375	740	822.8375	778	823.3375	818	823.8375
627	821.3500	665	821.8500	703	822.3500	741	822.8500	779	823.3500	819	823.8500
628	821.3625	666	821.8625	704	822.3625	742	822.8625	780	823.3625	820	823.8625
629	821.3750	667	821.8750	705	822.3750	743	822.8750	781	823.3750	821	823.8750
630	821.3875	668	821.8875	706	822.3875	744	822.8875	782	823.3875	822	823.8875
631	821.4000	669	821.9000	707	822.4000	745	822.9000	783	823.4000	823	823.9000
632	821.4125	670	821.9125	708	822.4125	746	822.9125	784	823.4125	824	823.9125
633	821.4250	671	821.9250	709	822.4250	747	822.9250	785	823.4250	825	823.9250
634	821.4375	672	821.9375	710	822.4375	748	822.9375	786	823.4375	826	823.9375
635	821.4500	673	821.9500	711	822.4500	749	822.9500	787	823.4500	827	823.9500
636	821.4625	674	821.9625	712	822.4625	750	822.9625	788	823.4625	828	823.9625
637	821.4750	675	821.9750	713	822.4750	751	822.9750	789	823.4750	829	823.9750
638	821.4875	676	821.9875	714	822.4875	752	822.9875	790	823.4875	830	823.9875

TABLE 2 (continued): CHANNELING PLAN FOR 821-824/866-869 MHz

*	*	*	*	*	791
601	**639**	**677**	**715**	**753**	792
*	*	*	*	*	793
602	640	678	716	754	794
603	641	679	717	755	795
604	642	680	718	756	796
605	643	681	719	757	797
606	644	682	720	758	798
607	645	683	721	759	799
608	646	684	722	760	800
609	647	685	723	761	801
610	648	686	724	762	802
611	649	687	725	763	803
612	650	688	726	764	804
613	651	689	727	765	805
614	652	690	728	766	806
615	653	691	729	767	807
616	654	692	730	768	808
617	655	693	731	769	809
618	656	694	732	770	810
619	657	695	733	771	811
620	658	696	734	772	812
621	659	697	735	773	813
622	660	698	736	774	814
623	661	699	737	775	815
624	662	700	738	776	816
625	663	701	739	777	817
626	664	702	740	778	818
627	665	703	741	779	819
628	666	704	742	780	820
629	667	705	743	781	821
630	668	706	744	782	822
631	669	707	745	783	823
632	670	708	746	784	824
633	671	709	749	785	825
634	672	710	748	786	826
635	673	711	749	787	827
636	674	712	750	788	828
637	675	713	751	789	829

NOTES:

1. Channels 601, 639, 677, 715, and 753 are allocated for Public Service Mutual Aid.

2. Channels 791, 792 and 793 are to be allocated for conventional assignments.

3. Trunking groups are made up of six channels or less and are identified by the first channel number, ie: group 602, 603, 604, etc. Channel usage is subject to the Canada/United States Sharing Arrangement outlined in section 4.

4. Expansion of trunked systems to more channels per group (i.e., groups 602 to 618) is to be made from other trunked systems groups with 250 kHz separation higher in frequency, i.e., trunked group 602 can be expanded from group 622 (e.g., 250 kHz separation), group 603 can be expanded from group 623, etc. Groups 619, 620, and 621 are not expandable (e.g., no more higher groups with 250 kHz separation).

638	676	714	752	790	830

TABLE 3: CHANNEL DESIGNATION

note: only the base transmit frequencies are listed;
mobile transmit frequencies are in the frequency band 896-901 Mhz, 39 MHz lower.

40 935.5000

Channel No.	Base transmit frequency
1	935.0125
2	.0250
3	.0375
4	.0500
5	.0625
6	.0750
7	.0875
8	935.1000
9	.1125
10	.1250
11	.1375
12	.1500
13	.1625
14	.1750
15	.1875
16	935.2000
17	.2125
18	.2250
19	.2375
20	.2500
21	.2625
22	.2750
23	.2875
24	935.3000
25	.3125
26	.3250
27	.3375
28	.3500
29	.3625
30	.3750
31	.3875
32	935.4000
33	.4125
34	.4250
35	.4375
36	.4500
37	.4625
38	.4750
39	.4875

Channel No.	Base transmit frequency
41	935.5125
42	.5250
43	.5375
44	.5500
45	.5625
46	.5750
47	.5875
48	935.6000
49	.6125
50	.6250
51	.6375
52	.6500
53	.6625
54	.6750
55	.6875
56	935.7000
57	.7125
58	.7250
59	.7375
60	.7500
61	.7625
62	.7750
63	.7875
64	935.8000
65	.8125
66	.8250
67	.8375
68	.8500
69	.8625
70	.8750
71	.8875
72	935.9000
73	.9125
74	.9250
75	.9375
76	.9500
77	.9625
78	.9750
79	.9875

80 936.0000

Channel No.	Base transmit frequency
81	936.0125
82	.0250
83	.0375
84	.0500
85	.0625
86	.0750
87	.0875
88	936.1000
89	.1125
90	.1250
91	.1375
92	.1500
93	.1625
94	.1750
95	.1875
96	936.2000
97	.2125
98	.2250
99	.2375
100	.2500
101	.2625
102	.2750
103	.2875
104	936.3000
105	.3125
106	.3250
107	.3375
108	.3500
109	.3625
110	.3750
111	.3875
112	936.4000
113	.4125
114	.4250
115	.4375
116	.4500
117	.4625
118	.4750
119	.4875
120	936.5000
121	936.5125
122	.5250
123	.5375
124	.5500
125	.5625
126	.5750
127	.5875
128	936.6000
129	.6125

130	.6250
131	.6375
132	.6500
133	.6625
134	.6750
135	.6875
136	936.7000
137	.7125
138	.7250
139	.7375
140	.7500
141	.7625
142	.7750
143	.7875
144	936.8000
145	.8125
146	.8250
147	.8375
148	.8500
149	.8625
150	.8750
151	.8875
152	936.9000
153	.9125
154	.9250
155	.9375
156	.9500
157	.9625
158	.9750
159	.9875
160	937.0000

Channel No.	Base transmit frequency
161	937.0125
162	.0250
163	.0375
164	.0500
165	.0625
166	.0750
167	.0875
168	937.1000
169	.1125
170	.1250
171	.1375
172	.1500
173	.1625
174	.1750
175	.1875
176	937.2000
177	.2125
178	.2250
179	.2375
180	.2500
181	.2625
182	.2750
183	.2875
184	937.3000
185	.3125
186	.3250
187	.3375
188	.3500
189	.3625
190	.3750
191	.3875
192	937.4000
193	.4125
194	.4250
195	.4375
196	.4500
197	.4625
198	.4750
199	.4875
200	937.5000

Channel No.	Base transmit frequency
201	937.5125
202	.5250
203	.5375
204	.5500
205	.5625
206	.5750
207	.5875
208	937.6000
209	.6125
210	.6250
211	.6375
212	.6500
213	.6625
214	.6750
215	.6875
216	937.7000
217	.7125
218	.7250
219	.7375
220	.7500
221	.7625
222	.7750
223	.7875
224	937.8000
225	.8125
226	.8250
227	.8375
228	.8500
229	.8625
230	.8750
231	.8875
232	937.9000
233	.9125
234	.9250
235	.9375
236	.9500
237	.9625
238	.9750
239	.9875
240	938.0000

Channel No.	Base transmit frequency
241	938.0125
242	.0250
243	.0375
244	.0500
245	.0625
246	.0750
247	.0875
248	938.1000
249	.1125
250	.1250
251	.1375
252	.1500
253	.1625
254	.1750
255	.1875
256	938.2000
257	.2125
258	.2250
259	.2375
260	.2500
261	.2625
262	.2750
263	.2875
264	938.3000
265	.3125
266	.3250
267	.3375
268	.3500
269	.3625
270	.3750
271	.3875
272	938.4000
273	.4125
274	.4250
275	.4375
276	.4500
277	.4625
278	.4750
279	.4875
280	938.5000

Channel No.	Base transmit frequency
281	938.5125
282	.5250
283	.5375
284	.5500
285	.5625
286	.5750
287	.5875
288	938.6000
289	.6125
290	.6250
291	.6375
292	.6500
293	.6625
294	.6750
295	.6875
296	938.7000
297	.7125
298	.7250
299	.7375
300	.7500
301	.7625
302	.7750
303	.7875
304	938.8000
305	.8125
306	.8250
307	.8375
308	.8500
309	.8625
310	.8750
311	.8875
312	938.9000
313	.9125
314	.9250
315	.9375
316	.9500
317	.9625
318	.9750
319	.9875
320	939.0000

Channel No.	Base transmit frequency
321	939.0125
322	.0250
323	.0375
324	.0500
325	.0625
326	.0750
327	.0875
328	939.1000
329	.1125
330	.1250
331	.1375
332	.1500
333	.1625
334	.1750
335	.1875
336	939.2000
337	.2125
338	.2250
339	.2375
340	.2500
341	.2625
342	.2750
343	.2875
344	939.3000
345	.3125
346	.3250
347	.3375
348	.3500
349	.3625
350	.3750
351	.3875
352	939.4000
353	.4125
354	.4250
355	.4375
356	.4500
357	.4625
358	.4750
359	.4875
360	939.5000

Channel No.	Base transmit frequency
361	939.5125
362	.5250
363	.5375
364	.5500
365	.5625
366	.5750
367	.5875
368	939.6000
369	.6125
370	.6250
371	.6375
372	.6500
373	.6625
374	.6750
375	.6875
376	939.7000
377	.7125
378	.7250
379	.7375
380	.7500
381	.7625
382	.7750
383	.7875
384	939.8000
385	.8125
386	.8250
387	.8375
388	.8500
389	.8625
390	.8750
391	.8875
392	939.9000
393	.9125
394	.9250
395	.9375
396	.9500
397	.9625
398	.9750
399	939.9875

TABLE 2 (a): CHANNELLING PLAN

NATIONAL AND/OR WIDE AREA ASSIGNMENTS

Channel groups 191, 241, 291 and 341 are available for national/wide area radio systems. These channel groups consists of the following channels:

group 191: 191,192,193,194,195,196,197,198,199 and 200
group 241: 241,242,243,244,245,246,247,248,249 and 250
group 291: 291,292,293,294,295,296,297,298,299 and 300
group 341: 341,342,343,344,345,346,347,348,349 and 350

TABLE 2 (b): GROUP CHANNELLING

NOTE: The group number is given by the first channel of the group. The designation " a " or " b " corresponds to the 2 sub-groups of 5 channels within the group of 10 contiguous channels. For trunked systems, frequencies are assigned in groups of 5 channels according to this table, starting with the sub-group (a) and expansion in sub-group (b).

	- - - - - - - - (a) - - - - - - - -	- - - - - - - (b) - - - - - - - -
1	1, 2, 3, 4, 5	6, 7, 8, 9, 10
11	11, 12, 13, 14, 15	16, 17, 18, 19, 20
21	21, 22, 23, 24, 25	26, 27, 28, 29, 30
31	31, 32, 33, 34, 35	36, 37, 38, 39, 40
41	41, 42, 43, 44, 45	46, 47, 48, 49, 50
51	51, 52, 53, 54, 55	56, 57, 58, 59, 60
61	61, 62, 63, 64, 65	66, 67, 68, 69, 70
71	71, 72, 73, 74, 75	76, 77, 78, 79, 80
81	81, 82, 83, 84, 85	86, 87, 88, 89, 90
91	91, 92, 93, 94, 95	96, 97, 98, 99,100
101	101,102,103,104,105	106,107,108,109,110
111	111,112,113,114,115	116,117,118,119,120
121	121,122,123,124,125	126,127,128,129,130
131	131,132,133,134,135	136,137,138,139,140
141	141,142,143,144,145	146,147,148,149,150

151	151,152,153,154,155	156,157,158,159,160
161	161,162,163,164,165	166,167,168,169,170
171	171,172,173,174,175	176,177,178,179,180
181	181,182,183,184,185	186,187,188,189,190
191	191,192,193,194,195	196,197,198,199,200
201	201,202,203,204,205	206,207,208,209,210
211	211,212,213,214,215	216,217,218,219,220
221	221,222,223,224,225	226,227,228,229,230
231	231,232,233,234,235	236,237,238,239,240
241	241,242,243,244,245	246,247,248,249,250
251	251,252,253,254,255	256,257,258,259,260
261	261,262,263,264,265	266,267,268,269,270
271	271,272,273,274,275	276,277,278,279,280
281	281,282,283,284,285	286,287,288,289,290
291	291,292,293,294,295	296,297,298,299,300
301	301,302,303,304,305	306,307,108,109,310
311	311,312,313,314,315	316,317,318,319,320
321	321,322,323,324,325	326,327,328,329,330
331	331,332,333,334,335	336,337,338,339,340
341	341,342,343,344,345	346,347,348,349,350
351	351,352,353,354,355	356,357,358,359,360
361	361,362,363,364,365	366,367,368,369,370
371	371,372,373,374,375	376,377,378,379,380
381	381,382,383,384,385	386,387,388,389,390
391	391,392,393,394,395	396,397,398,399

V. DECISIONS

PCC.III/DEC.13 (VI-96)

Relations with the sub-regional organisms on the establishment of a database on the usage of the radio spectrum.

The Sixth Meeting of the Permanent Consultative Committee III: Radiocommunications decided that the Executive Secretary establishes communication with the sub-regional organisms of America related with telecommunications, in order to identify the tasks that are being developed for the establishment of a database on the usage of the radioelectric spectrum, so task duplicity can be avoided.

PCC.III/DEC. 14 (VI-96)

Questionnaire on VSAT stations.

The Sixth Meeting of the Permanent Consultative Committee III: Radiocommunications decided that the Executive Secretary of CITEL circulates again the questionnaire prepared by the Working Group on Usage of VSAT Stations in the Americas to the member countries with the commitment of giving him an answer no later than the last days of February, 1997.

PCC.III/DEC. 15 (VI-96)

Certification Guidelines.

The Sixth Meeting of the Permanent Consultative Committee III: Radiocommunications decided that the Executive Secretary of CITEL requests that the president of PCC.I transmits to the PCC.III a compilation of the results obtained by PCC.I on the certification guidelines.

PCC.III/DEC. 16 (VI-96)

Database on the usage of the spectrum.

The Sixth Meeting of the Permanent Consultative Committee III: Radiocommunications decided that the Executive Secretary of CITEL provides the member administrations of CITEL with the format to be used to capture the information related with the database that is being prepared in CITEL on the usage of the radioelectric spectrum in the Americas.

PCC.III/DEC.17 (VI-96)

Identification of the Frequency Spectrum for Fixed Wireless Access (FWA)

The Sixth Meeting of the Permanent Consultative Committee III: Radiocommunications decided that the Executive Secretary of CITEL shall provide all members of PCC.III with the new question ITU-R xxxx/8, titled "Frequency bands, technical characteristics and operation needs for the local loop, wireless access systems" (included in Annex A of Document PCC.III-510/96), requesting that they:

1) Analyze the possibility to support the approval of this new question by ITU-R.

2) Consider the provision of contributions to ITU-R WG8A, as well as to PCC.III with the intention of harmonizing the studies in Region 2.

PCC.III/DEC.18 (VI-96)

Proposed Structure for WRC-97

The Sixth Meeting of the Permanent Consultative Committee III: Radiocommunications decided that the Executive Secretary will coordinate, in accordance with Resolution PCC.III/RES.47/96 (III-96) the dissemination of Document PCC-477/96 rev. 1 is circulated among member countries.

VI. LIST OF THE BASIC DOCUMENTS RESULTING FROM THE SIXTH MEETING OF PCC.III: RADIOCOMMUNICATIONS

Report of the Meeting	PCC.III-580/96 rev. 1
Summary Minutes of the Opening Session and the First Plenary Meeting	PCC.III-546/96 rev. 2
Summary Minutes of the Second and Third Plenary Meeting	PCC.III-564/96 rev. 1
Summary Minutes of the Fourth Plenary Meeting	PCC.III-578/96 rev. 1
Summary Minutes of the Fifth Plenary Meeting and the Closing Session	PCC.III-579/96
List of Documents	PCC.III-454/96 rev. 2
List of Participants	PCC.III-458/96 rev. 1