ORGANIZACION DE LOS ESTADOS AMERICANOS
ORGANIZATION OF AMERICAN STATES

Comisión Interamericana de Telecomunicaciones
Inter-American Telecommunication Commission

XIX MEETING OF PERMANENT CONSULTATIVE COMMITTEE III: RADIOCOMMUNICATIONS
November 6 to 9, 2001
Guatemala City, Guatemala

OEA/Ser.L/XVII.4.3
PCC.III/doc. 2131/01 rev.1 cor.1
9 November 2001
Original: Spanish

FINAL REPORT

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FINAL REPORT

XIX MEETING OF THE PERMANENT CONSULTATIVE COMMITTEE III: RADIOCOMMUNICATIONS (PCC.III)

The XIX Meeting of the Permanent Consultative Committee III: Radiocommunications was held in Guatemala city, Guatemala, November 6 to 9, 2001.

I. AGENDA[1]

1. Approval of the Agenda and Calendar.
2. Appointment of the Drafting Group for the Final Report.
3. Restructuring of the working methods of PCC.III.
4. Meeting and Report of Working Groups and Ad Hoc Groups on the following topics:

    4.1 World Radiocommunication Conference.
    4.2 Satellite systems to provide fixed and mobile services.
    4.3 Terrestrial Fixed and Mobile Radiocommunication Services.
    4.4 Preparation of the WTDC-02.
    4.5 ITU Radiocommunication Assembly and Radiocommunication Advisory Group Matters.
    4.6 Study of approaches that facilitate the Migration of existing Radiocommunication Systems in order to make spectrum available for new Radiocommunication Systems.

5. Report of the tasks realized in coordination with ITU.
6. Status of the databases in development.
7. Agenda, Venue and Date of the XX Meeting of PCC.III.
8. Other matters.
9. Approval of the Final Report of the XIX Meeting.

II. AUTHORITIES OF THE MEETING

Chair: Mr. Fernando Carrillo (Mexico)
Vice-Chair: Mr. Marco Bafutto (Brazil)

Executive Secretary: Mr. Clovis Baptista (CITEL)

[1] Document PCC.III/doc.2005/01

Drafting Group:

Chair:	Mr. René Vicente Rodríguez (Guatemala)
Members:	Mr. John Taylor (Canada)
	Mr. Stephen Miller (United States)
	Ms. Robin Frank (United States)
	Ms. Monserrat Sans (United States)

III. RESOLUTIONS

PCC.III/RES. 124 (XIX-01) [2]

GUIDELINES FOR PCC.III REPRESENTATION IN THE WORKING GROUPS OF OTHER REGIONAL ORGANIZATIONS IN PREPARATION FOR THE WRC'S

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

CONSIDERING:

a) The resolution PCC.III/RES.88 (XIII-99) "Procedure for PCC.III representation in the Working Group of the regional organizations for the purpose of sharing the progress of common proposals in preparation for the ITU´s World Radiocommunication Conferences (WRCs), and

b) The experience acquired on previous representations of the PCC.III at working group meetings of other regional organizations,

RESOLVES:

To adopt the guidelines outlined in detail in the attachment to this resolution.

INSTRUCTS THE EXECUTIVE SECRETARY:

To distribute this resolution and its attachment to the CITEL Member States and the associate members of PCC.III.

[2] Document PCC.III/doc.2057/01 rev.1

ANNEX PCC.III/RES. 124 (XIX-01)

1. The composition and participation of the delegations of the PCC.III to the meetings of working groups of other regional organizations will be in accordance to the procedure established on resolution PCC.III/RES.88 (XIII-99) which establishes that the Committee may be represented by its Chair or Vice-Chair, the Chair or Vice-Chair of the Working Group for the preparation of WRC, or by the Coordinators, rapporteurs and delegates identified by the member States of CITEL in consultation with the Chair of the PCC.III and the Chair of the Working Group for the preparation of the WRCs.

2. The criteria that will be applied to decide the final composition of the designated delegation to represent the Committee will be the following:

    a. The delegation shall always include at least, one representative of one Member State.
    b. The lead Spokesperson shall always be a representative of a Member State.
    c. In order to promote the efficient participation of the PCC.III at such meetings, the delegates must periodically attend the activities of PCC.III.
    d. In order to avoid inconveniences to the meeting organizers , the Member States willing to participate are requested to limit the number of representatives to be proposed.

3. The applications to participate in the delegation of the PCC.III must be submitted to the Executive Secretary only, with the consent of the designated contact of the Member State before the OAS.

4. In order that the meeting organizers may conclude their registration process in due time, the participation requests, including the registration form duly completed with the name or names of the proposed representatives, should be submitted by the date set by the Executive Secretary.

5. The participation requests received after the indicated date may not be able to be processed by the meeting organizers.

6. The Executive Secretary will send a written notification to the inviting organization, informing on the number of delegates of the PCC.III. A copy of this communication will be sent to all Member States, to the associate members of PCC.III and to the representatives conforming the delegation of the PCC.III.

7. The duties and obligations of the PCC.III delegation will be the following:

    a. The purpose of the PCC.III delegation is to present before the other regional organizations the advances achieved on the work carried out by the Committee for the preparation of the WRC, therefore, delegates shall not advocate the views of one administration, but should represent the work of PCC.III as a whole.
    b. As guidance for the participation of the PCC.III delegation, the chair of the Working Group for the preparation of the WRC will elaborate an up-dated written report on the activities of this Group. This report will be included in the communication that the Secretariat will send to the organization issuing the invitation, notifying the number of delegates of PCC.III.
    c. The delegates of the PCC.III will not be able to present or defend views or positions other than those that have been subject of discussion at the PCC.III meeting, and that are included in the report of Working Group for the preparation of WRC.

d. The lead Spokesperson will prepare a written report of the activities of the invitation meeting. This report shall be presented at the first plenary session of the Working Group to prepare for WRC of the next meeting of the PCC.III.

PCC. III/RES. 125 (XIX-01) [3]

INCLUSION OF A SECTION ON EXPERIENCES FOR MIGRATION OF FREQUENCY BANDS OF RADIOCOMMUNICATION SYSTEMS IN THE WEB PAGE OF THE INTER-AMERICAN TELECOMMUNICATION COMMISSION (CITEL)

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

CONSIDERING:

a) The need that the administrations have to optimize the use of the radio-electric spectrum to make it possible to fit new spectrum requirements needed to support new telecommunications technologies coming into place and being implemented;

b) The responses given by the various administrations and included in the report of the Ad Hoc Group's Chair on the study of methods that facilitate the migration of radiocommunication systems (PCC.III/doc.2075/01), and

c) That the activities of the Ad Hoc Group to study approaches that facilitate the migration of existing radiocommunication systems in order to make spectrum available for new radiocommunication systems conclude at the XIX Meeting of the Permanent Consultative Committee III, and the administrations present expressed their wish of having available an effective access means for updated information of the various administrations with regard to this important topic,

RECOGNIZING:

a) That the initiatives undertaken by CITEL Member States aimed at developing and implementing new telecommunication technologies and systems which help enhance communications among the inhabitants of Earth, hence helping promote development and the cultural integration of peoples is of importance for the Administrations, and

b) The various technical and operational considerations with which the administrations of the Members States undertake communications system migration activities,

[3] Document PCC/doc.2100/01 rev. 1

TAKING INTO ACCOUNT:

That in its *Preamble,* the Constitution of the International Telecommunication Union fully recognizes the sovereign right of each State to regulate its telecommunications

RESOLVES:

1. To invite Administrations to develop sections on their experiences in "migration of frequency bands experiences of radiocommunication systems in their own Internet pages, with, at least, the information listed below, and to provide the Internet access address to the CITEL Secretariat.

   - Bands affected by the migration
   - Reasons that motivate the migration of telecommunications systems
   - Migration procedure used
   - Time allowed to perform the migration
   - Costs involved in the migration

2. To instruct the Executive Secretary of CITEL to create in the CITEL Internet web page a section related to experiences in the migration of frequency bands of radiocommunication systems, that includes hyperlinks to the addresses provided by the Administration.

PCC.III/RES. 126 (XIX-01)[4]

AGENDA, VENUE AND DATE OF THE XX MEETING

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

RESOLVES:

1. To hold the XX Meeting of PCC.III in México DF, México, February 18-21, 2002.
2. To approve the draft agenda for the XX PCC.III Meeting attached in the Annex.

ANNEX PCC.III/RES. 126 (XIX-01)

1. Approval of the Agenda and Calendar.
2. Appointment of the Drafting Group for the Final Report.
3. Restructuring of the working methods of PCC.III.
4. Meeting and Report of Working Groups and Ad Hoc Chairs on the following topics:

   4.1 World Radiocommunication Conference.
   4.2 Satellite systems to provide fixed and mobile services.
   4.3 Terrestrial Fixed and Mobile Radiocommunication Services.

[4] Document PCC.III/doc.2113/01

4.4 ITU Radiocommunication Assembly and Radiocommunication Advisory Group Matters.

5. Report of the tasks realized in coordination with ITU.
6. Status of the databases in development.
7. Agenda, Venue and Date of the XXI Meeting of PCC.III.
8. Other matters.
9. Approval of the Final Report of the XX Meeting.

PCC.III/RES.127 (XIX-01)[5]

COORDINATED IMPLEMENTATION OF IMT-2000 IN THE AMERICAS REGION

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

RECOGNIZING:

a) That in resolution PCC.III/RES. 111 (XVII-01) an Ad Hoc Group was established for the preparation of the World Telecommunication Development Conference (WTDC-02), as part of the COM/CITEL preparations for WTDC 2002, and

b) That in said resolution it was decided to take into account resolution COM/CITEL RES.103 (IX-00) in relation to guidelines for the preparation of proposals for WTDC 2002,

CONSIDERING:

a) That the ITU Americas Regional Preparatory Meeting for the World Telecommunication Development Conference (WTDC-02) identified IMT-2000 as a priority to be included in the next action plan of ITU Telecommunication Development Bureau (BDT);

b) That the implementation of IMT-2000 in the Americas Region is a priority issue for the Region, and

c) The necessity to promote the coordinate implementation of IMT-2000 in the Americas Region,

RESOLVES:

1. To approve the following draft Inter-American Proposal to be submitted for the consideration of the COM/CITEL Working Group to prepare CITEL for the Plenipotentiary Conference and the World Telecommunication Development Conference of the ITU to be held in 2002:

5 Document PCC.III/doc.2089/01 rev2

That the following items be included in the action plan to be adopted by WTDC 2002 towards a coordinated implementation of IMT-2000 in the American countries:

a) Encourage and assist Region 2 countries to implement IMT-2000 systems within the frequency bands identified in the ITU Radio Regulations using the relevant ITU and CITEL Recommendations for the harmonized frequency band implementation;
b) Provide direct assistance to the Region 2 countries in using the relevant ITU and CITEL recommended frequency band plans, radio technologies and standards in order to meet their national requirements for the implementation of IMT-2000 in the short, medium and long term;
c) Provide information on strategies which can be used for the evolution of first and second generation mobile systems (cellular/PCS) to IMT-2000;
d) Develop means to facilitate the implementation of fixed wireless access applications which allow use IMT-2000 technology and infra-structure;
e) Encourage the Region 2 countries to review, as necessary, their regulatory framework (e.g., licensing, type approval and customs arrangements) to facilitate global circulation of IMT-2000 terminals taking into account the relevant ITU Recommendations (e.g. ITU-R IMT.RCIRC, ITU-R IMT.UNWANT-MS);
f) Provide direct assistance to Administrations on the use and interpretation of ITU Recommendations related to IMT-2000 and the relevant CITEL Recommendations for IMT-2000;
g) Promote training on strategic planning for the introduction of IMT-2000, taking into account the specific national and regional requirements and characteristics;

2. To send the current resolution to the COM/CITEL Working Group to prepare for the Plenipotentiary Conference (PP-02) and the World Telecommunication Development Conference (WTDC-02) so that it may be approved as an Inter-American Proposal of CITEL.

INSTRUCTS THE EXECUTIVE SECRETARY:

To do all the necessary steps to fulfil *resolves* 2 of this resolution.

PCC.III/RES.128 (XIX-01)[6]

ESTABLISHMENT OF AN INFORMAL GROUP FOR THE DISTANCE EDUCATION PROJECT "NETO/EDSAT-AMERICAS PROJECT"

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

CONSIDERING:

a) That the General Secretariat of the OAS requested CITEL, in its capacity as the OAS advisory body specialized in telecommunications, for an in-depth analysis of the technical and financial feasibility of the distance education project "NETO/EDSAT-Americas Project";

b) That during the XIX Meeting of PCC.III, the Executive Secretary of CITEL asked the Chair of the PCC.III to submit a report with its recommendations on the matter for the next COM/CITEL meeting to be held in December, and

c) That a technical and regulatory review and assessment of the information provided is required to be able to provide an answer regarding this matter, and more time is needed to prepare said answer,

NOTING:

That the information of the EDSAT Americas project is available in the web page of OAS: http://www.netoedsat.org.

RESOLVES:

1. To create an informal group that will work electronically to carry out an in-depth analysis of the technical and financial feasibility of the distance education project "NETO/EDSAT-Americas Project", to subsequently be able to make suggestions and provide its opinions to the next COM/CITEL meeting to be held from December 10 to 14, 2001.

2. That the work of this informal Group should be completed and sent to the Chair of the PCC.III no later than November 30, 2001.

3. To appoint Mr. Alonzo Picazo as the Coordinator of this informal Group, with e-mail address: apicazo@satmex.com.

INVITES:

The CITEL Member States and associate members to participate in the informal group.

INSTRUCTS THE EXECUTIVE SECRETARY:

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6 Document PCC.III/doc.2115/01

To disseminate the outputs of this informal Group among Member States and associate members.

PCC.III/RES. 129 (XIX-01)[7]

DRAFT INTER-AMERICAN PROPOSAL FOR THE 2002 WORLD TELECOMMUNICATION DEVELOPMENT CONFERENCE TO PROPOSE TO CARRY OUT STUDIES FOR THE IMPLEMENTATION OF REGIONAL TELE-HEALTH PROGRAMS

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

RECOGNIZING:

a) That in resolution COM/CITEL RES. 85 (VIII-99) a Working Group was established to prepare CITEL for the 2002 ITU Plenipotentiary Conference (PP-02);

b) That in order to avoid duplicating efforts, it was considered convenient that the Working Group responsible for preparing CITEL for PP-02 be in charge of preparing the World Telecommunication Development Conference (WTDC-02);

c) That due to the above, the resolution COM/CITEL RES.103 (IX-00) was issued which establishes that the Working Group for the preparation of CITEL for PP-02 be responsible for preparing for the WTDC-02 through the coordination of its chapters on "regional presence" and "Telecommunications development sector", with the objective, among others, of preparing common proposals and/or recommendations for the work of the Conference, and that each Permanent Consultative Committee establishes an Ad Hoc Group to prepare contributions for the WDTC, and

d) That resolution PCC.III/RES.111 (XVII-01), adopted during the Seventeenth Meeting of the CITEL Permanent Consultative Committee III: Radiocommunications (PCC.III), resolved to establish an Ad Hoc Group to develop, from the point of view of PCC.III, inputs on those items deemed important to the PCC.III area of responsibility,

CONSIDERING:

a) That the issue "Development of plans for the development of telecommunications in rural and low income urban areas", was one of those given priority in the resolution COM/CITEL RES.103 (IX-00);

b) That in the Declaration "Connecting the Americas" participating countries made a commitment to expand access to global knowledge and provide full integration to the knowledge-society, particularly among rural and vulnerable groups, as well as to encourage the development of the telecommunications infrastructure needed to support all sectors of society and strengthen the application of information technologies for human development;

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[7] Document PCC.III/doc.2119/01.

c) That said Declaration provides that it is by encouraging all members of society to access information and communication technologies, enabling them to play a greater role in the political, economic and social development of their respective societies, that makes it possible to face the transition to a knowledge-based society;

d) That in this regard, as telecommunications are a major element for the development of rural and low-income communities, telecommunication development plans must fully achieve their goals in a proper framework that takes the specific needs of these populations into account;

e) That a commitment was made in the Plan of Action for the Americas to narrow the gap between rural and urban populations in the region, through universal access to new information and communication technologies;

f) That, likewise, the Plan of Action underscores greater competitiveness and productivity in every sector through applications, such as telemedicine, and

g) That the Americas Regional Preparatory Meeting for the World Telecommunication Development Conference for 2002 of the ITU, also identified this issue, as a priority to be included in the next Plan of Action of the Telecommunication Development Bureau,

FURTHER CONSIDERING:

That it is probable that, as a result of the implementation of regional tele-health programs, some barriers may be encountered which may not be solved nationally only but need to be handled at the international level,

RESOLVES:

1. To approve the following as a Draft Inter-American Proposal to be submitted for consideration by the COM/CITEL Working Group to prepare CITEL for the Plenipotentiary Conference and the World Telecommunication Development Conference of the ITU of 2002:

   To have specific studies done as requested by the Telecommunication Development Bureau from the other two sectors of the ITU, from the same Telecommunication Development Bureau and from the specialized health bodies of the United Nations system in order to make the Tele-health Program implementation and operation more efficient both nationally and regionally to solve the following issues:

   - Standardization to accomplish system compatibility and interoperability.
   - The development and application of national and international legislation
   - Aspects of medical responsibility and ethics to be studied and solved by specialized international bodies to support the telecommunications sector.
   - The creation of health and telecommunications integration platforms.
   - Recommendations for the equipment taking into account medical requirements.

2. To forward this resolution to the COM/CITEL Working Group to prepare CITEL for the Plenipotentiary Conference and the World Telecommunication Development Conference of the ITU, for approval as an Inter-American Proposal of CITEL, if appropriate.

INSTRUCTS THE EXECUTIVE SECRETARY:

To carry out the steps necessary to comply with *resolve* 2 of this resolution.

PCC.III/RES.130 (XIX-01) [8]

DRAFT INTER-AMERICAN PROPOSAL FOR THE 2002 WORLD TELECOMMUNICATION DEVELOPMENT CONFERENCE TO PROPOSE THE IMPLEMENTATION OF REGIONAL TELE-EDUCATION PROGRAMS

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

RECOGNIZING:

a) That in resolution COM/CITEL RES. 85 (VIII-99) a Working Group was established to prepare CITEL for the 2002 ITU Plenipotentiary Conference (PP-02);

b) That in order to avoid duplicating efforts, it was considered convenient that the Working Group responsible for preparing CITEL for PP-02 be in charge of preparing the World Telecommunication Development Conference (WTDC-02);

c) That due to the above, the resolution COM/CITEL RES.103 (IX-00) was issued which establishes that the Working Group for the preparation of CITEL for PP-02 be responsible for preparing for the WTDC-02 through the coordination of its chapters on "regional presence" and "Telecommunications development sector", with the objective, among others, of preparing common proposals and/or recommendations for the work of the Conference, and also that each Permanent Consultative Committee establishes an Ad Hoc Group to prepare contributions for the WDTC;

d) That resolution PCC.III/RES 111 (XVII-01), adopted during the Seventeenth Meeting of the CITEL Permanent Consultative Committee III: Radiocommunications (PCC.III), resolved to establish an Ad Hoc Group to develop, from the point of view of PCC.III, inputs on those items deemed important to the PCC.III area of responsibility,

CONSIDERING:

a) That the issue "Development of plans for the development of telecommunications in rural and low income urban areas", was one of those given priority in the resolution COM/CITEL RES.103 (IX-00);

b) That in the Declaration "Connecting the Americas" participating countries made a commitment to expand access to global knowledge and provide full integration to the knowledge-society, particularly among rural and vulnerable groups, as well as to encourage the development of the telecommunications infrastructure needed to support all sectors of society and strengthen the application of information technologies for human development;

[8] Document PCC.III/doc.2120/01

c) That said Declaration provides that it is by encouraging all members of society to access information and communication technologies, enabling them to play a greater role in the political, economic and social development of their respective societies, that makes it possible to face the transition to a knowledge-based society;

d) That in this regard, as telecommunications are a major element for the development of rural and low-income communities, telecommunication development plans must fully achieve their goals in a proper framework that takes the specific needs of these populations into account;

e) That a commitment was made in the Plan of Action for the Americas to narrow the gap between rural and urban populations in the region, through univeral access to new information and communication technologies, and

f) That the Americas Regional Preparatory Meeting for the World Telecommunication Development Conference for 2002 of the ITU also identified this issue, as a priority to be included in the next Plan of Action of the Telecommunication Development Bureau,

FURTHER CONSIDERING:

a) That the educational backwardness, the increasing need for training and professionalization, the need for educational approaches in the area of labor, illiteracy and other problems facing the region require answers that could be found in Open Distance Education;

b) That in recent years, different people and institutions have made efforts from a pedagogical perspective to link new computer science and communication technologies to education;

c) That different institutions have performed individual research directed at developing pedagogical models to facilitate learning through the network or satellite communications;

d) That one of the main advantages of the satellite alternative is its access to remote communities not increasing the cost of the link by distance or geographical characteristics of the area in which the community is located;

e) That tele-education programs will eliminate the need for users to commute to urban centers to access schooling, encouraging their permanence in their place of origin; this feature also represents a viable option to tackle educational backwardness prevalent in the region. In order to do this, it is necessary to include electronic and social communication media as a basis for the various projects that will be developed for this purpose, and

f) That the Distance Education Program would help to strengthen the technological infrastructure, as well as to use electronic communication media and computer science in educational systems, and to develop methods and materials that take advantage of these resources for individual development,

RESOLVES:

1. To approve the following as a Draft Inter-American Proposal to be submitted for consideration by the COM/CITEL Working Group to prepare CITEL for the Plenipotentiary Conference and the World Telecommunication Development Conference of the ITU of 2002:

- To carry out studies with the assistance of the ITU Telecommunication Development Bureau on the viability of a regional tele-education system.
- The technical assistance by experts from the ITU Telecommunication Development Bureau to implement a regional tele-education system.
- Support in the areas of human resources and material provided by the ITU Telecommunication Development Bureau in the implementation of a regional tele-education system.
- Financing the acquisition of the necessary equipment and training in handling satellite technology by the ITU Telecommunication Development Bureau.

2. To forward this resolution to the COM/CITEL Working Group to prepare CITEL for the Plenipotentiary Conference and the World Telecommunication Development Conference of the ITU, for approval as an Inter-American Proposal of CITEL, if appropriate.

INSTRUCTS THE EXECUTIVE SECRETARY:

To carry out the steps necessary to comply with *resolve* 2 of this resolution.

PCC.III/RES. 131 (XIX-01)[9]

DRAFT INTER-AMERICAN PROPOSAL FOR THE 2002 WORLD TELECOMMUNICATION DEVELOPMENT CONFERENCE TO PROPOSE THE IMPLEMENTATION OF THE PROJECT CALLED "INTER-AMERICAN TELEHEALTH NETWORK"

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

RECOGNIZING:

a) That in resolution COM/CITEL RES. 85 (VIII-99) a Working Group was established to prepare CITEL for the 2002 ITU Plenipotentiary Conference (PP-02);

b) That in order to avoid duplicating efforts, it was considered convenient that the Working Group responsible for preparing CITEL for PP-02 be in charge of preparing the World Telecommunication Development Conference (WTDC-02);

c) That due to the above, the resolution COM/CITEL RES.103 (IX-00) was issued which establishes that the Working Group for the preparation of CITEL for PP-02 be responsible for preparing for the WTDC-02 through the coordination of its chapters on "regional presence" and "Telecommunications development sector", with the objective, among others, of preparing common proposals and/or recommendations for the work of the Conference, and also that each Permanent Consultative Committee establishes an Ad Hoc Group to prepare contributions for the WDTC, and

d) That resolution PCC.III/RES 111 (XVII-01), adopted during the Seventeenth Meeting of the CITEL Permanent Consultative Committee III: Radiocommunications (PCC.III), resolved to establish an Ad Hoc Group to develop, from the point of view of PCC.III, inputs on those items deemed important to the PCC.III area of responsibility,

CONSIDERING:

a) That the topic "Drawing up plans for the development of telecommunications in rural areas and in urban low-income areas" was included in the list of priority topics in the resolution COM/CITEL RES.103 (IX-00);

b) That in the Declaration "Connecting the Americas", participating countries made a commitment to expand access to global knowledge and provide full integration to the knowledge-society, particularly among rural and vulnerable groups, as well as to encourage the development of the telecommunications infrastructure needed to support all sectors of society and strengthen the application of information technologies for human development;

c) That said Declaration provides that it is by encouraging all members of society to access information and communication technologies, enabling them to play a greater role in the political, economic and

[9] Document PCC.III/doc.2121/01

social development of their respective societies, that makes it possible to face the transition to a knowledge-based society;

d) That in this regard, as telecommunications are a major element for the development of rural and low-income communities, telecommunication development plans must fully achieve their goals in a proper framework that takes the specific needs of these populations into account;

e) That the Plan of Action for the Americas includes a commitment to narrow the gap between rural and urban populations in the countries in the region, by offering universal access to the new information and communication technologies;

f) That, moreover, the Plan of Action also stresses increased competitiveness and productivity in all sectors by using applications such as telemedicine, and

g) That the ITU Americas Regional Preparatory Meeting for the 2002 World Telecommunication Development Conference, also identified this topic in the list of priority topics to be included in the next Plan of Action of the Bureau of Telecommunication Development,

RESOLVES:

1. To approve the attached draft as a Draft Inter-American Proposal to be submitted for the consideration of the Working Group of the COM/CITEL to prepare CITEL for the Plenipotentiary Conference and the World Telecommunication Development Conference of the ITU in 2002.

2. To forward this resolution to the COM/CITEL Working Group to prepare CITEL for the Plenipotentiary Conference and the World Telecommunication Development Conference of the ITU, for approval as an Inter-American Proposal of CITEL, if appropriate.

INSTRUCTS THE EXECUTIVE SECRETARY:

To carry out the steps necessary to comply with *resolve 2* of the present resolution.

ANNEX

COORDINATING INSTITUTION: CITEL

SOCIAL APPLICATIONS OF THE TECHNOLOGIES Telemedicine

PROJECT: INTER-AMERICAN TELEHEALTH NETWORK

COUNTRIES INVOLVED:

1.- OBJECTIVE

- Find feasible alternatives for implementation of a comprehensive telehealth program for the Inter-American countries, specifying the best technologies for each situation, making it compatible with the various platforms, and with the value added of creating standards, policies and legal regulations applicable to TELEHEALTH.

2.- RESULTS EXPECTED

- Teleconsultations, telediagnosis and teleradiology
- Increased problem-solving capability for less complex medical units
- Reducing the cost of moving patients
- Tool for distance education and management of health projects outside the region
- Telemanagement of medical units, helping cut operating expenses and increase the budget for research and equipment, among other items.
- Support for disability programs
- Support for domestic emergencies
- Regional databases: medical centers, specialists, electronic for a

3.- BUDGET

- ESTIMATED COST OF PILOT TEST

STAGE **1.**
Two countries

ITEM	**COST**
Materials	US$ 10,000
Inputs	US$ 4,000
Cost of Renting Internet Channel	US$ 200
Travel and Per Diem (Coordinators)	US$ 8,000
TOTAL	**US$ 22,000**

STAGE 2.

Five countries

ITEM	**COST**
20 PC's Intel Pentium III 500MHz, 128 MB RAM, 19.6 GB Hard Disk, DVD-Rom, Fax-Modem, Network Card, 15" Monitor, Speakers, Windows 98, Office, HP 710 Color Printer	US$ 44,000
Inputs	US$ 10,000
Cost of Internet link Cost of Renting Internet channel	
Travel and Per Diem 2 Meetings / 2 Days / 1 Participant per country	US$ 30,000
TOTAL	**US$ 84,400**

STAGE 3.

Materials for Videoconferencing using existing platforms

ITEM	**COST**
Inputs	US$ 30,000
Cost of Videoconference Linkup **Cost of Renting ISDN Channel and/or Satellite** **128 Kbps** **4 Carriers**	US$ 40,000
Travel and Per Diem 2 Meetings / 2 Days / 1 Participant per country	US$ 30,000
TOTAL	**US$ 100,000**

STAGE 4.

4 Months of pilot tests

ITEM	**COST**
Materials for International Videoconferencing, installed platforms	US$ 30,000
Cost of link infrastructure Cost of renting satellite channel C4 carriers - 256 Kbps	US$ 70,200
Travel and Per Diem 2 Meetings / 2 Days / 1 Participant per country	US$ 30,000
TOTAL	**US$ 130,200**

MISCELLANEOUS

ITEM	**COST**
Operating and Administrative Expenses (to be itemized)	US$ 23,000
GRAND TOTAL	**US$ 336,200**

4.- WORK PLAN

STAGE	**MONTH 1**	**MONTH 2**	**MONTH 3**	**MONTH 4**	**MONTH 5**	**MONTH 6**
I	Agreement Meeting	Installation	Tests	Tests	Tests	Tests and Conclusions
II	Agreement Meeting	Installation	Tests	Tests	Tests	Tests and Conclusions
III	Agreement Meeting	Installation	Tests	Tests	Tests	Tests and Conclusions
IV	Agreement Meeting	Installation	Tests	Tests	Tests	Tests and Conclusions

TECHNICAL PLAN

STAGE 1: Platform for first level of care to isolated communities with zone hospital, using installed platforms of the Internet, radio links, etc.
STAGE 2: Platform for first level of care from an area clinic to zone hospital. INTERNET platform. AND/ low capacity VSAT antennas
STAGE 3: Platform for second and third level care, using videoconferencing via ISDN and/or satellite .
STAGE 4: International. From domestic medical centers to international medical centers, videoconferencing with document camera, using a satellite offering inter-american coverage.

GOAL FOR STAGE 1: Improve the quality of number of cases resolved and drop in mortality and morbidity rates.
GOAL FOR STAGE 2: Reduce transfers from first-level to second-level care to a minimum of 30%.
GOAL FOR STAGES 3 AND 4: Support for advanced specialties and continuous medical education.

Each country will be responsible for managing its network. Given the content and international standards, a regulatory and administrative body will be needed. Each country, based on its domestic legal structure, must present proposals on how the program is to be implemented and any possible limitations. Mexico's experience with this program has produced a savings of US$3.3 million, or 30% of the budget allocated for transfers, plus more than 91 distance learning courses and improved hospital administration efficiency, among others.

It is important to point out that the Telehealth program in Mexico, the basis for this inter-American project, is the first one in Latin America and the first worldwide carried out among medical units. COFETEL placed it in the top 7% of national priorities, and it pays no charge for use of the satellite segment.

PCC.III/RES.132 (XIX-01)[10]

ADDITIONAL PROCEDURES FOR THE PREPARATION OF WRC-03

The XIX Meeting of the Permanent Consulting Committee III : Radiocommunications,

CONSIDERING:

a) The importance that an adequate preparation for the WRC-03 has for the Region, which implies counting on flexible working mechanisms for the availability of information about the works and activities carried out by the Study Groups and Task Groups of the ITU, and

b) That the Administrations participate in the preparatory works of the ITU and that they benefit from specialists for the consideration of the different items of the agenda of the WRC-03,

RESOLVES:

To request Administrations that before December 15, 2001:

a) They provide the information concerning their representatives before the Study Groups and Task groups at the ITU. (See Annex 1).

b) They provide the information concerning the representatives of their Administration who are responsible for the chapters / items of the agenda. (See Annex 2).

INSTRUCTS THE EXECUTIVE SECRETARY:

a) To send the present resolution and its Annexes to the Member Administrations of CITEL.

b) To consolidate the information received from the Administrations and circulate it among the Member States and the associate members of the Permanent Consultive Committee III.

[10] Document PCC.III/doc.2122/01

ANEXO/ANNEX 1

Contactos de las Administraciones de la CITEL que participan en las Comisiones de Estudio y Grupos de Trabajo de la UIT para la preparación de la CMR-03. Por favor indique nombres, teléfono y dirección de e-mail.

Contact names of CITEL Administration that participate in the ITU Study Groups and Task Groups for the preparation of the WRC-03. Please indicate the names, phone number and e-mail address.

STUDY GROUPS	**GRUPO DE ESTUDIO**	**ESTADO MIEMBRO:**
SG 1	CE 1	
TG1/7	GTE 1/7	
SG 3	CE 3	
WP 3L	GT 3L	
WP 3M	GT 3M	
SG 4	CE 4	
WP 4A	GT 4A	
WP 4-9S	GT 4-9S	
SG 6	CE 6	
WP 6E	GT 6E	
WP 6M	GT 6M	
WP 6S	GT 6S	
TG 6/6	GTE 6/6	
SG 7	CE 7	
WP 7B	GT 7B	
WP 7C	GT 7C	
WP 7D	GT 7D	

WP 7E	GT 7E	
SG 8	CE 8	
WP 8A	GT 8A	
WP 8B	GT 8B	
WP 8D	GT 8D	
WP 8F	GT 8F	
SG 9	CE 9	
WP 9B	GT 9B	
WP 9C	GT 9C	
WP 9D	GT 9D	
JTG 4-7-8-9	GMT 4-7-8-9	
JTG 1-6-8-9	GMT 1-6-8-9	
JTG 4-7-8	GMT 4-7-8	
SC	SC	

ANEXO/ANNEX 2

GRUPO DE TRABAJO PARA LA PREPARACIÓN DE LA CMR-03

Contactos de las Administraciones Miembros de la CITEL para cada uno de los puntos del orden del día para la CMR-03. Por favor, indicar nombres, teléfono y dirección de e-mail.

Contact names of CITEL Administrations for each of the WRC-03 agenda items. Please indicate the names, phone number and e-mail address.

Capitulo 1: Servicios de radionavegación, de radionavegación por satélite y de radiolocalización Chapter 1: Radionavigation, radionavigation-satellite and radiolocation services **Punto del orden del dia / Agenda Items**	**ESTADO MIEMBRO:**
1.4	
1.17	
1.28	
1.15	
1.24	
Capitulo 2: Servicios móviles, móviles por satélite y de ciencias espaciales **Chapter 2: Mobile, mobile-satellite and space science services**	
1.3	
1.5	
1.6	
1.31	

1.11	
1.12	
1.38	
1.16	
1.20	
1.33	
Capitulo 3: Cuestiones relativas a los servicios fijos por satélite y de radiodifusión por satélite **Chapter 3: Issues concerning fixed-satellite and broadcasting-satellite services**	
1.19	
1.29	
1.37	
1.39	
1.27	
1.34	
1.35	
1.30	
Capitulo 4: Servicios fijos, y fijos por satélite, y sistemas en plataformas a gran altitud (HAPS) **Chapter 4: Fixed and Fixed-satellite services and High Altitude Platform Systems (HAPS)**	
1.13	

1.18	
1.25	
1.32	
1.26	
Capitulo 5: Servicios móvil marítimo, de radioaficionados, de radioaficionados por satélite y de radiodifusión en las bandas MF y HF **Chapter 5: Maritime mobile, amateur and amateur-satellite, and broadcastingservices in MF and HF bands**	
1.2	
1.9	
1.10	
1.10.1	
1.10.2	
1.14	
1.36	
1.7	
1.7.1	
1.7.2	
1.7.3	
1.23	
Capitulo 6: Otros asuntos **Chapter 6: Other Matters**	
1.8	

1.8.1	
1.8.2	
1.1	
2	
4	
7.1	
Capitulo 7: Programa de trabajo futuro **Chapter 7: Future work programme**	
1.21	
1.22	
7.2	

PCC.III/RES. 133 (XIX-01)[11]

JOINT WORKING METHODS BETWEEN PCC.I AND PCC.III FOR THE DEVELOPMENT OF STANDARD COORDINATION DOCUMENTS FOR WIRELESS SYSTEMS AND SERVICES

The XIX Meeting of the Permanent Consulting Committee III: Radiocommunications,

CONSIDERING:

a) That the growing need to restructure the working methods of the different regional and international fora due to the convergence of technologies and services and their impact on regulatory and standardization activities regarding wireless communications;

b) That in pursuance of the technological development of wireless systems and services, PCC.I and PCC.III's mandates bring about superposition in areas that require harmonization and coordination of activities related to the application of standards, and

[11] Document PCC.III/doc.2123/01

c) That as a result of technological innovations in the field of wireless communications it is necessary and convenient to improve the efficiency of the activities of the working groups involved in the coordination of standards of the Permanent Consultative Committees in order to optimize their tasks,

RECOGNIZING:

a) That resolution COM/CITEL RES. 18 (III-95) instructs the Chairs of PCC.I and PCC.III to coordinate a joint meeting of their working groups which carry out activities to harmonize standards for wireless systems and services;

b) That according to the joint meeting between PCC.I and PCC.III that took place in Asuncion, Paraguay, in March 1996, resolution PCC.III/RES..33 (IV-96) approves the unanimous Agreement between both Committees that establishes the method to coordinate the standardization of wireless networks;

c) That resolution PCC.III/RES.33 (IV-96) indicated the need to designate a responsible to coordinate PCC.III activities identified as matters of joint action with PCC.I;

d) That resolution PCC.III/RES.37 (V-96) established the working plan to be followed within PCC.III for the implementation of the method, referred to in the preceding paragraph, to coordinate standards for wireless networks, and

e) That since the approval of these resolutions, CITEL has established an electronic forum to facilitate the use of efficient working methods in the prompt development of CITEL documents,

FURTHERMORE RECOGNIZES:

That resolution PCC.I/RES.129 (XV-01) proposes an alternative working method between PCC.I and PCC.III for the development of standard coordination documents, particularly in the area of wireless communications,

RESOLVES:

1. To submit for consideration of the next COM/CITEL meeting the proposal on working methods for the development of Standard Coordination Documents between PCC.I and PCC.III in the area of wireless communications, as it appears in Annex 1 of the present resolution.

2. To make this resolution known to the Chair of PCC.I.

3. To designate Mr. Javier Camargo of Mexico as coordinator of PCC.III activities identified as matters of joint action with PCC.I in the area of wireless communications.

INSTRUCTS THE EXECUTIVE SECRETARY:

To carry out numerals 1 and 2 of the *resolves*.

ANNEX PCC.III/RES. 133 (XIX-01)

a) According to the unanimous Agreement between PCC.I and PCC III, as is established in the Annex to resolution PCC.III/RES.33 (IV/96), the responsibilities of each Committee - depending on the nature of the joint activity- are indicated in the following table:

PCC.I (Leader) PCC.III (Support)	1. DESCRIPTION OF THE SERVICES 2. NETWORK INTERFACES 3. ACCESS SIGNALLING 4. SIGNALING BETWEEN SYSTEMS 5. WIRELESS INTELLIGENT NETWORKS
PCC.III(Leader) PCC.I (Support)	1. AIR INTERFACES 2. CELLULAR HANDOVER REQUIREMENTS 3. PRIVACY AND AUTHENTICATION REQUIREMENTS 4. USER IDENTITY MODULES 5. MOBILE UNIT IDENTIFYERS

b) Each Committee will identify those projects which require coordination with other Committees, taking into account the responsibilities of both Committees, as set forth in resolution PCC.III/RES.33 (IV-96);
c) The Committee identified as leader, of a specific joint activity, must obtain written agreement from the other Committee before approving any document or corresponding resolution;
d) A project schedule shall be developed for any project requiring coordination with the other Committee;
e) A specific discussion group within CITEL's Electronic Forum will be instituted for those projects that require coordination between both Committees and in such a way that said Forum shall operate as a space for opinions, but not for deliberations or approval of proposals;
f) The members of both Committees shall be informed via electronic mail about the initiation of a coordinated project and of the establishment of the corresponding discussion group within the Electronic Forum;
g) Each Committee shall receive the contributions related to a coordinated project according to the responsibilities of both Committees, as is established in resolution PCC.III/RES.33 (IV-96)
h) Both Committees must designate a representative in charge of coordinating those tasks identified as matters of joint action in the area of wireless communications, and they will submit the results of discussions carried out in the Electronic Forum to the meetings of the respective Committee;
i) All the documents corresponding to joint projects developed either during or between PCC meetings must be placed in the Electronic Forum;
j) Any project pending approval must be placed in the Electronic Forum at least 30 days before the respective Committee meeting where said project will be considered for approval.

PCC.III/RES 134 (XIX-01)

PROCEDURE FOR RECOGNITION OF THE CITEL INTERNATIONAL AMATEUR RADIO PERMIT (IARP) WITH THE CEPT

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

CONSIDERING;

a) The objective of CITEL to facilitate and promote by all possible means available to it, the continuing development of telecommunications in the American States;

b) The benefits derived from the implementation of the Inter-American Convention on the International Amateur Radio Permit (IARP) that provides for temporary amateur station operations in one Member State of persons licensed with an IARP by another Member State without further review, and

c) That the simplification of the administrative licensing procedures for amateur service, enables to reduce logistic and economic resources used by Administrations,

CONSIDERING ALSO:

That some CITEL administrations have independently subscribed reciprocity bilateral agreements, not only with other countries of America, but also with countries located in other continents, in particular Europe,

TAKING INTO ACCOUNT:

a) The status of the advanced negotiations carried out by CITEL Secretariat, with the European Radiocommunications Committee (ERC) of the CEPT in compliance to the provisions of decision PCC.III/DEC.34 (XVI-00) that is contained in document PCC.III/doc.2030/1, and

b) The opinion of the Legal Services Department of OAS on the subject, included in document PCC.III/doc.2076/01.

ACKNOWLEDGING:

That it is necessary to study in depth the documents indicated above, in order to enable PCC.III to expedite its corresponding recommendations on this subject,

RESOLVES:

1. To approve the establishment of an Ad Hoc Group in charge of collecting the opinion of Member States of OAS on the subject and submit a Report showing the results of the work at the XX Meeting of PCC.III.

2. To designate Mr. Héctor Budé from Uruguay as Chair of the Ad Hoc Group.

3. To submit the present resolution to COM/CITEL.

INVITES:

The Administrations of Member States of OAS to submit their contributions on the matter, until January 30, 2002, to the Chair of the Ad Hoc Group using, as far as possible, electronic means and preferable the e-mail address: hbude@ursec.gub.uy.

INSTRUCTS THE EXECUTIVE SECRETARY:

To carry out the necessary actions to comply with *resolve* 3 of the present resolution.

III. RECOMMENDATIONS

PCC. III/REC. 64 (XIX-01)[12]

PARTICIPATION IN THE ITU-R WP8A ACTIVITIES, REGARDING WRC-03 AGENDA ITEM 1.3

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

CONSIDERING:

a) That the WRC-2003 agenda item 1.3 establishes, "*to consider identification of globally/regionally harmonized bands, to the extent practicable, for the implementation of future advanced solutions to meet the needs of public protection agencies, including those dealing with emergency situations and disaster relief, and to make regulatory provisions, as necessary, taking into account resolution 645 (WRC-2000)*";

b) That the ITU-R Working Group 3 of Working Party 8A (WP8A3) is responsible for the studies associated with public protection and disaster relief (PPDR) communications pursuant to WRC-03 agenda item 1.3;

[12] Document PCC.III/doc.2117/01

c) That during the 11th Meeting of the ITU-R WP8A3, significant progress was made in several aspects of WRC-03 agenda item 1.3 which helped focus the areas to which input contributions are sought urgently (doc. 8A/TEMP/78-E of 29/10/01 and the summary doc. CCPIII/doc.2087 of the 06/11/01), and

d) That to establish and facilitate regional positions, it is necessary to have as many CITEL administrations as possible in the WP8A3 activities,

RECOGNIZING:

a) That the countries have the autonomy and the sovereignty to regulate the use of services and technologies of telecommunications in their territories, and

b) That Globally/regionally harmonized bands may assist and promote communications interoperability, enable some equipment economies of scale and facilitate mutual assistance among administrations and PPDR users,

RECOMMENDS:

1. That CITEL members administrations participate as much as possible in the activities of ITU-R WP8A3, by means of contributions, observations and proposals.

2. That in order to facillitate regional positions and the work on CPM text, CITEL member Administrations consider their views and develop contributions on the following topics:

    a) PPDR applications and system requirements
    – Suitable technical parameters
    – Revision and additional applications and requirements

    b) Global cross-border circulation of radiocommunication equipment in emergency and disaster relief situations
    – Decision regarding draft PDNR or draft resolution
    – Revisions

    c) Spectrum requirements methodology
    - Input parameter values for PPDR

    d) List of candidate bands
    - Applicability of bands for PPDR future advance solutions

3. That, input contributions to the next interim meeting of ITU-R WP8A3 scheduled for February 11-15 in Rome, Italy be submitted by February 1 and for the ITU-R WP 8A May 8-14 meeting in Geneva, Switzerland contributions be submitted by May 1, 2002.

PCC.III-REC. 65 (XIX-01)[13]

GUIDELINES FOR THE HIGH-DENSITY IMPLEMENTATION OF GSO FSS EARTH STATIONS WITHOUT INDIVIDUAL SITE COORDINATION IN BANDS SHARED WITH THE FIXED SERVICE

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

CONSIDERING:

a) That an increasing number of GSO Fixed-Satellite Service (FSS) networks applications incorporate large numbers of the same type of transmit/receive earth stations (i.e.,"typical" earth stations) operating in certain FSS bands in the 11/14 GHz and 20/30 GHz part of the spectrum;

b) That these GSO FSS networks are subject to coordination under various provisions of the ITU Radio Regulations and under each CITEL Member's jurisdiction;

c) That PCC. III/REC. 62 (XVIII-01) recommends that in portions of the frequency bands 17.7-20.2 GHz (space-to-Earth) and 27.5-30.0 GHz (Earth-to-space), CITEL administrations consider implementing national provisions and procedures to facilitate the implementation of Ka-Band FSS systems intending to provide broadband services to high density employed terminals;

d) That in order to ensure the widest availability of FSS services, there is a global need to facilitate the implementation of a high density of GSO FSS terminals which do not have the need for individual site coordination of such stations with the fixed service;

e) That under a high density deployment, such earth stations will conform to a set of common technical characteristics (i.e., "typical" earth stations);

f) That the deployment of a high density of earth stations is most suitable in frequency bands not shared with terrestrial services;

g) That a growing number of CITEL Administrations already identify in their respective allocation plans the 19.7-20.2 GHz and 29.5-30.0 GHz bands, as bands not shared with FS, for ubiquitous deployment of GSO FSS earth stations;

h) That as the 19.7-20.2 GHz and 29.5-30.0 GHz bands are not shared on a co-primary basis with the FS, no issues arise with respect to individual site coordination with fixed service stations;

i) That a number of FSS systems with other types of earth stations and characteristics than those used by high-density systems have already been brought into use or are planned to be brought into use, including some that use the band 17.8-20.2 GHz (space-to-Earth), and

j) That methods exist to ensure that the deployment of a high density of earth stations can make efficient use of the radio spectrum and not cause unacceptable interference.

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[13] Document PCC.III/doc.2064/01 rev1

RECOMMENDS:

1. That CITEL Members, on a national basis or in discussions between administrations, use the guidelines in the Annex when regulating the deployment of large groups of GSO FSS earth stations with similar characteristics without individual site coordination with the fixed service.

2. That in using these guidelines, administrations take into account existing and planned FSS systems with types of earth stations and characteristics other than those used by high-density systems and characteristics.

ANNEX PCC.III-REC. 65 (XIX-01)

Guidelines for the High-Density Implementation of GSO FSS Earth Stations Without Individual Site Coordination with the Fixed Service

1.0 Introduction

The requirement for guidance regarding implementation of groups of GSO FSS earth stations derives from the need to allow operation of hundreds or even thousands of terminals operating in the same service area. The objective of this approach is to ease the implementation of all these terminals if the terminals conform to a certain set of conditions. While these conditions may vary from administration to administration, and region to region, the objective of this Recommendation is to develop a set of conditions that would be considered sufficient in any region. These GSO FSS networks are subject to coordination under various provisions of the Radio Regulations. The conditions that are addressed in this Annex include:

- frequency bands
- earth station technical parameters
- coordination with satellite networks using other types of earth stations
- sharing with other co-primary services.

2.0 Frequency Bands

The concept of group station GSO FSS implementation in FSS spectrum allocations can best be carried out in bands that are not shared with terrestrial services. However, the principles presented here are intended to apply to bands shared with the FS. This group station GSO FSS deployment is currently, or is proposed to be done, in various FSS allocations in the 11/14 GHz and in the 20/30 GHz spectrum range.

Some of the FSS allocations to which these type of guidelines may apply are in Tables 1.1 (space-to-Earth) and 1.2 (Earth-to-space).

Table 1.1

ITU Primary Service Frequency Allocations, 17.7–20.2 GHz (s-E)

<table>
<tr><th>Region 1</th><th>Region 2</th><th>Region 3</th></tr>
<tr><td rowspan="2">17.7–18.1
FIXED
FIXED-SATELLITE
(space-earth) S5.484A
(Earth-space) S5.516
MOBILE</td><td>17.7–17.8
FIXED
FIXED-SATELLITE S5.516
BROADCASTING
SATELLITE

S5.518, S5.515, S5.517</td><td rowspan="2">17.7–18.1
FIXED
FIXED-SATELLITE
(space-Earth) S5.484A
(Earth –space) S5.516
MOBILE</td></tr>
<tr><td>17.8–18.1
FIXED
FIXED-SATELLITE S5.516
MOBILE
S5.484A</td></tr>
<tr><td colspan="3">18.1–18.6
FIXED
FIXED-SATELLITE (space-Earth) S5.484A
(Earth-space) S5.520
MOBILE

S5.519, S5.521</td></tr>
<tr><td>18.6–18.8
FIXED
FIXED-SATELLITE
(space-Earth) S5.522B
EARTH EXPLORATION
SATELLITE(passive)
MOBILE
S5.522A
S5.522C</td><td>18.6–18.8
EARTH EXPLORATION
SATELLITE(passive)
FIXED
FIXED-SATELLITE
(Space-Earth) S5.522B
MOBILE
SPACE RESEARCH
(passive)
S5.522A</td><td>18.6–18.8
FIXED
FIXED-SATELLITE
(space-Earth) S5.522B
EARTH EXPLORATION
SATELLITE(passive)
MOBILE
S5.522A
S5.522</td></tr>
<tr><td colspan="3">18.8–19.7
FIXED
FIXED-SATELLITE S5.523A
MOBILE

S5.523B, S5.523C, S5.523D, S5.523E</td></tr>
<tr><td>19.7–20.1
FIXED-SATELLITE S5.484A

S5.524</td><td>19.7–20.1
FIXED SATELLITE S5.484A
MOBILE-SATELLITE
,
S5.524, S5.525, S5.526, S5.527, S5.528, S5.529</td><td>FIXED-SATELLITE
(space-Earth) S5.484A

S5.524</td></tr>
</table>

20.1-20.2 FIXED SATELLITE (space-Earth) S 5.484A MOBILE SATELLITE S5.524, S5.525, S5.526, S5.527, S5.528

Table 1.2

ITU Primary Service Frequency Allocations, 27.5–30.0 GHz (E-s)

Region 1	Region 2	Region 3
27.5–29.5 FIXED FIXED-SATELLITE (Earth-Space) S5.484A S5.539 MOBILE S5.538, S5.540, S5.523A, S5.539		
29.5–29.9 FIXED SATELLITE (Earth-space) S 5.484A S5.539	29.5–29.9 FIXED-SATELLITE (Earth-space) S 5.484A S5.539 MOBILE-SATELLITE	29.5–29.9 FIXED-SATELLITE (Earth-space) S5.484A, S5.539
29.9–30.0 FIXED-SATELLITE (Earth-space) S5.484A, S5.539 MOBILE-SATELLITE S5.525, S5.526, S5.527, S5.538, S5.540, S5.542		

An examination of these allocations indicates that some are shared with other radio services, in particular the Fixed Service, and some allocations are not. The conditions which apply in each of these categories differ.

When implementing group GSO FSS terminals, the complexities of operating such systems on the same frequencies in the same geographical areas as terrestrial services need to be taken into account.

2.1 Bands not Shared with FS

In the case where GSO FSS group-implemented terminals operate in bands not shared with the Fixed Service but are shared with other FSS systems, FSS terminals with other types of technical characteristics or that have been individually site coordinated must continue to be accommodated. As these bands are not shared on a co-primary basis with the FS, no issues arise with respect to individual site coordination with fixed service stations.

2.2 Bands Shared with FS

It is expected that a major deployment of groups of GSO FSS earth stations will take place in the 20/30 GHz FSS allocations. There are a variety of geostationary satellite systems in the FSS that are expected to begin operation in these FSS allocations in the near future.

To operate this type of group implemented GSO FSS stations in bands allocated on a co-primary basis with the fixed service requires some special techniques and methods that ensure that unacceptable interference is avoided.

In areas where there is already heavy deployment of FS links, it may become very difficult to site FSS earth stations. In any case, some special methods that are further described in Section 4 of this Annex address the situation where the band is shared with FS.

3.0 Earth Station Technical Parameters

The technical characteristics of high density FSS earth stations operating with geostationary satellite networks in the 20/30 GHz FSS bands are found in Draft New Recommendation ITU-R S.Doc. 4/70 – "Technical Characteristics of High Density FSS Earth Stations Transmitting towards Geostationary FSS Space Stations in the 30 GHz Band".

Some similar characteristics for 14 GHz terminals can be found in Recommendation ITU-R S.580-5 which reads as follows :

"with regard to antennas having a D/λ exceeding 150:

– that new antennas of an earth station operating with a geostationary satellite should have a design objective such that the gain (G) of at least 90% of the side-lobe peaks does not exceed:

$$G = 29 - 25 \log (\text{theta}) \quad \text{dBi}$$

(G being the gain relative to an isotropic antenna and theta being the off-axis angle in the direction of the geostationary-satellite orbit referred to the main-lobe axis).

This requirement should be met for any off-axis direction which is within 3° of the GSO and for which $1° \leq \text{theta} \leq 20°$;

with regard to antennas having a D/λ between 50 and 150:

– that antennas should have a design objective such that the gain (G) of at least 90% of the side-lobe peaks does not exceed:

$$G = 32 - 25 \log (\text{theta}) \quad \text{dBi}$$

– that antennas installed after 1995 (this date takes into account the needs of developing countries and every effort should be made to achieve the design objective at an earlier date) should have a design objective such that the gain (G) of at least 90% of the side-lobe peaks does not exceed:

$$G = 29 - 25 \log (\text{theta}) \quad \text{dBi}$$

These requirements should be met for theta between 1° or (100 λ/D) whichever is the greater and 20° for any off-axis direction which is within 3° of the GSO and for an off-axis angle, theta, greater than the limits specified above, Recommendation ITU-R S.465 should be used."

The type of parameters referenced in this Section are of the type which when agreed for use in a particular service area, would permit the large-scale deployment of these terminals for use throughout that service area.

The principal goal for this approach is to avoid the need for individual terminal coordination while ensuring the protection of individual GSO FSS terminals.

These terminals operate in the FSS, for example at 20/30 GHz, which have primary or co-primary allocation status in the frequency bands in which this approach is being developed.

The technical parameters associated with such an approach are particularly useful when the terminals are working through closely spaced FSS satellites, (i.e., 2º separation).

4.0 Coordination With Other Networks and With Co-Primary Services

GSO FSS 20/30 GHz band satellite systems use pairs of frequency bands within FSS allocations for their terminals. Coordination between GSO FSS networks within an orbital arc of ± 8 degrees is addressed by No. S9.7 in all of the bands shown in Tables 1.1 and 1.2. In the band 18.8-19.7 GHz, coordination is required between GSO FSS and non-GSO FSS systems. In other frequency bands, compatibility is ensured between GSO FSS and non-GSO FSS systems through equivalent power flux density limits on NGSO FSS systems in Article S22.

4.1 Bands not Shared with FS

Assignments are within the following bands:

29.5-30.0 GHz Earth-to-space and
19.7-20.2 GHz space-to-Earth; and

In this pair, the 29.5-30.0 GHz/19.7-20.0 GHz the bands are not shared terrestrially, and are therefore inherently suitable for group authorization of terminals deployed without individual site coordination.

4.2 Bands Shared with FS

Assignments of GSO FSS use vary on a Regional basis within the following bands:

27.5 – 28.6 GHz Earth-to-space and
17.7 – 18.8 GHz space-to-Earth; and

In most cases, as the Earth-to-space band is not shared, there is no threat of FSS terminal interference into other co-primary FS users.

In the space-to-Earth band, when shared with terrestrial services, there is a requirement to protect Earth Stations from unacceptable interference caused by co-primary FS users of the band. This protection may be achieved by means of a user terminal registration process.

One approach to achieve this is as follows:

1. User obtains satellite terminal from a vendor outlet (e.g. mass market or service provider).

2. The vendor provides an order to a professional installer to install the terminal at the user location.

3. The installer reviews national database of authorized FS links:

    a) If an FS link exists that would cause unacceptable interference to a satellite terminal, the terminal cannot be used at that location without an interference protection solution. In this case the user's terminal may be set to operate in the FS-free band.

    b) If no unacceptable interference is anticipated (by nearby FS links), the terminal is installed at the user premises and the location of this terminal is added to the database.

    c) The installer may register the terminal for terrestrial station interference protection. "Coordination" is not required because the terminal does not transmit in a shared band.

    d) The success of this approach will be dependent on the maintenance and availability of FS and FSS terminal databases.

4. The FS entity desiring to install a new FS link would search the frequency use database in the band shared with the FSS and would deploy around registered satellite user terminals. The FS user is not required to protect non-registered satellite terminals in shared spectrum.

5. A similar method can be used with respect to individual earth stations which have been individually coordinated.

PCC.III/REC. 66 (XIX-01)[14]

USE OF COMMERCIAL MOBILE RADIO SYSTEMS IN THE BAND 800/900 MHZ TO PROVIDE INTERCONNECTED SERVICES

The XIX Meeting of Permanent Consultative Committee III: Radiocommunications,

CONSIDERING:

a) That over the last few years there have been significant changes in the technology used for the provision of land mobile services;

b) That due to these advances such as the adoption of digital technology, trunking techniques and frequency reuse techniques it has been possible to provide services interconnected to the PSTN without adversely affecting the communications capacity of non-interconnected services such as dispatch;

c) That in many countries the use of commercial segments of 800/900 MHz frequencies has evolved from private dispatch-type services to commercial wireless services that provide, in some countries, services interconnected to the PSTN;

d) That in many countries the penetration of mobile wireless service exceeds that of wireline service and the demand for wireless service continues to grow;

e) That providing for fair and open markets fosters investment in an administration's economy and leads to innovation and lower prices, and

f) That flexible use of the segments of the 800/900 MHz band used for commercial wireless services can help satisfy the demand for additional wireless capacity through more efficient use of existing terrestrial mobile allocations,

NOTING:

a) That some CITEL Member States have already adopted and others have begun adopting rules for the provision of interconnected services by commercial mobile radio systems operating at 800/900 MHz;

b) That providing flexibility in the provision of services by operators of commercial mobile radio systems in the band 800/900 MHz enhances opportunities for consumers, and

c) That policies of CITEL Member States differ with regard to licensing and access to spectrum, interconnection, customer billing, access to numbering resources and service rules,

[14] Document PCC.III/doc.2054/01 rev.1

RECOMMENDS:

1. That CITEL Member States consider through their national spectrum policies providing flexibility in the provision of services by commercial mobile radio systems in the bands at 800/900 MHz.

2. That CITEL Member States consider adopting technology neutral policies where substantially similar services are uniformly regulated.

PCC.III/REC. 67 (XIX-01)[15]

GENERAL REQUIREMENTS FOR LOW POWER RADIOCOMMUNICATION DEVICES

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

CONSIDERING:

a) That PCC III/RES. 74 (XI-98) includes "Low Power Radiocommunication Devices" within its terms of reference;

b) That Low Power Radiocommunication Devices are increasing their number of applications and the radio frequencies of their use;

c) That a number of CITEL administrations have made provisions for Low Power Radiocommunication Devices to operate within their national boundaries;

d) That it is the interest of CITEL member countries to harmonize their regulations on Low Power Radiocommunication Devices, and

e) That their regulation would be facilitated by the harmonization of regulations throughout CITEL members countries,

RECOMMENDS:

1. That CITEL Member States should consider appropriate actions for "Low Power Radiocommunication Devices" and the general requirements listed in Annex.

2. That CITEL Member States should consider appropriate actions for these devices so that these devices should be subject to recognized certification and verification procedures.

[15] Document PCC.III/doc.2081/01

ANNEX PCC.III/REC. 67 (XIX-01)

1 Introduction

This Recommendation sets out common technical and non-technical parameters for low power radiocommunication devices and widely recognized approaches for managing their use on a national basis. When using this Recommendation it should be remembered that it represents the most widely accepted views but it should not be assumed that all given parameters are accepted in all countries.

It should also be remembered that the pattern of radio use is not static. It is continuously evolving to reflect the many changes that are taking place in the radio environment; particularly in the field of technology. Radio parameters must reflect these changes and the views set out in this Recommendation is therefore subject to periodic review.

Moreover, almost all administrations still have national regulations. For these reasons, those wishing to develop or market low power radiocommunication devices based on this Recommendation are advised to contact the relevant national administration to verify that the position set out herein applies.

Low power radiocommunication devices operate on a variety of frequencies. They must share these frequencies with other applications and are generally prohibited from causing harmful interference to those applications. If a low power radiocommunication device does cause interference to authorized radiocommunications, even if the device complies with all of the technical standards and equipment authorisation requirements in the national rules, then its operator will be required to cease operation, at least until the interference problem is solved.

2 Definition of low power radiocommunication devices

For the purpose of this Recommendation the term "low power radiocommunication devices" is intended to cover radio transmitters which have low capability of causing interference to other radio equipment**.**

Simple licensing requirements may be applied, e.g. general licenses or general frequency assignments or even license exemption, however, information about the regulatory requirements for placing low power radiocommunication equipment on the market and for their use should be obtained by contacting individual national administrations.

3 Applications

Due to the many different applications provided by these devices, no description can be exhaustive, however, the following categories are amongst those regarded low power radiocommunication devices:

• **Alarms**
The use of radiocommunication for indicating an alarm condition at a distant location.

• **Equipment for Detecting Movement and Equipment for Alert**
Equipment for detecting movement and equipment for alert are low power radar systems for radiodetermination purposes. Radiodetermination means the determination of the position, velocity and/or other characteristics of an object, or the obtaining of information relating to these parameters, by means of the propagation properties of radio waves.

• **Inductive Applications**
Inductive loop systems are communication systems based on magnetic fields generally at low RF frequencies.
The regulations for inductive systems are different in various countries. In some countries this equipment is not considered as radio equipment, and neither type approval nor limits for the magnetic field are set. In other countries inductive equipment is considered as radio equipment and there are various national or international type approval standards.

Inductive applications include for example car immobilizers, car access systems or car detectors, animal identification, alarm systems, item management and logistic systems, cable detection, waste management, personal identification, wireless voice links, access control, proximity sensors, anti-theft systems including RF anti-theft induction systems, data transfer to handheld devices, automatic article identification, wireless control systems and automatic road tolling.

• **Model Control**
"Model Control" covers the application of radio model control equipment, which is solely for the purpose of controlling the movement of the model (toy), in the air, on land or over or under the water surface.

• **Radio Microphones**
Radio microphones (also referred to as wireless microphones or cordless microphones) are small, unidirectional transmitters designed to be worn on the body, or hand held, for the transmission of sound over short distances for personal use. The receivers are more tailored to specific uses and may range in size from small hand units to rack mounted modules as part of a multi-channel system.

• Automatic Vehicle Identification (AVI)
The Automatic Vehicle Identification system uses data transmission between a transponder located on a vehicle and a fixed interrogator positioned on the track to provide for the automatic and unambiguous identification of a passing vehicle. The system also enables any other stored data to be read and provides for the bidirectional exchange of variable data.

• **RF Identification (RFID) Systems**
The object of any RFID system is to carry data in suitable transponders, generally known as tags, and to retrieve data, by hand- or machine–readable means, at a suitable time and place to satisfy particular application needs. Data within a tag may provide identification of an item in manufacture, goods in transit, a location, the identity of persons and/or their belongings, a vehicle or assets, an animal or other types of information. By including additional data the prospect is provided for supporting applications through item specific information or instructions immediately available on reading the tag. Read-write tags are often used as a decentralized database for tracking or managing goods in the absence of a host link.

A system requires, in addition to tags, a means of reading or interrogating the tags and some means of communicating the data to a host computer or information management system. A system will also include means for entering or programming data into the tags, if this is not undertaken at the source by the manufacturer.

Quite often an antenna is distinguished as if it were a separate part of an RFID system. While its importance justifies this attention it should been seen as a feature that is present in both readers and tags, essential for the communication between the two. While the antenna of tags is an integral part of the device, the reader or interrogator can have either an integral or separate antenna in which case it shall be defined as an indispensable part of the system (see also section 6: "Antenna requirements").

• RF (Radar) Level Gauges

RF Level Gauges have been used in many industries for many years to measure the amount of various materials, primarily stored in an enclosed container or tank. The industries in which they are used are mostly concerned with Process Control. These low power radiocommunication devices are used in facilities such as Refineries, Chemical Plants, Pharmaceutical Plants, Pulp and Paper Mills, Food and Beverage Plants, and Power Plants among others.

All of these industries have storage tanks throughout their facilities where intermediate or final products are stored, and which require level measurement gauges.

Radar level gauges may also be used to measure the level of water of a river (e.g. when fixed under a bridge) for information or alarm purposes.

Level gauges using an RF electromagnetic signal are insensitive to pressure, temperature, dust, vapours, changing dielectric constant and changing density.
The types of technology used in RF level gauge products include:

– pulsed radiating; and
– Frequency Modulated Continuous Wave (FMCW).

• Road Transport and Traffic Telematics (RTTT)

(Also referred to as dedicated low power radiocommunications for transport information and control systems (TICS).)

RTTT systems are defined as systems providing data communication between two or more road vehicles and between road vehicles and the road infrastructure for various information-based travel and transport applications, including automatic toll-collection, route and parking guidance, collision avoidance and similar applications.

• Telecommand

The use of radiocommunication for the transmission of signals to initiate, modify or terminate functions of equipment at a distance.

• Telemetry

The use of radiocommunication for indicating or recording data at a distance.

• Ultra Low Power Active Medical Implant Communication Systems (MICS)

Ultra Low Power Active Medical Implants are part of a MICS for use with implanted medical devices, like pacemakers, implantable defibrillators, nerve stimulators, and other types of implanted devices. The

MICS uses UHF transceiver modules for radiofrequency communication between an external device referred to as a programmer/controller and a medical implant placed within a human body.

These communication systems are used in many ways, for example: device parameter adjustment (e.g. modification of the pacing parameters), transmission of stored information (e.g. electrocardiograms stored over time or recorded during medical event), and the real time transmission of monitored vital life signs for short periods.

MICS equipment is used only under the direction of a physician or other duly authorized medical professional. The duration of these links is limited to the short periods of time necessary for data retrieval and reprogramming of the medical implant related to patient welfare.

• Voice and Video
In connection with low power radiocommunication devices "voice" covers applications like walkie-talkie, baby monitoring and similar use. Citizen band (CB) and private mobile radio (PMR) equipment is excluded.

With "Video" - applications non-professional cordless cameras are meant mainly to be used for controlling or monitoring purposes.

• **Wireless Audio Applications**
Applications for wireless audio systems include the following: cordless loudspeakers, cordless headphones, cordless headphones for portable use, i.e. portable compact disc players, cassette decks or radio receivers carried on a person, cordless headphones for use in a vehicle, for example for use with a radio or mobile telephone etc., in-ear monitoring, for use in concerts or other stage productions.

Systems should be designed in such a way that in the absence of an audio input no RF carrier transmission shall occur.

4 Frequency Ranges

There are certain frequency bands which are used worldwide for low power radiocommunication. These common bands are indicated in the table below. Although this table represents the most widely accepted set of frequency bands for low power radiocommunication devices it should not be assumed that all of these bands are available in all countries.

It should further be noted that low power radiocommunication devices operating within the frequency bands designated for industrial, scientific and medical (ISM) applications must accept harmful interference which may be caused by these applications. Since low power radiocommunication devices generally operate on a non-interference, no protection from interference basis, ISM bands, among others, have been selected as home for these devices.

Table 1: Commonly used frequency ranges

ISM within bands under RR S5.138 and S5.150	
6 765-6 795 kHz	
13 553-13 567 kHz	
26 957-27 283 kHz	
40.66-40.70 MHz	
902-928 MHz	
2 400-2 483.5 MHz	
5 725-5 875 MHz	
24-24.25 GHz	
61-61.5 GHz	
122-123 GHz	
244-246 GHz	
Other Commonly used frequency ranges	
9-135 kHz	Commonly used for inductive low power radiocommunication applications
402-405 MHz	Ultra Low Power Active Medical Implants, Recommendation ITU-R SA.1346
5 795-5 805 MHz	Transport Information and Control Systems Recommendation ITU-R M.1453
5 805-5 815 MHz	Transport Information and Control Systems Recommendation ITU-R M.1453
76-77 GHz	Transport Information and Control System (Radar) Recommendation ITU-R M.1452

However, it should be noted that low power radiocommunication devices may generally not be permitted to use bands allocated to the radioastronomy, aeronautical mobile services and safety of life services including radionavigation.

Low power radiocommunication devices are not permitted to operate in the following bands.

Table 2: Restricted Bands - Spurious Emissions Only with Limited Exceptions (not indicated)

MHz	MHz	MHz	GHz
0.090-0.110 2.1735-2.1905 4.125-4.128 4.17725-4.17775 4.20725-4.20775 6.215-6.218 6.26775-6.26825 6.31175-6.31225 8.291-8.294 8.362-8.366 8.37625-8.38675 8.41425-8.41475 12.29-12.293 12.51975-12.52025 12.57675-12.57725 13.36-13.41	16.42-16.423 16.69475-16.69525 16.80425-16.80475 25.5-25.67 37.5-38.25 73-74.6 74.8-75.2 108-121.94 123-138 156.52475-156.52525 156.7-156.9 242.95-243 322-335.4 399.9-410 608-614 960-1 215	1 300-1 427 1 435-1 626.5 1 645.5-1 646.5 1 660-1 710 1 718.8-1 722.2 2 200-2 300 2 655-2 900 3 260-3 267 3 332-3 339 3 345.8-3 352.5 4200-4 400 4800-5150 5350-5460 8025-8500 9000-9200	9.3-9.5 10.6-11.7 12.2-12.7 13.25-13.4 14.47-14.5 15.35-16.2 20.2-21.26 22.01-23.12 23.6-24.0 31.2-31.8 36.43-36.5 38.6-46.7 46.9-59.0 64.0-76.0 Above 77 GHz

Other restricted bands in some CITEL countries are listed in the Attachments.

5 Radiated Power or Magnetic or Electric Field Strength

The electric field strength limits shown in the tables below are the required values to allow satisfactory operation of low power radiocommunication devices. The levels were determined after careful analysis and are dependent on the frequency range, the specific application chosen and the services and systems already used or planned in these bands.

Table 3: General Limits

Frequency (MHz)	Electric Field Strength (microvolts/metre)	Measurement Distance (metres)
0.009-0.490	2 400/F(kHz)	300
0.490-1.705	24 000/F(kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

The following table contains exceptions or exclusions (indicated) to the general limits, otherwise the general limits can still be used. The emission limit for each type of operation, and the type of detector

used to measure emissions (average with a peak limit, "A", or quasi-peak, "Q") is specified. When a transmitter power limit is specified instead of an emission limit, no emission detector is specified.

Table 4: Exception or Exclusions from the General Limits

Frequency Band	Type of Use	Emission Limit	Detector A-Average Q-Quasi-peak
9-45 kHz	Cable locating equipment	10 Watts peak output power	
45-490 kHz	Cable locating equipment	1 Watt peak output power	
26.96-27.28 MHz	Any	10 000 µV/m @ 3 m	A
43.71-44.49 MHz	Cordless Telephones	10 000 µV/m @ 3 m	A
46.6-46.98 MHz	Cordless Telephones	10 000 µV/m @ 3 m	A
48.75-49.51 MHz	Cordless Telephones	10 000 µV/m @ 3 m	A
49.66-49.82 MHz	Cordless Telephones	10 000 µV/m @ 3 m	A
49.82-49.9 MHz	Any	10 000 µV/m @ 3 m	A
	Cordless Telephones	10 000 µV/m @ 3 m	A
49.9-50 MHz	Cordless Telephones	10 000 µV/m @ 3 m	A
72-73 MHz	Auditory Assistance Devices	80 000 µV/m @ 3 m	A
74.6-74.8 MHz	Auditory Assistance Devices	80 000 µV/m @ 3 m	A
75.2-76 MHz	Auditory Assistance Devices	80 000 µV/m @ 3 m	A
174-216 MHz	Or Biomedical Telemetry Devices	1 500 µV/m @ 3 m	A
902-928 MHz	Spread Spectrum Transmitters	1 Watt Output Power	
	Field Disturbance Sensors	500 000 µV/m @ 3 m	A
	Any	50 000 µV/m @ 3 m	Q
2.4-2.435 GHz	Spread Spectrum Transmitters	1 Watt Output Power	
	Any	50 000 µV/m @ 3 m	A
2.435-2.465 GHz	Spread Spectrum Transmitters	1 Watt Output Power	
	Field Disturbance Sensors	500 000 µV/m @ 3 m	A
	Any	50 000 µV/m @ 3 m	A

2.465-2.4835 GHz	Spread Spectrum Transmitters	1 Watt Output Power	
	Any 15.249	50 000 µV/m @ 3 m	A
2.9-3.26 GHz	Automatic Vehicle Identification Systems	3 000 µV/m per MHz of bandwidth @ 3 m	A
3.267-3.332 GHz	Automatic Vehicle Identification Systems	3 000 µV/m per MHz of bandwidth @ 3 m	A
3.339-3.3458 GHz	Automatic Vehicle Identification Systems	3 000 µV/m per MHz of bandwidth @ 3 m	A
3.358-3.6 GHz	Automatic Vehicle Identification Systems	3 000 µV/m per MHz of bandwidth @ 3 m	A
5.725-5.785 GHz	Spread Spectrum Transmitters	1 Watt Output Power	
	Any	50 000 µV/m @ 3 m	A
5.785-5.815 GHz	Spread Spectrum Transmitters	1 Watt Output Power	
	Field Disturbance Sensors	500 000 µV/m @ 3 m	A
	Any	50 000 µV/m @ 3 m	A
5.815-5.85 GHz	Spread Spectrum Transmitters	1 Watt Output Power	
	Any	50 000 µV/m @ 3 m	A
5.85-5.875 GHz	Any	50 000 µV/m @ 3 m	A
10.5-10.55 GHz	Field Disturbance Sensors	2 500 000 µV/m @ 3 m	A
24-24.075 GHz	Any	250 000 µV/m @ 3 m	A
24.075-24.175 GHz	Field Disturbance Sensors	2 500 000 µV/m @ 3 m	A
	Any	250 000 µV/m @ 3 m	A
24.175-24.25 GHz	Any	250 000 µV/m @ 3 m	A

For some CITEL countries other additional specific exceptions or exclusions to the general limits are listed in the attachments.

6 Antenna Requirements

Basically three types of transmitter antennas are used for low power radiocommunication transmitters: Integral (no external antenna socket); Dedicated (type approved with the equipment); and, External (equipment type approved without antenna).

In most cases low power radiocommunication transmitters are equipped with either integral or dedicated antennas, because changing the antenna on a transmitter can significantly increase, or decrease, the strength of the signal that is ultimately transmitted. Except for some special applications, the RF requirements are not based solely on output power but also take into account the antenna characteristics.

Thus, a low power radiocommunication transmitter that complies with the technical standards with a particular antenna attached could exceed the power limits given if a different antenna is attached. Should this happen a serious interference problem to authorized radio communications such as emergency, broadcast and air-traffic control communications could occur.

In order to prevent such interference problems, low power radiocommunication transmitters shall be designed to ensure that no type of antenna can be used other than one which has been designed and type approved by the manufacturer to show conformity with the appropriate emission level. This means that normally low power radiocommunication transmitters must have permanently attached, or detachable antennas with a unique connector. A "unique connector" is one that is not of a standard type found in electronic supply stores or not normally used for RF connection purposes. National administrations may define the term "unique connector" differently.

7 MUTUAL RECOGNITION AGREEMENTS (MRA)

Administrations have in many cases found it is beneficial and efficient to establish mutual agreements between countries providing for the recognition by one country of the conformity test results of a recognized/accredited test laboratory in the other country/region.

These MRAs enable manufacturers to have the conformity of their products assessed in accordance with the regulatory requirements of the relevant third country by appropriately designated laboratories, inspection bodies and Conformity Assessment Bodies (CABs) in their own countries, hence reducing the costs of such assessments and the time needed to access markets.

The agreements comprise a "framework" agreement which establishes the mutual recognition principles and procedures, and a series of sectoral annexes which detail, for each sector, the scope in terms of products and operations, the respective legislation, and any specific procedures.

ATTACHMENT 1

Brazil

Some Specific Exceptions

1. The bands listed below are also considered restricted for operation of low power radicommunication devices in Brazil:

Table 1: Restricted Bands

MHz	MHz
0.495-0.505 21.87-21.924 23.2-23.35 121.94-123 149.9-150.5	1626.5-1645.5 2483.5-2500 6650-6675.2 59000-64000

2. Besides those listed in the Annex, the following table contains other exceptions or exclusions to the general limits in Brazil. Additionally, under special conditions telecommand systems can operate in some specific frequencies of 26 MHz, 27 MHz, 50 MHz, 71 MHz e 75 MHz bands.

Table 2: Exception or Exclusions from the General Limits

Frequency Band	Type of Use	Emission Limit	Detector A-Average Q-Quasi-peak
40.66-40.7 MHz	Intermittent Control Signals	2 250 µV/m @ 3 m	A or Q
	Periodic Transmissions	1 000 µV/m @ 3 m	A or Q
	Any	1 000 µV/m @ 3 m	Q
	Perimeter Protection Systems	500 µV/m @ 3 m	A
54-70 MHz	Exclusively Non-Residential Perimeter Protection Systems	100 µV/m @ 3 m	Q
	Wireless microphone	50 mW	
	Telemetry Devices	50 mW	
70-72 MHz	Intermittent Control Signals	1 250 µV/m @ 3 m	A or Q
	Periodic Transmissions	500 µV/m @ 3 m	A or Q

	Non-Residential Perimeter Protection Systems	100 µV/m @ 3 m	Q
	Wireless microphone	50 mW	
72-73 MHz	Intermittent Control Signals	1 250 µV/m @ 3 m	A or Q
	Periodic Transmissions	500 µV/m @ 3 m	A or Q
74.6-74.8 MHz	Intermittent Control Signals	1 250 µV/m @ 3 m	A or Q
	Periodic Transmissions	500 µV/m @ 3 m	A or Q
75.2-76 MHz	Intermittent Control Signals	1 250 µV/m @ 3 m	A or Q
	Periodic Transmissions	500 µV/m @ 3 m	A or Q
76-88 MHz	Intermittent Control Signals	1 250 µV/m @ 3 m	A or Q
	Periodic Transmissions	500 µV/m @ 3 m	A or Q
	Non-Residential Perimeter Protection Systems	100 µV/m @ 3 m	Q
	Wireless microphone	50 mW	
88-108 MHz	Intermittent Control Signals	1 250 µV/m @ 3 m	A or Q
	Periodic Transmissions	500 µV/m @ 3 m	A or Q
	Wireless microphone	250 mW	
121.94-123 MHz	Intermittent Control Signals	1 250 µV/m @ 3 m	A or Q
	Periodic Transmissions	500 µV/m @ 3 m	A or Q
138-149.9 MHz	Intermittent Control Signals	(625/11) × f(MHz) - (67500/11) µV/m @ 3 m	A or Q
	Periodic Transmissions	(250/11) × f(MHz) - (27000/11) µV/m @ 3 m	A or Q
150.05-156.52475 MHz	Intermittent Control Signals	(625/11) × f(MHz) - (67500/11) µV/m @ 3 m	A or Q
	Periodic Transmissions	(250/11) × f(MHz) - (27000/11) µV/m @ 3 m	A or Q
156.52525-156.7 MHz	Intermittent Control Signals	(625/11) × f(MHz) - (67500/11) µV/m @ 3 m	A or Q
	Periodic Transmissions	(250/11) × f(MHz) - (27000/11) µV/m @ 3 m	A or Q

156.9-162.0125 MHz	Intermittent Control Signals	(625/11) × f(MHz) - (67500/11) µV/m @ 3 m	A or Q
	Periodic Transmissions	(250/11) × f(MHz) - (27000/11) µV/m @ 3 m	A or Q
167.17-167.72 MHz	Intermittent Control Signals	(625/11) × f(MHz) - (67500/11) µV/m @ 3 m	A or Q
	Periodic Transmissions	(250/11) × f(MHz) - (27000/11) µV/m @ 3 m	A or Q
173.2-174 MHz	Intermittent Control Signals	(625/11) × f(MHz) - (67500/11) µV/m @ 3 m	A or Q
	Periodic Transmissions	(250/11) × f(MHz) - (27000/11) µV/m @ 3 m	A or Q
174-216 MHz	Intermittent Control Signals	3 750 µV/m @ 3 m	A or Q
	Periodic Transmissions	1 500 µV/m @ 3 m	A or Q
	Wireless microphone	50 mW	
216-225 MHz	Intermittent Control Signals	3 750 µV/m @ 3 m	A or Q
	Periodic Transmissions	1 500 µV/m @ 3 m	A or Q
225-240 MHz	Intermittent Control Signals	3 750 µV/m @ 3 m	A or Q
	Periodic Transmissions	1 500 µV/m @ 3 m	A or Q
	Indoor Sound System	580000 µV/m @ 3 m	
240-242.95 MHz	Indoor Sound System	580000 µV/m @ 3 m	
243-270 MHz	Indoor Sound System	580000 µV/m @ 3 m	
285-322 MHz	Intermittent Control Signals	(125/3) × f(MHz) - (21250/3) µV/m @ 3 m	A or Q
	Periodic Transmissions	(50/3) × f(MHz) - (8500/3) µV/m @ 3 m	A or Q
335.4-399.9 MHz	Intermittent Control Signals	(125/3) × f(MHz) - (21250/3) µV/m @ 3 m	A or Q
	Periodic Transmissions	(50/3) × f(MHz) - (8500/3) µV/m @ 3 m	A or Q
402-405 MHz	Medical Implant Communication Systems (MICS)	25 µW (e.i.r.p.) per 300 kHz Bandwidth	
410-462.53 MHz	Intermittent Control Signals	(125/3) × f(MHz) - (21250/3) µV/m @ 3 m	A or Q

	Periodic Transmissions	(50/3) × f(MHz) - (8500/3) µV/m @ 3 m	A or Q
462.53-462.74 MHz	Intermittent Control Signals	(125/3) × f(MHz) - (21250/3) µV/m @ 3 m	A or Q
	Periodic Transmissions	(50/3) × f(MHz) - (8500/3) µV/m @ 3 m	A or Q
	General Usage Radio Equipment	500 mW (e.r.p.)	
462.74-467.53 MHz	Intermittent Control Signals	(125/3) × f(MHz) - (21250/3) µV/m @ 3 m	A or Q
	Periodic Transmissions	(50/3) × f(MHz) - (8500/3) µV/m @ 3 m	A or Q
467-53-467.74 MHz	Intermittent Control Signals	(125/3) × f(MHz) - (21250/3) µV/m @ 3 m	A or Q
	Periodic Transmissions	(50/3) × f(MHz) - (8500/3) µV/m @ 3 m	A or Q
	General Usage Radio Equipment	500 mW (e.r.p.)	
470-512 MHz	Intermittent Control Signals	12 500 µV/m @ 3 m	A or Q
	Periodic Transmissions	5 000 µV/m @ 3 m	A or Q
	Wireless Microphone	250 mW	
512-566 MHz	Intermittent Control Signals	12 500 µV/m @ 3 m	A or Q
	Periodic Transmissions	5 000 µV/m @ 3 m	A or Q
	Biomedical Telemetry Devices for Hospitals	200 µV/m @ 3 m	Q
	Wireless Microphone	250 mW	
566-608 MHz	Intermittent Control Signals	12 500 µV/m @ 3 m	A or Q
	Periodic Transmissions	5 000 µV/m @ 3 m	A or Q
	Wireless Microphone	250 mW	
614-806 MHz	Intermittent Control Signals	12 500 µV/m @ 3 m	A or Q
	Periodic Transmissions	5 000 µV/m @ 3 m	A or Q
	Wireless Microphone	250 mW	
806-864 MHz	Intermittent Control Signals	12 500 µV/m @ 3 m	A or Q

	Periodic Transmissions	5 000 µV/m @ 3 m	A or Q
864-868 MHz	Intermittent Control Signals	12 500 µV/m @ 3 m	A or Q
	Periodic Transmissions	5 000 µV/m @ 3 m	A or Q
	Wireless PABX System	250 mW	
868-890 MHz	Intermittent Control Signals	12 500 µV/m @ 3 m	A or Q
	Periodic Transmissions	5 000 µV/m @ 3 m	A or Q
890-902 MHz	Intermittent Control Signals	12 500 µV/m @ 3 m	A or Q
	Periodic Transmissions	5 000 µV/m @ 3 m	A or Q
	Signals Used to Measure the Characteristics of a Material	500 µV/m @ 30 m	A
902-928 MHz	Signals Used to Measure the Characteristics of a Material	500 µV/m @ 30 m	A
	Intermittent Control Signals	12 500 µV/m @ 3 m	A or Q
	Periodic Transmissions	5 000 µV/m @ 3 m	A or Q
928-940 MHz	Intermittent Control Signals	12 500 µV/m @ 3 m	A or Q
	Periodic Transmissions	5 000 µV/m @ 3 m	A or Q
	Signals Used to Measure the Characteristics of a Material	500 µV/m @ 30 m	A
940-944 MHz	Intermittent Control Signals	12 500 µV/m @ 3 m	A or Q
	Periodic Transmissions	5 000 µV/m @ 3 m	A or Q
944-948 MHz	Intermittent Control Signals	12 500 µV/m @ 3 m	A or Q
	Periodic Transmissions	5 000 µV/m @ 3 m	A or Q
	Wireless PABX System	250 mW	
948-960 MHz	Intermittent Control Signals	12 500 µV/m @ 3 m	A or Q
	Periodic Transmissions	5 000 µV/m @ 3 m	A or Q
1.24-1.3 GHz	Intermittent Control Signals	12 500 µV/m @ 3 m	A
	Periodic Transmissions	5 000 µV/m @ 3 m	A

1.427-1.435 GHz	Intermittent Control Signals	12 500 µV/m @ 3 m	A
	Periodic Transmissions	5 000 µV/m @ 3 m	A
1.6265-1.6455 GHz	Intermittent Control Signals	12 500 µV/m @ 3 m	A
	Periodic Transmissions	5 000 µV/m @ 3 m	A
1.6465-1.66 GHz	Intermittent Control Signals	12 500 µV/m @ 3 m	A
	Periodic Transmissions	5 000 µV/m @ 3 m	A
1.71-1.7188 GHz	Intermittent Control Signals	12 500 µV/m @ 3 m	A
	Periodic Transmissions	5 000 µV/m @ 3 m	A
1.7222-2.2 GHz	Intermittent Control Signals	12 500 µV/m @ 3 m	A
	Periodic Transmissions	5 000 µV/m @ 3 m	A
1.91-1.93 GHz	Wireless PABX System	250 mW	
2.3-2.31 GHz	Intermittent Control Signals	12 500 µV/m @ 3 m	A
	Periodic Transmissions	5 000 µV/m @ 3 m	A
2.39-2.4 GHz	Intermittent Control Signals	12 500 µV/m @ 3 m	A
	Periodic Transmissions	5 000 µV/m @ 3 m	A
2.5-2.655 GHz	Intermittent Control Signals	12 500 µV/m @ 3 m	A
	Periodic Transmissions	5 000 µV/m @ 3 m	A
2.9-3.26 GHz	Intermittent Control Signals	12 500 µV/m @ 3 m	A
	Periodic Transmissions	5 000 µV/m @ 3 m	A
3.267-3.332 GHz	Intermittent Control Signals	12 500 µV/m @ 3 m	A
	Periodic Transmissions	5 000 µV/m @ 3 m	A
3.339-3.3458 GHz	Intermittent Control Signals	12 500 µV/m @ 3 m	A
	Periodic Transmissions	5 000 µV/m @ 3 m	A
3.358-3.6 GHz	Intermittent Control Signals	12 500 µV/m @ 3 m	A
	Periodic Transmissions	5 000 µV/m @ 3 m	A

4.4-4.5 GHz	Intermittent Control Signals	12 500 µV/m @ 3 m	A
	Periodic Transmissions	5 000 µV/m @ 3 m	A
5.25-5.35 GHz	Intermittent Control Signals	12 500 µV/m @ 3 m	A
	Periodic Transmissions	5 000 µV/m @ 3 m	A
5.46-5.725 GHz	Intermittent Control Signals	12 500 µV/m @ 3 m	A
	Periodic Transmissions	5 000 µV/m @ 3 m	A
5.875-7.25 GHz	Intermittent Control Signals	12 500 µV/m @ 3 m	A
	Periodic Transmissions	5 000 µV/m @ 3 m	A
7.75-8.025 GHz	Intermittent Control Signals	12 500 µV/m @ 3 m	A
	Periodic Transmissions	5 000 µV/m @ 3 m	A
8.5-9 GHz	Intermittent Control Signals	12 500 µV/m @ 3 m	A
	Periodic Transmissions	5 000 µV/m @ 3 m	A
9.2-9.3 GHz	Intermittent Control Signals	12 500 µV/m @ 3 m	A
	Periodic Transmissions	5 000 µV/m @ 3 m	A
9.5-10.5 GHz	Intermittent Control Signals	12 500 µV/m @ 3 m	A
	Periodic Transmissions	5 000 µV/m @ 3 m	A
10.5-10.55 GHz	Intermittent Control Signals	12 500 µV/m @ 3 m	A
	Periodic Transmissions	5 000 µV/m @ 3 m	A
10.55-10.6 GHz	Intermittent Control Signals	12 500 µV/m @ 3 m	A
	Periodic Transmissions	5 000 µV/m @ 3 m	A
12.7-13.25 GHz	Intermittent Control Signals	12 500 µV/m @ 3 m	A
	Periodic Transmissions	5 000 µV/m @ 3 m	A
13.4-14.47 GHz	Intermittent Control Signals	12 500 µV/m @ 3 m	A
	Periodic Transmissions	5 000 µV/m @ 3 m	A

14.5-15.35 GHz	Intermittent Control Signals	12 500 µV/m @ 3 m	A
	Periodic Transmissions	5 000 µV/m @ 3 m	A
16.2-17.7 GHz	Intermittent Control Signals	12 500 µV/m @ 3 m	A
	Periodic Transmissions	5 000 µV/m @ 3 m	A
19.156-19.635 GHz	Any P-MP Radio System	100 mW output power	
21.4-22.01 GHz	Intermittent Control Signals	12 500 µV/m @ 3 m	A
	Periodic Transmissions	5 000 µV/m @ 3 m	A
23.12-23.6 GHz	Intermittent Control Signals	12 500 µV/m @ 3 m	A
	Periodic Transmissions	5 000 µV/m @ 3 m	A
24.25-31.2 GHz	Intermittent Control Signals	12 500 µV/m @ 3 m	A
	Periodic Transmissions	5 000 µV/m @ 3 m	A
31.8-36.43 GHz	Intermittent Control Signals	12 500 µV/m @ 3 m	A
	Periodic Transmissions	5 000 µV/m @ 3 m	A
36.5-38.6 GHz	Intermittent Control Signals	12 500 µV/m @ 3 m	A
	Periodic Transmissions	5 000 µV/m @ 3 m	A
46.7-46.9 GHz	Vehicle mounted field disturbance sensors	Varies	
76-77 GHz	Vehicle mounted field disturbance sensors	Varies	

ATTACHMENT 2

Canada

Some Specific Exceptions

1. The bands listed below are also considered restricted for operation of low power radicommunication devices in Canada:

Table 1: Restricted Bands

MHz	MHz
3.020-3.026 5.677-5.683 121.94-123 240-242.95 243-285 1215-1300 2310-2390 3352.5-3358 3500-4200	4500-4800 7250-7750 11700-12200 17700-20200 21260-21400 46700-46900 59000-64000 76000-77000

2. Besides those listed in the Annex, the following table contains other exceptions or exclusions to the general limits in Canada.

Table 2: Exception or Exclusions from the General Limits

Frequency Band	Type of Use	Emission Limit	Detector A-Average Q-Quasi-peak
Any frequency except restricted frequencies	Underground and tunnel radio	< 110 W Tx power	A or Q
Any frequency	Any	# 6 nW total input power – battery consumption	A or Q
0-9 kHz	Any	N/A	-
45-490 kHz	Cable locating equipment	1 Watt peak output power	A or Q
510-1705 kHz	Any	100 mW final stage or	Q

		250 µV/m @ 30 m	
1.705-37 MHz	Swept frequency devices	100 µV/m @ 30 m for <10 MHz 30 µV/m @ 30 m for >10 MHz and < 30 MHz 100 µV/m @ 3 m for >30 MHz	Q
6.765-6.795 MHz	Any	15 500 µV/m @ 30 m	Q
13.553-13.567 MHz	Any	15 500 µV/m @ 30 m	Q
26.96-27.41 MHz	General Radio Service	4-6 W Tx power	Q
26.99-27.20 MHz[16]	Momentary remote control	2.5-4 W peak Tx power	A or Q
40.66-40.70 MHz	Any	10 000 µV/m @ 3 m	A
		233 000 µV/m @ 3 m	Q
44/49 MHz	Cordless telephones	10 000 µV/m @ 3 m	A
47 MHz[17]	Road traffic controllers	100 mW	-
49.82-49.90	Any	10 000 µV/m @ 3 m	Q
70-130 MHz	Any momentary	500 µV/m @ 3 m	A or Q
72-73 MHz	Momentary model aircraft	0.75 W peak Tx power	A or Q
	Wireless microphone	80 000 µV/m @ 3 m	A
74.6-74.8 MHz	Wireless microphone	80 000 µV/m @ 3 m	A
75.2-76.0 MHz	Wireless microphone	80 000 µV/m @ 3 m	A
75.4-76.0 MHz[18]	Momentary remote control	0.75 W peak Tx power	A or Q
121.5 MHz	Radiobeacon	25 000 µV/m @ 3 m	Q
130-174 MHz	Any momentary	500 µV/m to 1 500 µV/m @ 3m	A or Q
174-216 MHz	Medical telemetry	1 500 µV/m @ 3m	A
174-260 MHz	Any momentary	3 750 µV/m @ 3m	A or Q
216-216.450 MHz; 216.500-217 MHz[19]	Auditory assistance, medical telemetry, goods tracking	100 mW Tx power	Q
216.45-216.50 MHz	Law enforcement	100 mW Tx power	Q
243 MHz	Radiobeacon	25 mW to 50 mW min Tx power	Q

[16] Only the following channel carrier frequencies are permitted: 26.995; 27.045; 27.095; 27.145; 27.195 MHz.

[17] One-way communication only

[18] Voice modulation is permitted for emergency use if it is of the push-to-talk type.

[19] These bands are channelized and available for voice or data transmission b not two-way voice.

260-470 MHz	Any momentary	1 500 µV/m to 5 000 µV/m @ 3m	A or Q
406-406.1 MHz	Radiobeacon	25 mW to 50 mW min Tx power	Q
Above 470 MHz	Any momentary	5 000 µV/m @ 3m	A or Q
608-614 MHz	Medical telemetry	200 µV/m @ 3 m	Q
902-902.1 MHz / -927.9-928 MHz	Rural radiophones	0.5 W Tx power	Q
944-948.5 MHz	CT2+ Cordless telephones (private/commercial use)	10 mW	Q
1910-1920 MHz	Personal Communication Service Device (asynchronous)	112 mW Tx power	A
1920-1930 MHz	Personal Communication Service Device (isochronous)	112 mW Tx power	A
5150-5250 MHz[20]	Local area network	200 mW	A
5250-5350 MHz	Local area network	250 mW Tx power	A
5725-5825 MHz	Local area network	(4 W) 1 W Tx power	A
5725-5850 MHz	Any	50 000 µV/m @ 3 m	A
8.5-10.55 GHz	Inside metal container	8 mW peak Tx power	A
17.15 GHz	Any	300 mW e.i.r.p	A
94 GHz	Any	400 mW	A

[20] For indoors use only.

ATTACHMENT 3

United States of America

Some Specific Exceptions

1. The bands listed below are also considered restricted for operation of low power radicommunication devices in the United States of America:

Table 1: Restricted Bands

MHz	MHz
0.495-0.505	2483.5-2500
149.9-150.5	3352.5-3358
162.0125-167.17	3600-4200
167.72-173.2	4500-4800
240-242.95	7250-7750
243-285	11700-12200
1215-1240	17700-20200
2310-2390	21260-21400

2. Besides those listed in the Annex, the following table contains other exceptions or exclusions to the general limits in the United States of America.

Table 2: Exception or Exclusions from the General Limits

Frequency Band	Type of Use	Emission Limit	Detector A-Average Q-Quasi-peak
101.4 kHz	Telephone company electronic marker detectors	23.7 µV/m @ 300 m	A
160-190 kHz	Any	1 Watt input to final RF stage	
510-525 kHz	Any	100 mW input to final RF stage	
525-1 705 kHz	Any	100 mW input to final RF stage	
	Transmitters on grounds of educational institutions	24 000/f(kHz) µV/m @ 30 m outside of campus boundary	Q
	Carrier current and leaky coax systems	15 µV/m @ 47 715/f(kHz) m from cable	Q

1.705-10 MHz	Any, when 6 dB bandwidth ≥10% of centre frequency	100 µV/m @ 30 m	A
	Any, when 6 dB bandwidth < 10% of centre frequency	15 µV/m @ 30 m or bandwidth in (kHz)/f(MHz)	A
13.553-13.567 MHz	Any	10 000 µV/m @ 30 m	Q
40.66-40.7 MHz	Intermittent Control Signals	2 250 µV/m @ 3 m	A or Q
	Periodic Transmissions	1 000 µV/m @ 3 m	A or Q
	Any	1 000 µV/m @ 3 m	Q
	Perimeter Protection Systems	500 µV/m @ 3 m	A
54-70 MHz	Exclusively Non-Residential Perimeter Protection Systems	100 µV/m @ 3 m	Q
70-72 MHz	Exclusively either Intermittent Control Signals	1 250 µV/m @ 3 m	A or Q
	Or Periodic Transmissions	500 µV/m @ 3 m	A or Q
	Or Non-Residential Perimeter Protection Systems	100 µV/m @ 3 m	Q
72-73 MHz	Intermittent Control Signals	1 250 µV/m @ 3 m	A or Q
	Periodic Transmissions	500 µV/m @ 3 m	A or Q
74.6-74.8 MHz	Intermittent Control Signals	1 250 µV/m @ 3 m	A or Q
	Periodic Transmissions	500 µV/m @ 3 m	A or Q
75.2-76 MHz	Intermittent Control Signals	1 250 µV/m @ 3 m	A or Q
	Periodic Transmissions	500 µV/m @ 3 m	A or Q
76-88 MHz	Exclusively either Intermittent Control Signals	1 250 µV/m @ 3 m	A or Q
	Or Periodic Transmissions	500 µV/m @ 3 m	A or Q
	Or Non-Residential Perimeter Protection Systems	100 µV/m @ 3 m	Q
88-108 MHz	Any (≤ 200 kHz bandwidth)	250 µV/m @ 3 m	A
121.94-123 MHz	Intermittent Control Signals	1 250 µV/m @ 3 m	A or Q
	Periodic Transmissions	500 µV/m @ 3 m	A or Q
138-149.9 MHz	Intermittent Control Signals	(625/11) × f(MHz) - (67500/11) µV/m @ 3 m	A or Q

	Periodic Transmissions	(250/11) × f(MHz) - (27000/11) µV/m @ 3 m	A or Q
150.05-156.52475 MHz	Intermittent Control Signals	(625/11) × f(MHz) - (67500/11) µV/m @ 3 m	A or Q
	Periodic Transmissions	(250/11) × f(MHz) - (27000/11) µV/m @ 3 m	A or Q
156.52525-156.7 MHz	Intermittent Control Signals	(625/11) × f(MHz) - (67500/11) µV/m @ 3 m	A or Q
	Periodic Transmissions	(250/11) × f(MHz) - (27000/11) µV/m @ 3 m	A or Q
156.9-162.0125 MHz	Intermittent Control Signals	(625/11) × f(MHz) - (67500/11) µV/m @ 3 m	A or Q
	Periodic Transmissions	(250/11) × f(MHz) - (27000/11) µV/m @ 3 m	A or Q
167.17-167.72 MHz	Intermittent Control Signals	(625/11) × f(MHz) - (67500/11) µV/m @ 3 m	A or Q
	Periodic Transmissions	(250/11) × f(MHz) - (27000/11) µV/m @ 3 m	A or Q
173.2-174 MHz	Intermittent Control Signals	(625/11) × f(MHz) - (67500/11) µV/m @ 3 m	A or Q
	Periodic Transmissions	(250/11) × f(MHz) - (27000/11) µV/m @ 3 m	A or Q
174-216 MHz	Exclusively either Intermittent Control Signals	3 750 µV/m @ 3 m	A or Q
	Or Periodic Transmissions	1 500 µV/m @ 3 m	A or Q
216-240 MHz	Periodic Transmissions	1 500 µV/m @ 3 m	A or Q
	Intermittent Control Signals	3 750 µV/m @ 3 m	A or Q
285-322 MHz	Intermittent Control Signals	(125/3) × f(MHz) - (21250/3) µV/m @ 3 m	A or Q
	Periodic Transmissions	(50/3) × f(MHz) - (8500/3) µV/m @ 3 m	A or Q
335.4-399.9 MHz	Intermittent Control Signals	(125/3) × f(MHz) - (21250/3) µV/m @ 3 m	A or Q
	Periodic Transmissions	(50/3) × f(MHz) - (8500/3) µV/m @ 3 m	A or Q
410-470 MHz	Intermittent Control Signals	(125/3) × f(MHz) - (21250/3) µV/m @ 3 m	A or Q
	Periodic Transmissions	(50/3) × f(MHz) - (8500/3) µV/m @ 3 m	A or Q

470-512 MHz	Exclusively either Intermittent Control Signals	12 500 µV/m @ 3 m	A or Q
	Or Periodic Transmissions	5 000 µV/m @ 3 m	A or Q
512-566 MHz	Exclusively either Intermittent Control Signals	12 500 µV/m @ 3 m	A or Q
	Or Periodic Transmissions	5 000 µV/m @ 3 m	A or Q
	Or Biomedical Telemetry Devices for Hospitals	200 µV/m @ 3 m	Q
566-608 MHz	Exclusively either Intermittent Control Signals	12 500 µV/m @ 3 m	A or Q
	Or Periodic Transmissions	5 000 µV/m @ 3 m	A or Q
614-806 MHz	Exclusively either Intermittent Control Signals	12 500 µV/m @ 3 m	A or Q
	Or Periodic Transmissions	5 000 µV/m @ 3 m	A or Q
806-890 MHz	Intermittent Control Signals	12 500 µV/m @ 3 m	A or Q
	Periodic Transmissions	5 000 µV/m @ 3 m	A or Q
890-902 MHz	Intermittent Control Signals	12 500 µV/m @ 3 m	A or Q
	Periodic Transmissions	5 000 µV/m @ 3 m	A or Q
	Signals Used to Measure the Characteristics of a Material	500 µV/m @ 30 m	A
902-928 MHz	Signals Used to Measure the Characteristics of a Material	500 µV/m @ 30 m	A
	Intermittent Control Signals	12 500 µV/m @ 3 m	A or Q
	Periodic Transmissions	5 000 µV/m @ 3 m	A or Q
928-940 MHz	Intermittent Control Signals	12 500 µV/m @ 3 m	A or Q
	Periodic Transmissions	5 000 µV/m @ 3 m	A or Q
	Signals Used to Measure the Characteristics of a Material	500 µV/m @ 30 m	A
940-960 MHz	Intermittent Control Signals	12 500 µV/m @ 3 m	A or Q
	Periodic Transmissions	5 000 µV/m @ 3 m	A or Q
1.24-1.3 GHz	Intermittent Control Signals	12 500 µV/m @ 3 m	A
	Periodic Transmissions	5 000 µV/m @ 3 m	A
1.427-1.435 GHz	Intermittent Control Signals	12 500 µV/m @ 3 m	A
	Periodic Transmissions	5 000 µV/m @ 3 m	A
1.6265-1.6455 GHz	Intermittent Control Signals	12 500 µV/m @ 3 m	A
	Periodic Transmissions	5 000 µV/m @ 3 m	A

1.6465-1.66 GHz	Intermittent Control Signals	12 500 µV/m @ 3 m	A
	Periodic Transmissions	5 000 µV/m @ 3 m	A
1.71-1.7188 GHz	Intermittent Control Signals	12 500 µV/m @ 3 m	A
	Periodic Transmissions	5 000 µV/m @ 3 m	A
1.7222-2.2 GHz	Intermittent Control Signals	12 500 µV/m @ 3 m	A
	Periodic Transmissions	5 000 µV/m @ 3 m	A
1.91-1.92 GHz	Asyncronous Personal Communications Service devices	Varies	
1.92-1.93 GHz	Isocronous PCS devices	Varies	
2.3-2.31 GHz	Intermittent Control Signals	12 500 µV/m @ 3 m	A
	Periodic Transmissions	5 000 µV/m @ 3 m	A
2.39-2.4 GHz	Intermittent Control Signals	12 500 µV/m @ 3 m	A
	Asyncronous PCS devices	Varies	
	Periodic Transmissions	5 000 µV/m @ 3 m	A
2.5-2.655 GHz	Intermittent Control Signals	12 500 µV/m @ 3 m	A
	Periodic Transmissions	5 000 µV/m @ 3 m	A
2.9-3.26 GHz	Intermittent Control Signals	12 500 µV/m @ 3 m	A
	Periodic Transmissions	5 000 µV/m @ 3 m	A
3.267-3.332 GHz	Intermittent Control Signals	12 500 µV/m @ 3 m	A
	Periodic Transmissions	5 000 µV/m @ 3 m	A
3.339-3.3458 GHz	Intermittent Control Signals	12 500 µV/m @ 3 m	A
	Periodic Transmissions	5 000 µV/m @ 3 m	A
3.358-3.6 GHz	Intermittent Control Signals	12 500 µV/m @ 3 m	A
	Periodic Transmissions	5 000 µV/m @ 3 m	A
4.4-4.5 GHz	Intermittent Control Signals	12 500 µV/m @ 3 m	A
	Periodic Transmissions	5 000 µV/m @ 3 m	A
5.15-5.25 GHz	National Information Infrastructure devices	Varies	
5.25-5.35 GHz	National Information Infrastructure devices	Varies	
	Intermittent Control Signals	12 500 µV/m @ 3 m	A
	Periodic Transmissions	5 000 µV/m @ 3 m	A
5.46-5.725 GHz	Intermittent Control Signals	12 500 µV/m @ 3 m	A
	Periodic Transmissions	5 000 µV/m @ 3 m	A

5.725-5.825 GHz	National Information Infrastructure devices	Varies	
5.875-7.25 GHz	Intermittent Control Signals	12 500 µV/m @ 3 m	A
	Periodic Transmissions	5 000 µV/m @ 3 m	A
7.75-8.025 GHz	Intermittent Control Signals	12 500 µV/m @ 3 m	A
	Periodic Transmissions	5 000 µV/m @ 3 m	A
8.5-9 GHz	Intermittent Control Signals	12 500 µV/m @ 3 m	A
	Periodic Transmissions	5 000 µV/m @ 3 m	A
9.2-9.3 GHz	Intermittent Control Signals	12 500 µV/m @ 3 m	A
	Periodic Transmissions	5 000 µV/m @ 3 m	A
9.5-10.5 GHz	Intermittent Control Signals	12 500 µV/m @ 3 m	A
	Periodic Transmissions	5 000 µV/m @ 3 m	A
10.5-10.55 GHz	Intermittent Control Signals	12 500 µV/m @ 3 m	A
	Periodic Transmissions	5 000 µV/m @ 3 m	A
10.55-10.6 GHz	Intermittent Control Signals	12 500 µV/m @ 3 m	A
	Periodic Transmissions	5 000 µV/m @ 3 m	A
12.7-13.25 GHz	Intermittent Control Signals	12 500 µV/m @ 3 m	A
	Periodic Transmissions	5 000 µV/m @ 3 m	A
13.4-14.47 GHz	Intermittent Control Signals	12 500 µV/m @ 3 m	A
	Periodic Transmissions	5 000 µV/m @ 3 m	A
14.5-15.35 GHz	Intermittent Control Signals	12 500 µV/m @ 3 m	A
	Periodic Transmissions	5 000 µV/m @ 3 m	A
16.2-17.7 GHz	Intermittent Control Signals	12 500 µV/m @ 3 m	A
	Periodic Transmissions	5 000 µV/m @ 3 m	A
21.4-22.01 GHz	Intermittent Control Signals	12 500 µV/m @ 3 m	A
	Periodic Transmissions	5 000 µV/m @ 3 m	A
23.12-23.6 GHz	Intermittent Control Signals	12 500 µV/m @ 3 m	A
	Periodic Transmissions	5 000 µV/m @ 3 m	A
24.25-31.2 GHz	Intermittent Control Signals	12 500 µV/m @ 3 m	A
	Periodic Transmissions	5 000 µV/m @ 3 m	A
31.8-36.43 GHz	Intermittent Control Signals	12 500 µV/m @ 3 m	A
	Periodic Transmissions	5 000 µV/m @ 3 m	A
36.5-38.6 GHz	Intermittent Control Signals	12 500 µV/m @ 3 m	A
	Periodic Transmissions	5 000 µV/m @ 3 m	A

46.7-46.9 GHz	Vehicle mounted field disturbance sensors	Varies	
59-64 GHz	Not aircraft, not satellite, not field disturbance sensors (with a qualified fixed exception)	Varies	
76-77 GHz	Vehicle mounted field disturbance sensors	Varies	

IV. DECISIONS

PCC.III/DEC. 45 (XIX-01)[21]

NEW DATA BASE FOR FSS EARTH STATION ANTENNA PATTERNS

The XIX Meeting of the Permanent Consultative Committee: Radiocommunications,

DECIDES:

To request the Executive Secretary to send the attached Draft resolution inviting administrations to comment on the database format and structure to the XX Meeting of Permanent Consultant Committee III: Radiocommunications. The XX Meeting will continue developing a new resolution on the creation of a database for FSS earth station antenna pattern.

APPENDIX 1

DRAFT RESOLUTION FOR NEW DATA BASE FOR EARTH STATION ANTENNA PATTERNS USED IN THE FIXED-SATELLITE SERVICE

The XX Meeting of Permanent Consultative Committee III – Radiocommunications,

CONSIDERING:

a) That CITEL administrations have a need to make calculations of interference levels for conducting fixed-satellite service (FSS) network coordinations and facilitating sharing between their FSS earth stations and between FSS earth stations and terrestrial services;

b) That for these calculations, information on the earth station antenna patterns are needed;

c) That earth station antenna characteristics, including either the measured radiation pattern of the antenna or the reference radiation pattern to be used for coordination, are part of the Appendix S4 data submitted to the ITU;

d) That more detailed information on earth station antenna characteristics than that provided in the Appendix S4 data may be useful to CITEL administrations when considering the deployment of earth stations;

[21] Document PCC.III/doc.2112/01

e) That it is preferable this kind of information be made available in a common database to which all interested and involved administrations could access, and

f) That this common database would only be feasible if some kind of standardization could be established for antenna pattern submission,

RESOLVES:

1. To request the Executive Secretary of CITEL to establish, within a one-year period, a new database for FSS earth station antenna radiation pattern information such as measured patterns, theoretical patterns, sidelobe masks or sidelobe envelopes.

2. To allow the submission of any radiation pattern information to this database by any regulatory agency, satellite service provider, earth station equipment supplier or integrator, antenna manufacturer and others participating in CITEL.

3. To apply a standard file format for these pattern data submissions as described in ANNEX, identifying administration and manufacturer or supplier name in the comments (lines 2 or 3).

INVITES:

Regulatory agencies, satellite service providers, earth station equipment suppliers or integrators, antenna manufacturers and others participating in CITEL to supply the radiation pattern data of the antennas used by their FSS earth stations based on the standard file format.

ANNEX

DRAFT DATA FORMAT FOR EARTH STATION ANTENNA PATTERN

1. GENERIC DESCRIPTION

The basic file types considered here are block structured. These data blocks are detailed in the next sections.

In all files, HEADER has to be formatted in accordance with:

Line	Description / Content
1	Title
2	Comments
3	Comments
4	File identification code

Maximum number of characters:

- Title: 52 characters
- Comments: 80 characters

1.1. File identification code

Code	File type
200	3D Fields – co-polar, cross-polar
201	3D Fields – rectangular coordinates
202	3D Fields – cylindrical coordinates
203	3D Fields – spherical coordinates

NOTE: For the purpose of this application only File Code 200 will be considered and described in details

1.2. Block structured files

For the block structured files a fifth row has to be used containing the total number of blocks.

Line	Description / Content
5	Total number of blocks

After row 5 the sequence of blocks is included with the main function data.

A single file block has a generic structure as following:

Control line

n	*m*		
$a_{1,1}$	$a_{1,2}$	...	$a_{1,m}$
$a_{2,1}$	$a_{2,2}$	...	$a_{2,m}$
...	...	...	...
...	...	...	...
$a_{n,1}$	$a_{n,2}$	...	$a_{n,m}$

Where:

Control line = Contains relevant data concerning the specific block (see details in the following sections);

n = number of block rows,

m = number of block columns.

1.2.1. File general structure

The general structure of a block structured file is described as following:

1Title
2Comments
3Comments
4File identification } *header*

5 Number of blocks

control line of block 1
n_1 m_1
$a_{1,1}$ $a_{1,2}$ K $a_{1,m}$
K K K K
K K K K
$a_{n,1}$ $a_{n,2}$ K $a_{n,m}$ } *block 1*

K K K K
K K K K

control line of block f
n_f m_f
$a_{1,1}$ $a_{1,2}$ K $a_{1,mf}$
K K K K
K K K K
$a_{nf,1}$ $a_{nf,2}$ K $a_{nf,mf}$ } *final block*

2. 3D Fields - Block Structured Files

In this section the content of field data is described only for the file type 200 (**3D Fields – Co-polar and Cross-polar)**. See figure 1 as a reference for parameters described below.

Title
Comments
Comments
id *pol* *orientation* *freq*
Number of blocks
ϕ_k r_j
n *m*

θ_1	$\lvert Co(\theta_1,\phi_k,r_j)\rvert$	$\angle Co(\theta_1,\phi_k,r_j)$	$\lvert X(\theta_1,\phi_k,r_j)\rvert$	$\angle X(\theta_1,\phi_k,r_j)$
. .	. . .	. . .	.. . .	. ..
. .	. . .	. . .	. . . .	. ..
θ_n	$\lvert Co(\theta_n,\phi_k,r_j)\rvert$	$\angle Co(\theta_n,\phi_k,r_j)$	$\lvert X(\theta_n,\phi_k,r_j)\rvert$	$\angle X(\theta_n,\phi_k,r_j)$

} *block*

Where:

- *id*, file identification, is 200,
- *pol*, antenna polarization, assumes values 1 (linear); 2 (circular/elliptical) or 0 (non determined),
- *orientation:*
  - when *pol* = 1, "orientation" indicates plane ϕ which contains the main component of the electric field (preferably 90°);
  - when *pol* = 2, "orientation" is 1 (for *left-hand* circular/elliptical polarization) , or 2 (for *right-hand* circular/elliptical polarization),
  - For non-determined cases use pol = 0 and orientation = 0;
- *freq*, frequency (in GHz). Not relevant in case of general sidelobe masks or envelopes.
- ϕ_k, pattern cut half plane angle ϕ (in degrees) , related to block data, (use ϕ = 90 for **upper elevation** cut). Varies from 0 to 360°.
- θ_i , Angular direction (in degrees) relative to the antenna boresight ($\theta_i = 0^o$) which shall indicate satellite pointing and maximum gain direction.

- r_j, radial distance **r** in meters related to specific block, (this value can be suppressed if data relates to far-field region)

- *n*, number of block rows, i.e., number of θ_i samples (where θ varies from 0 to 180°). Value of *n* shall be adequate to allow pattern resolution for data plotting or for use in coordination and interference calculations.

- *m*, number of block columns (for the 200 type file $m = 5$),

- $|Co(\theta_i, \phi_k, r_j)|$, co-polar field amplitude in dB or dBi, at the point (θ_i, ϕ_k, r_j),
- $\angle Co(\theta_i, \phi_k, r_j)$, co-polar field phase (in degrees), at the point (θ_i, ϕ_k, r_j),

- $|X(\theta_i, \phi_k, r_j)|$, cross-polar field amplitude in dB or dBi, at the point (θ_i, ϕ_k, r_j),

- $\angle X(\theta_i, \phi_k, r_j)$, cross-polar field phase (in degrees), at the point (θ_i, ϕ_k, r_j),

When amplitudes are indicated in dB, the antenna maximum gain (dBi) value must be supplied (use comments lines). When phase values are not available or not relevant, insert *0.0* (not blanks).

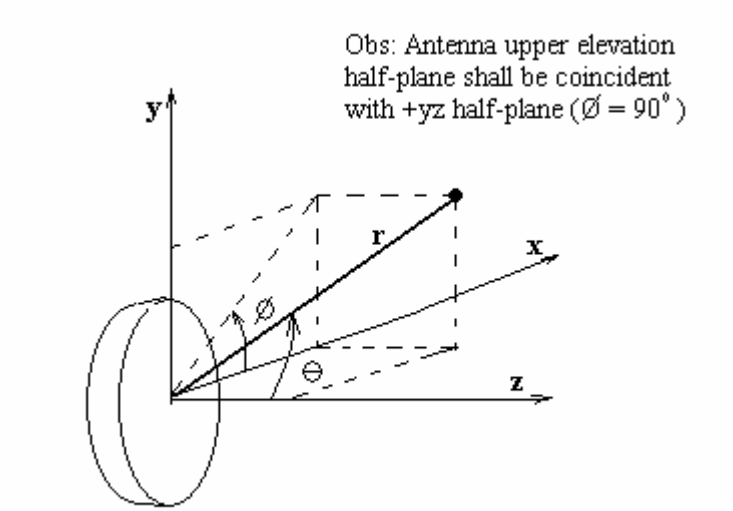

Figure 1 – Example of a reflector antenna in a spherical coordinate system as per the proposed standard file format

PCC.III/DEC. 46 (XIX-01) [22]

RESTRICTIONS TO THE USE OF BANDS 3625-3700 MHz AND 5850- 5925 MHz FOR TT&C SIGNALS

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

DECIDES:

To request the Executive Secretary to send document PCC.III/Doc.2046/01 "Draft Recommendation: Restrictions to the use of Bands 3625-3700 MHz and 5850- 5925 MHz TT&C signals" (see Annex) to the Administrations, and to invite the administrations to submit their comments about it to the XX Meeting of the Permanent Consultative Committee: Radiocommunications.

[22] Document PCC.III/doc.2116/01

ANNEX

DRAFT RECOMMENDATION

CONSTRAINTS FOR THE USE OF 3625-3700 MHz AND 5850-5925 MHz BANDS FOR TT&C SIGNALS

INTRODUCTION

We have recently noted an increase in the announcement of satellite networks on the highest frequency bands (Ka band and others). However, many of these networks attempt to utilize 3625 – 3700 MHz and 5850 – 5925 MHz bands for their TT&C signals.

With the congestion in orbital arc use and the subsequent stationing of satellites with narrow spacing, the use of 3625 – 3700 MHz and 5850 – 5925 MHz bands for TT&C signals could affect the operation of VSAT networks on these bands. The interference involved can be highly damaging to low power density signals such as VSAT signal networks, and result in constraints for utilizing signals of this type in future networks.

It is interesting to remember that the introduction of VSAT technology networks permitted the development of diverse long distance communication projects, in the corporate sphere used extensively by bank networks, for sales of vehicle and many other products, as well as in a social context, such as tele-education and tele-medicine. Moreover, we must emphasize that technological development during these years allowed for the use of very small aperture antennas, which normally facilitate and promote greater use through cost reduction of VSAT terminals.

For all these reasons, and to avoid major difficulties in coordination, we must avoid using 3625 – 3700 MHz and 5850 – 5925 MHz bands for TT&C signals when implementing new satellite networks on the highest bands of the frequency spectrum. Thus, the spectrum used by these networks will not lead to constraints, especially on VSAT networks.

DRAFT RECOMMENDATION

PCC.III/REC_____(XIX-01)

RESTRICTIONS TO THE USE OF 3625-3700 MHz AND 5850-5925 MHz BANDS BY THE TT&C SIGNALS

The XIX Meeting of Permanent Consultative Committee III: Radiocommunication,

CONSIDERING:

a) The number of satellite networks announced on Ka band and others has increased greatly;

b) Many of these networks plan to use C band for their TT&C signals;

c) The orbital arc is highly congested with increasingly narrower orbital spacing and coordination of the satellite networks is increasingly more difficult;

d) VSAT technologies have been of great importance for CITEL Member States' telecommunication development;

e) Incentives must be provided for using new technologies and antennas with smaller apertures;

f) Each CITEL Member Country has its own unique characteristics and therefore may have different needs, and

g) There are already specific coordination procedures between ITU satellite networks,

TAKING INTO ACCOUNT:

The extensive utilization of 3625 - 3700 MHz and 5850 – 5925 MHz bands by VSAT technologies.

RECOMMENDS:

That the CITEL Member Administrations avoid using these frequency bands for TT & C signals for their satellite networks on the highest bands, principally on the Ka band.

PCC.III/DEC.47 (XIX-01)[23]

CONCLUSION OF THE AD-HOC GROUP TO STUDY APPROACHES THAT FACILITATE THE MIGRATION OF EXISTING RADIOCOMMUNICATION SYSTEMS IN ORDER TO MAKE SPECTRUM AVAILABLE FOR NEW RADIOCOMMUNICATION SYSTEMS

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

DECIDES:

1. To conclude the work of the Ad-hoc group to study approaches that facilitate the migration of existing radiocommunication systems in order to make spectrum available for new radiocommunication systems.

2. To instruct the Executive Secretary to send, in the name of PCC.III, a letter to the Administration of Venezuela in which he communicates CITEL's appreciation of the work of Mr. José Vilera in leading the efforts to prepare a report of the migration of frequency bands of radiocommunication systems.

PCC.III/DEC.48 (XIX-01)[24]

CONCLUSION OF THE AD-HOC AD HOC GROUP ON THE PREPARATION OF THE WTDC-02

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

DECIDES:

1. To conclude the work of the Ad Hoc Group on the preparation of the WTDC-02.

2. To instruct the Executive Secretary to send, in the name of PCC.III, a letter to the Administration of Mexico in which he communicates CITEL's appreciation of the work of Mr. Héctor Huerta in developing from the point of view of PCC.III inputs for WTDC.

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[23] Document PCC.III/doc.2111 /01

[24] Document PCC.III/doc.2130/01

PCC.III/DEC. 49 (XIX-01)[25]

CONSIDERATION OF SPECTRUM ARRANGEMENTS FOR IMT-2000

The XIX Meeting of Permanent Consultative Committee III: Radiocommunications,

DECIDES

1. To request from the Member States views for the XX Meeting of PCC.III on the annex Draft Recommendation PCC.III/REC.xx (XIX-01) "Spectrum Arrangements for IMT-2000 in the Bands 806 to 960 MHz and 1710 to 2200 MHz".

2. To instruct the Executive Secretary to distribute this decision to the Member States.

[25] Document PCC.III/doc.2124/01

ANNEX PCC.III/DEC. 49 (XIX-01)

Draft Recommendation
PCC.III/REC.XX (XIX-01)
Spectrum Arrangements for IMT-2000 in the Bands 806 to 960 MHz and 1710 to 2200 MHz

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

CONSIDERING:

a) That the ITU Radio Regulations identify the bands 806-960 MHz, 1 710-1 885 MHz, 1 885-2 025 MHz, 2 110-2 200 MHz and 2 500-2 690 MHz as intended for use on a worldwide basis by administrations wishing to implement IMT-2000;

b) That CITEL Recommendation PCC.III/Rec.12 (III-95) "Designation of Spectrum for Personal Communications Systems in the Americas in the 2GHz Band" recommends that "PCS systems consider strategies for the evolution towards 3G";

c) That IMT-2000 represents an opportunity for a major improvement in mobile or portable communication services for individuals or businesses which would be integrated into a variety of competing networks;

d) That spectrum arrangements should be defined which are technology neutral i.e. any of the proposed IMT-2000 technologies can be used in these bands;

e) That the bands identified for IMT-2000 should be considered on a global basis as a set, to achieve a comprehensive, global solution that will ensure that there is an approach that meets all requirements and that a significant level of interoperability is achieved;

f) That Administrations should harmonize frequency arrangements to the greatest extent possible to facilitate worldwide compatibility, global roaming and create economies of scale;

g) That evolution from pre-IMT-2000 systems to IMT-2000 is enabled by providing compatible frequency arrangements thus leading to flexible regulatory approach;

h) That indication of mobile transmit or base transmit operation does not preclude the use of these frequency bands for TDD applications, and

i) That the IMT-2000 identified bands are shared on a co-primary basis with other Services, which should be protected accordingly,

RECOMMENDS:

1. That CITEL Administrations to the extent possible should identify spectrum for IMT-2000 mobile systems based on the following five principles:

    a) Maximize harmonization of the IMT-2000 identified bands with existing 2G and 3G band plan pairings for implementation of IMT-2000 services;
    b) Maximize the use of the entire 1710-1850 MHz band ;
    c) Maximize harmonization with the global 2110-2170 MHz Base Transmit Band;
    d) Facilitate global roaming;
    e) Minimize equipment costs.

2. That for the purpose of economies of scale, and roaming, it is highly desirable that global bands and pairings are harmonized. For Administrations wishing to implement only part of a band, the channel pairing should be consistent with the duplex frequency separations of the full band plan.

3. That CITEL Administrations to the extent possible should select from the following Spectrum band pairing options.

Note: Three Administrations have presented considerations and information concerning the advantages and disadvantages of the recommended spectrum band pairing options (PCC.III/Inf.2077/01) and this matter should be further studied.

Recommended Spectrum Band Pairing Options

Figure 1 shows the recommended spectrum band pairing options.

1) Mobile transmit band 1 920-1 980 MHz, paired with the global base transmit band 2 110 2 170 MHz, with a 190 MHz duplex separation - some countries may wish to implement part of the band.
2) Mobile transmit band 1 710-1 785 MHz, paired with a base transmit band 1 805-1 880 MHz, consistent with a duplex separation of 95 MHz (aligned with GSM1800 bandplan). For countries having implemented option 3, the upper edge for the mobile transmit band is 1 755 MHz and for the base transmit band is 1 850 MHz.
3) Mobile transmit band 1 850-1 910 MHz, paired with a base transmit band 1 930-1 990 MHz, consistent with a duplex separation of 80 MHz (aligned with PCS1900 bandplan).
4) Mobile transmit band 1 755-1 805 MHz[26], paired with the global base transmit band 2 110-2 160 MHz, with a 355 MHz duplex separation.
5) Mobile transmit band 1 710-1 770 MHz, paired with the global base transmit band 2 110-2 170 MHz, consistent with a duplex separation of 400 MHz.
6) Mobile transmit band starting at 824 MHz paired with a base transmit band starting at 869 MHz, consistent with a duplex separation of 45 MHz.

[27]

[26] The precise band edges of 1 755 – 1 805 MHz are under discussion in some Administrations.

[27] The upper band limits in some countries are 1 755 and 1 850 MHz.

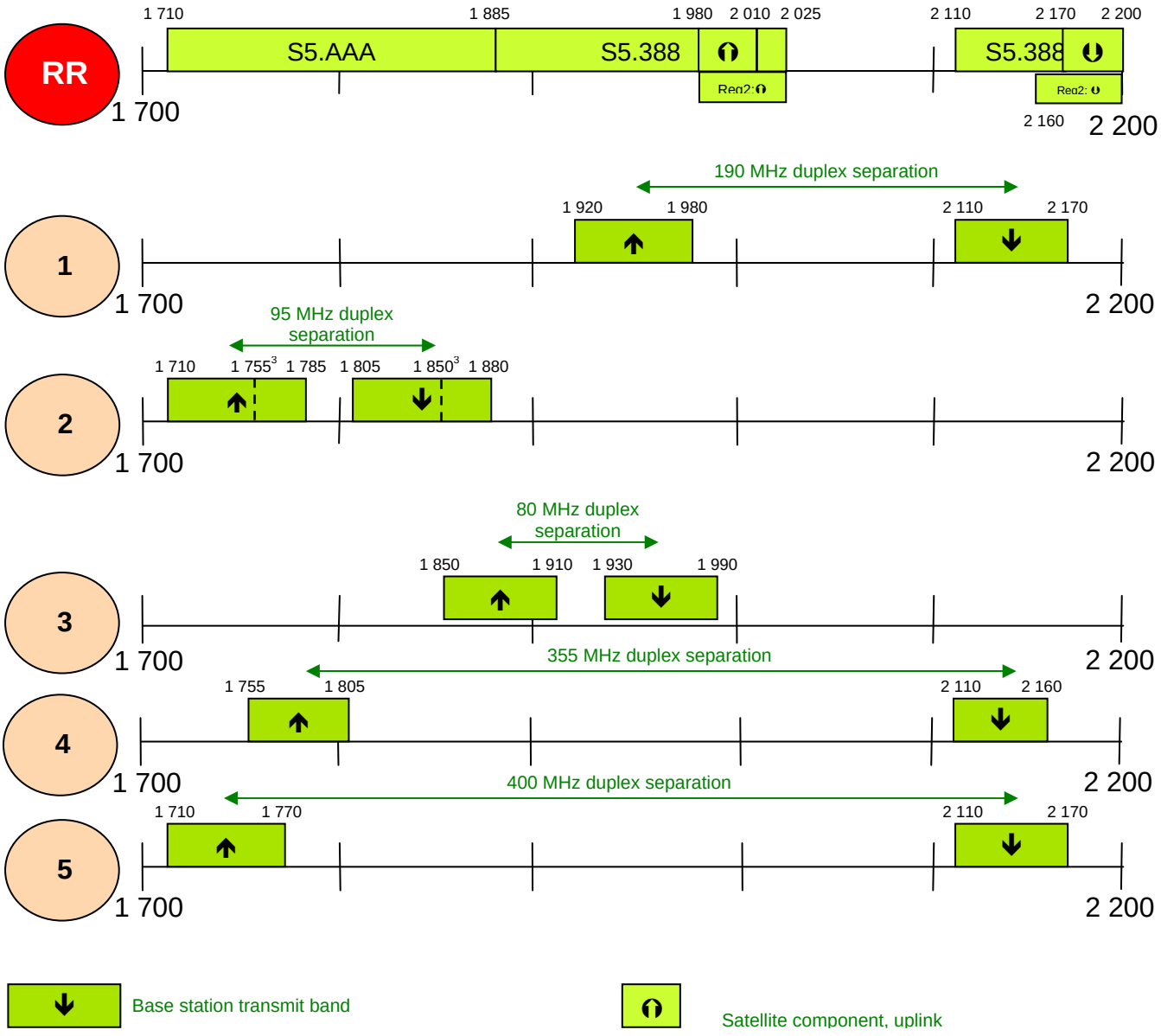

Figure 1: Recommended Band Pairing Options
1710-2200 MHz Band

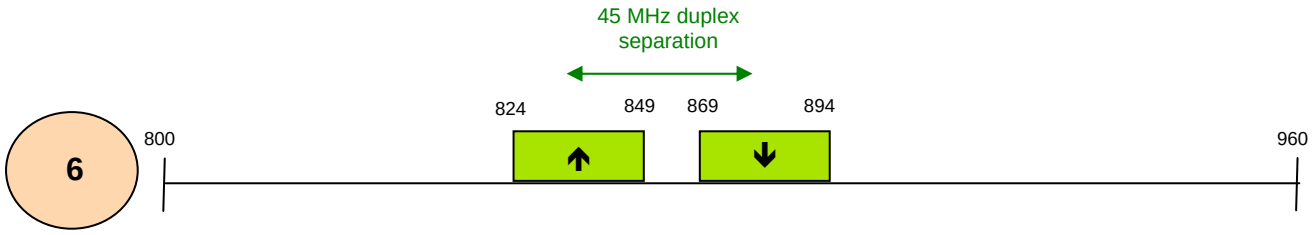

Figure 2: Recommended Band Pairing Options
806-960 MHz Band

V. LIST OF BASIC DOCUMENTS

Summary Minutes of the Inaugural Session and the First Plenary Session:	PCC.III/doc. 2088/01
Summary Minutes of the Second Plenary Session:	PCC.III/doc. 2126/01
Summary Minutes of the Third Plenary Session and Closing Session:	PCC.III/doc. 2128/01
List of Documents:	PCC.III/doc.2003/01 rev.6
List of Participants:	PCC.III/doc.2004/01rev.1
Final Report for the Meeting	PCC.III/doc.2131/01 rev.2