

**ORGANIZACION DE LOS ESTADOS AMERICANOS  
ORGANIZATION OF AMERICAN STATES**

**Comisión Interamericana de Telecomunicaciones  
Inter-American Telecommunication Commission**

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**VII MEETING OF PERMANENT  
CONSULTATIVE COMMITTEE II:  
RADIOCOMMUNICATIONS  
INCLUDING BROADCASTING  
June 20 to 23, 2006  
Lima, Peru**

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**FINAL REPORT**

**(Item on the Agenda: 8 )**

**(Document submitted by the Chair of the Group )**

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## FINAL REPORT

### VII MEETING OF THE PERMANENT CONSULTATIVE COMMITTEE II: RADIOCOMMUNICATIONS INCLUDING BROADCASTING

The VII Meeting of the Permanent Consultative Committee II: Radiocommunications including Broadcasting was held in Lima, Peru, June 20 to 23, 2006.

#### I. AGENDA<sup>1</sup>

1. Approval of the Agenda and Calendar.
2. Appointment of the Drafting Group for the Final Report.
3. Working methods of PCC.II.
4. Meeting and Report of Working Groups on:
  - 4.1 Preparation for Regional and World Radiocommunication Conferences.
  - 4.2 Terrestrial Fixed and Mobile Radiocommunication Services.
  - 4.3 Satellite systems to provide fixed and mobile services.
  - 4.4 Broadcasting.
  - 4.5 Technical and Regulatory Aspects Related to the Effects of Electromagnetic Non-Ionizing Emissions.
5. Report of the tasks performed in coordination with ITU.
6. Agenda, Venue and Date of the VIII Meeting of PCC.II.
7. Other matters.
8. Approval of the Final Report of the VII Meeting.

#### II. AUTHORITIES OF THE MEETING

<b>Alternate Chair:</b>	Mr. Mikhail Marsiglia (Venezuela)
<b>Vice-Chairs:</b>	Mr. Henry Batson (Jamaica) Mr. Héctor Budé (Uruguay) (Alternate)
<b>Executive Secretary:</b>	Mr. Clovis Baptista

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<sup>1</sup> Document CCP.II-RADIO/doc. 917/06 rev. 3

**Drafting Group:**

**Chair:** Mr. Herbert Palma (Peru)  
**Members** Mr. Stephen Acker (Canada)  
Mr. David Pinson (United States)  
Mr. Daniel Martínez (Venezuela)

**III. RESOLUTIONS**

**PCC.II/RES. 31 (VII-06)<sup>2</sup>**

**WORK METHOD OF THE SUB-WORKING GROUP ON HARMFUL INTERFERENCE OF UNAUTHORIZED TRANSMISSIONS TO SATELLITE SYSTEMS**

The VII Meeting of the Permanent Consultative Committee II: Radiocommunications including Broadcasting,

**CONSIDERING:**

- a) The importance of seeking optimal operation of satellite services in the region;
- b) That interference harmful to satellite networks from unauthorized emissions is considered a disruption from which major economic and technical losses ensue, for Administrations and satellite operators of the region and users; and
- c) That the Administrations of CITEI see a need to develop measures to address harmful interference from unauthorized satellite system emissions harmful to in the Americas,

**BEARING IN MIND:**

That, at the VI Meeting of PCC.II, it was decided to establish a Sub-Working Group to develop proposals intended to identify solutions to problems of harmful interference of unauthorized transmissions to satellite communication systems,

**RESOLVES:**

That said sub working group take account of the Work Plan attached hereto.

**INVITES:**

All member Administrations of CITEI interested to participate in this Sub-Working Group.

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<sup>2</sup> Document CCP.II-RADIO/doc. 1032/06 rev.1

**ANNEX TO RESOLUTION PCC.II/RES. 31 (VII-06) <sup>3</sup>**

**WORK PLAN TO ADDRESS INTERFERENCE HARMFUL  
TO SATELLITE SYSTEMS IN THE REGION**

<b>APPROVED ACTIVITY</b>	<b>PROPOSED ACTIONS TO BE CARRIED OUT</b>
<p><b>1 Updated registry of terrestrial stations.</b> Each Administration requires an updated registry of all the transmitting earth stations that operate within its national territory, including all relevant information such as geographical coordinates, address, antennas, satellites to which they transmit operational frequencies, etc.</p>	<p>1.1 Encourage Administrations to have this Register.                      1.2 Promote the updating of the Register.                      1.3 Promote the public availability of the Register.                      1.4 Propose an appropriate Register format for Administrations that do not have one.                      1.5 Promote to create a earth station data base for the control of the Administrations.</p>
<p><b>2 Training of the technical staff and staff that regulates, supervises or operates of transmitting earth stations.</b> It is essential that the operational staff of the earth stations receive training to operate the equipment, which must be recognized by the Administration.</p>	<p>2.1. Design curricula for seminars or courses.                      2.2. Select among the available courses of satellite operator members of PCC.II.                      2.3. Offer them through the CITEL's Regional Training Centers.                      2.4. Promote the dissemination of such courses.</p>
<p><b>3. Dissemination of cases where exemplary sanctions have been applied.</b> It is suggested that a dissemination system be established among CITEL Administrations directed at registered earth stations, in order to discourage new attempts to transmit without authorization and indicating the cases that have occurred and the sanctions that have been applied.</p> <p><b>4. Disseminate/Report the earth stations that are discovered transmitting without authorization.</b> Find a mechanism for disseminating or reporting on earth stations that incur in unauthorized transmissions, alerting</p>	<p>Create a space in CITEL's website to disseminate the most representative cases of harmful interference.</p>

<sup>3</sup> Document CCP.II-RADIO/doc. 1032/06

APPROVED ACTIVITY	PROPOSED ACTIONS TO BE CARRIED OUT
the different satellite operators that have landing rights in each member country of CITEL.	
<p><b>5. Periodic verification of transmissions.</b> It is considered convenient that the relevant Administrations carry out periodic verifications of transmissions without advance warning, in order to ensure that earth stations are transmitting according to the frequency assignment plan.</p>	<p>5.1 Establishment of certified monitoring groups, including methods and tools needed to carry out this action when so requested.</p> <p>5.2 Intensive participation by satellite operators is recommended.</p>
<p><b>6. Characterize cases of unauthorized transmissions that may occur.</b> It is necessary to define what would be considered as an unauthorized transmission. Basically, the suggestion is apply this definition to any transmission occurring outside the authorized frequencies; however, it should also be noted that accidental transmissions may occur due to human error or equipment failure, or intentional transmissions.</p>	<p>6.1 Development of a glossary of concepts and definitions agreed among the countries of CITEL.</p>
<p><b>7. Unify criteria at the regional level.</b> Apply the same criteria within the CITEL Administrations to characterize unauthorized transmissions.</p>	<p>7.1 Development of a glossary of concepts and definitions agreed among the countries of CITEL.</p>
<p><b>8. Establish standardized sanctions in all the member countries of CITEL.</b> The idea is to establish standardized sanctions at regional level, in such a way that all member countries of CITEL apply similar sanctions in accordance with criteria previously established and agreed among the different Administrations.</p> <p><b>9. Compensation for damage, bandwidth used and travel costs of the satellite operator.</b> Efforts would be made to find a way to ensure that any earth station discovered transmitting without authorization, pays for the damage caused by their interference to third parties, as well as the bandwidth</p>	<p>8.1 Development of a method for participation by satellite operators, Administrations, and users in efforts made in coordination with entities involved in the interference detection and elimination process.</p> <p>8.2 Method should also include quantification of costs and damages caused by interference, and sanctions therefor.</p>

APPROVED ACTIVITY	PROPOSED ACTIONS TO BE CARRIED OUT
<p>used and any travel costs incurred by the satellite operator in searching for the source of the interference.</p> <p><b>10. Establish working procedures with the satellite operators involved.</b> It is indispensable that satellite operators work in coordination with the corresponding Administration of each country, given that they cannot take action on their own account to find the source of the interference, and that such a search may entail risks.</p>	

**WORK OF THE RAPPORTEUR GROUP ON THE TECHNICAL AND REGULATORY ASPECTS RELATED TO THE EFFECTS OF ELECTROMAGNETIC NON-IONIZING EMISSIONS**

The VII Meeting of Permanent Consultative Committee II: Radiocommunications including Broadcasting,

**HAVING SEEN:**

- a) The growing concern of the peoples of the Americas at the deployment of wireless communication systems;
- b) That this concern has created a significant hurdle to the deployment of systems that would bring connectivity to many towns and cities in the Americas;
- c) That it is the duty of the authorities to work for the sustainable development and protection of the environment;
- d) That, to do so, appropriate regulations must be developed on non-ionizing emission, to ensure the protection of persons and the environment;
- e) That many countries in the region have yet to enact regulations on electromagnetic non-ionizing emission and some of them have requested information;
- f) That PCC.II, through the Rapporteur Group on Technical and Regulatory Aspects Related to the Effects of Electromagnetic Non-Ionizing Emissions has carried out work, gathered information, and established potentially useful relations with specialized international organizations;
- g) That the recent Declaration of Santo Domingo regarded wireless technologies as one of the ways to facilitate universal access to ICT's and requested CITELE to coordinate regional efforts to reduce the digital divide,

**CONSIDERING:**

- a) That to narrow the development gap among, as well as within, countries, a concerted effort is needed from the members of the Commission and from other international and regional organizations;
- b) That Wireless technologies can play a predominant role in achieving connectivity, improving universal access, and starting to bridge the digital divide in our region;
- c) That the Strategic Plan of CITELE encourages the active participation of the CITELE Member States and associate members and strengthens cooperation with the ITU and with other regional telecommunication organizations,

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<sup>4</sup> Document CCP.II-RADIO/doc. 1075/06 rev.1  
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## **BEARING IN MIND:**

- a) That the Mission of CITELE is to facilitate and promote the harmonious and integral development of telecommunications in the Americas;
- b) That the Vision set down in the Strategic Plan is for it *“To be a responsive, dynamic, and effective high-level specialized advisory body that promotes the ongoing exchange of experiences, information, and knowledge between governments and the private sector and develops reference guidelines to assist Member States in achieving their objectives regarding access to telecommunications, including information and communication technologies, promoting development in the region.”*;
- c) That one of the objectives of CITELE is *“to promote and study technical assistance, in agreement with the governments of the countries concerned.”*;
- d) That of particular importance among its functions are: “To undertake studies that will permit the orderly development of telecommunication networks; maintain continuous contact with the various international organizations in the field; and to request the cooperation of world or regional governmental organizations;
- d) That among the goals approved in the Strategic Plan of CITELE we can highlight to maintain CITELE’s leadership in the region in all aspects of telecommunications,

## **RESOLVES:**

1. To instruct the Rapporteur Group on the Technical and Regulatory Aspects Related to the Effects of Electromagnetic Non-Ionizing Emissions to continue its work, maintaining its current structure and based on the provisions contained in this resolution.
2. To request the Ministry of Transport and Communications of Peru to continue, through its website, the dissemination of the video of the Workshop on technical and regulatory aspects related to the effects of electromagnetic non-ionizing emissions in the period it considers as appropriate.
3. To instruct the Rapporteur Group to prepare a DVD with the documents presented at the Workshop held on June 19, 2006, including the work already performed by the Rapporteur Group, and to send it to the members of CITELE in order to disseminate all available information throughout the region.
4. That the Rapporteur Group, in conjunction with the Chair of PCC.II and the Executive Secretariat, should make the necessary contact with Regional Organizations and Specialized Organizations in order to continue compilation of information and help its dissemination.
5. That the Rapporteur Group should be available to those administrations that require its collaboration to develop their respective regulations.
6. It has been determined that none of the work of this Rapporteur Group should generate expenditures for the PCC.II, other than those associated with normal functioning at meetings of PCC.II, and that specific funding will have to be sought for each objective proposed, which will be channeled through the Secretariat in full accordance with the administrative provisions of the Organization.

## **INSTRUCTS:**

1. The Coordinator of the Rapporteur Group to present an activity report in connection with the aforementioned objectives at each meeting of PCC.II.
2. The Executive Secretary to bring this resolution to the attention of the CITEL Member States, associate members and observers, requesting that updates of the information on this subject be sent to the Coordinator of the Rapporteur Group (Mr. Hector Carril, [hcarril@secom.gov.ar](mailto:hcarril@secom.gov.ar)).
3. The Executive Secretary to establish a discussion group in the CITEL Electronic Forum and also to create an observatory on this subject in the CITEL open web page for the spreading of information on this subject to the general public.

### **PCC.II/RES. 33 (VII-06) <sup>5</sup>**

#### **COMMON REGULATORY BASIS FOR THE OPERATION OF EARTH STATIONS ON VESSELS (ESVs) IN THE AMERICAS**

The VII Meeting of the Permanent Consultative Committee II: Radiocommunications including Broadcasting,

## **CONSIDERING:**

- a) That WRC-03 adopted Resolution 902, which contains the broadly applicable regulatory and operational provisions and associated technical limitations for the operation of ESVs worldwide;
- b) That another Regional Organization and several Administrations have implemented Resolution 902 by adopting specific regulatory procedures and regulations for authorizing ESV operations;
- c) That there is a need for PCC.II to define a common basis for the operation of ESVs to facilitate the movement of vessels equipped with ESVs throughout the region, including territorial waters, in a way that assures protection of other radio services;
- d) That CITEL has adopted Recommendation PCC.II/REC. 14 (VI-05) "Procedures for Operation of Earth Stations on Vessels (ESVs)" which contains the key regulatory terms and conditions for the use of earth stations on board vessels in the Americas in the 5 925-6 425 MHz and 14-14.5 GHz bands, and which complements and implements Resolution 902 (WRC-03) by establishing specific recommendations for operational provisions for ESV use in the Americas region;
- e) That Recommendation PCC.II/REC. 14 (VI-05) specifies that a CITEL administration that operates an ESV network within the territory (including territorial waters) of a CITEL administration in the bands 5 925-6 425 MHz and 14-14.5 GHz, in accordance with the provisions set forth in the Annex to that Recommendation has, without the need for further regulatory measures, adequately protected co-frequency terrestrial and fixed-satellite service operations from harmful interference;

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<sup>5</sup> Document CCP.II-RADIO/doc. 1095/06 rev.1  
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f) That it is desirable for CITEL Administrations to have a means by which they can recognize that Administrations that have successfully followed Resolution 902 (WRC-03), as implemented in Recommendation PCC.II/REC. 14 (VI-05), should be permitted to operate ESVs in the Americas in the 5 925-6 425 MHz and 14-14.5 GHz bands; and

g) That it is desirable for CITEL to maintain a database of country-specific information provided by administrations containing the national requirements for ESV operation and ESV operator information,

**RECOGNIZING:**

That Recommendation PCC.II/REC. 14 (VI-05) provides CITEL Administrations with a basis for authorizing the operation of ESVs which ensures adequate protection of co-frequency terrestrial and satellite services from interference,

**RESOLVES:**

1 To encourage CITEL Administrations that authorize or plan to authorize the operation of ESV networks and/or terminals in the bands 5925-6425 MHz and/or 14-14.5 GHz, to do so in accordance with the provisions set forth in Recommendation PCC.II/REC. 14 (VI-05).

2. That, subject to national regulations for ESV operation, an ESV network authorized by a CITEL Administration to operate in the bands 5925-6425 MHz and/or 14-14.5 GHz, in accordance with the provisions set forth in Recommendation PCC.II/REC. 14 (VI-05), may be deemed permitted to operate in and near the territorial waters of other CITEL Administrations so long as it actually does operate in accordance with such national regulations.

3. To maintain a database of country-specific information relating to ESV operations in the Americas and regional ESV network operators in the form specified in the Annex to this Resolution.

**INSTRUCTS THE EXECUTIVE SECRETARY:**

1. To inform all CITEL Administrations of this Resolution and encourage administrations to provide the country-specific database information requested in Resolves 3.

2. To report back to PCC.II at its next meeting the progress in setting up the database for ESV information.

## ANNEX TO RESOLUTION PCC.II/RES. 33 (VII-06)

### 1. Information to be submitted by CITEL Administrations

A CITEL administration permitting or authorizing ESV operations in the band 5925-6425 MHz or the band 14.0-14.5 GHz, is to submit the following information to the CITEL Secretariat for inclusion in a database of ESV Operational Information. This information may be updated whenever necessary; but the date of entry into force for any new requirements should not be less than 90 days after the date of publication.

#### a) Administration details

- Administration.
- Regulatory Authority:
  - Address.
  - Contact name.
  - Contact telephone number.
  - Contact e-mail address.

#### b) National Requirements for ESV Operation within specific geographical areas

- Requirements for the corresponding national license or authorization, if any.
- Precise definition of geographic area with reference to standard nautical charts and navigational markers if possible (to insure compliance, the geographic areas must be clearly and simply defined).
- List of requirements for the following operational parameters that are different than those in PCC.II/Rec. 14 (VI-05):
  - Frequency range that is affected.
  - Maximum occupied bandwidth per ESV.
  - Maximum ESV EIRP per vessel.
  - Maximum ESV EIRP spectral density (per MHz) toward the horizon (possibly azimuth and distance dependent).
  - Maximum off-axis EIRP density limitations (possibly azimuth and distance dependent).
  - Antenna pointing restrictions.
  - Operational management requirements.
- Date of publication and date of entry into force.

### 2. Parameters to be submitted by ESV Network Operators

An ESV Network Operator authorized by a CITEL administration or wishing to operate in the territories under the authority of CITEL Administrations should submit the following information to the CITEL Secretariat for inclusion in a database of ESV Operational Information. This information may be updated whenever necessary, but should always be available prior to the commencement of operations in a specific geographical area.

**a) ESV Network Operator details**

- Name of Network.
- Administration Authorizing Network Operations.
- Network Operator:
  - Contact name.
  - Business address.
  - Contact telephone number.
  - Contact e-mail address.
- 24x7 Network Control Facility:
  - Contact name.
  - Contact telephone number.
  - Contact e-mail address.
- Declaration of Compliance with PCC.II/Rec. 14 (VI-05).

**b) Technical Specifications of ESV antenna systems used within this network**

- Antenna diameter (major & minor axes) and type of optics.
- Transmit and receive frequency bands.
- Transmit and receive gains at band center frequencies.
- Number of carriers per ESV.
- Maximum EIRP per carrier.
- Maximum occupied bandwidth(s) per carrier.
- Minimum operating elevation angle.
- Pointing accuracy.
- Modulation and multiple access schemes.

**c) Operational areas for ships within this network.**

- Description of geographical areas to be served.
- Date of commencement of operations.

**3. Procedures for reporting parameter values**

- a. Frequency range (lower frequency limit and upper frequency limit) should be reported in MHz.
- b. EIRP values should be reported in dBW with an accuracy of one decimal place.
- c. Distances should be reported in nautical miles or kilometers with a clear indication of the unit used.
- d. Longitude and latitude should be given in decimal degrees preferably in degrees using the NAD coordinate system.

**4. The CITEL ESV Database**

The CITEL Secretariat is to make information submitted by Administrations and ESV Network Operators readily available on its website in a form that can be accessed using common Internet browsing tools.

The CITEL Secretariat is to provide password protected access for the submission and access of information by the duly authorized representatives of administrations and ESV Network Operators. Apart from administration and ESV network operator contact information, which is to be publicly available, all other information submitted to the CITEL ESV Database is to be accessible only by the duly authorized representatives of CITEL administrations and ESV Network Operators.

The CITEL Secretariat may provide simple forms for the submission of the information required or may post the files as they are submitted by the administrations and ESV Network Operators. All information should be submitted in one of the following file formats: text files (.txt); rich text files (.rtf), Microsoft Word files (.doc) or Portable Document Format files (.pdf).

A simple method (e.g. automatic email) should be established in order to notify CITEL administrations ESV network operators of any changes in the information submitted by an administration or ESV network operator.

**PCC.II/RES. 34 (VII-06) <sup>6</sup>**

**AGENDA, VENUE AND DATE FOR THE VIII PCC.II MEETING**

The VII Meeting of the Permanent Consultative Committee II: Radiocommunications including Broadcasting.

**RESOLVES:**

1. To hold the VIII Meeting of PCC.II from October 17 to 20, 2006 in Venezuela.
2. To approve the draft agenda for the VIII Meeting, which is attached as an Annex.

**ANNEX TO RESOLUTION PCC.II/RES. 34 (VII-06)**

1. Approval of the agenda and calendar.
2. Appointment of the Drafting Group for the Final Report.
3. Working methods of PCC.II.
4. Meeting of the Chairs of the Working Groups on:

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<sup>6</sup> Document CCP.II-RADIO/doc. 1090/06 rev.1cor.1  
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4.1 Working Group on Preparation for Regional and World Communication Conferences.

4.2 Working Group on Terrestrial Fixed and Mobile Radiocommunication Services.

4.3 Working Group on Satellite Systems to Provide Fixed and Mobile Services.

4.4 Working Group on Broadcasting.

4.5 Rapporteur Group on the Technical and Regulatory Aspects Related to the Effects of Electromagnetic Non-ionizing Emissions.

5. Report of the tasks performed in coordination with ITU.
6. Agenda, Venue and Date of the VIII Meeting of PCC.II.
7. Other matters.
8. Approval of the Final Report of the VII Meeting.

### **DRAFT AGENDAS OF WORKING GROUPS**

#### **4.1 Draft Agenda of the Working Group on the preparation of CITELE for Regional and World Radiocommunication Conferences**

1. Presentation and approval of the agenda.
2. Working methods.
3. Assignment of documents to the sub-groups:

SGT 1	1.2, 1.3, 1.5, 1.6, 1.13, 1.14, 1.15, 1.16, 1.20
SGT 2	1.7, 1.8, 1.10, 1.11, 1.17, 1.18, 1.19, 1.21
SGT 3	1.1, 1.12, 2, 3, 4, 5, 6, 7.1
SGT 4	1.4, 1.9
SGT – AD-HOC	7.2
4. Reports of the spokespersons to other organization's meetings.
5. Work plan 2006-2010.
6. Other matters.

#### **4.2 Draft Agenda of the Working Group on Terrestrial Fixed and Mobile Radiocommunication Services**

1. Opening remarks.
2. Approval of the agenda.
3. Radio frequency identification devices (RFID).
4. Low frequency devices.
5. RLAN in 5 GHz on board aircraft
6. Broadband Power Line Communications (BPL).
7. BWA
8. Refarming of 700 MHz band.
9. Use of the band 3400/3700 MHz.
10. Work plan 2006-2010.
11. Other business.

#### **4.3 Draft Agenda of the Working Group on Satellite Systems to Provide Fixed and Mobile Services**

1. Approval of the agenda.
2. General guidelines for licensing global mobile personal communication system networks (GMPCS).
3. Procedures to be followed for authorization of earth stations on board vessels (ESV).
4. Implementation of regulations providing for the deployment of satellite services.
5. Harmful interferences by non authorized transmissions in satellite networks.
6. Work plan 2006-2010.
7. Other business.

#### **4.4 Draft Agenda of the Working Group on Broadcasting**

1. Opening remarks.
2. Approval of the agenda.
3. Reports on
  - a. The 1981 R o de Janeiro Plan.
  - b. Digital Television.
  - c. Digital Sound Broadcasting.
4. Establish and schedule the duties of the sub-groups.
5. Work plan 2006-2010.
6. Other business.

#### **IV. RECOMMENDATIONS**

### **PCC.II/REC. 16 (VII-06)<sup>7</sup>**

#### **USE OF THE 4940-4990 MHz BAND IN THE AMERICAS FOR PUBLIC PROTECTION AND DISASTER RELIEF**

The VII Meeting of the Permanent Consultative Committee II: Radiocommunications including Broadcasting,

#### **CONSIDERING:**

- a) That the growing telecommunication and radiocommunications needs of public protection agencies and organizations, including those dealing with emergency situations and disaster relief, are vital to the maintenance of law and order, protection of life and property, disaster relief and emergency response;
- b) That many administrations wish to promote interoperability and interworking between systems used for public protection and disaster relief (PPDR), both nationally and for cross-border operations in emergency situations and for disaster relief;
- c) That there is a need in many countries for the cost-effective implementation of PPDR systems;
- d) That PPDR applications may be narrowband, wideband or broadband, or a mixture of these;
- e) That there is a need for a variety of broadband networks, such as adhoc networks for incident scene management, temporary fixed links, point-to-point and point-to-multipoint links including support of mobile operations; and applications such as large file transfers including maps, building layouts, medical data, image files and video,

#### **RECOGNIZING:**

- a) That Resolution 646 (WRC-03) identified several frequency bands for PPDR systems in Region 2, including the 4940-4990 MHz band;
- b) That spectrum planning is done at the national level, taking into account the need for interoperability, sharing with incumbent services and the benefits to neighboring administrations of using harmonized or common frequency bands;<sup>8</sup>
- c) That there are benefits of spectrum harmonization, including economies of scale, expanded equipment availability, and improved cross-border coordination;
- d) The benefits of cooperation between countries for the provision of effective and appropriate humanitarian assistance during disasters;

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<sup>7</sup> Document CCP.II-RADIO/doc. 1086/06 rev.1

<sup>8</sup> There are relevant ITU-R Recommendations that should be considered.

e) That countries, particularly developing countries, have an urgent need for low-cost communication equipment for public protection;

f) That administrations have the flexibility to determine, at the national level, how much spectrum to make available for public safety from the band identified in this Recommendation in order to meet their particular national requirements,

**NOTING:**

That the identification of this frequency band or parts thereof for public safety does not preclude the use of this band by any application within the services to which this band is allocated and does not preclude the use of, nor establish priority over, any other frequencies for public safety in accordance with the Radio Regulations,

**RECOMMENDS:**

1. That for the purposes of achieving regionally harmonized frequency bands/ranges, CITEL administrations consider designating the band 4940-4990 MHz for PPDR applications, particularly to support PPDR broadband communication requirements.

2. That CITEL Member countries utilize relevant ITU-R Recommendations in planning spectrum use as described in *recommends* 1 for PPDR applications.

3. That CITEL Member countries consider, as an example, the sub-band designation and channeling indicated in Attachment 1 when allocating spectrum for use by users who are directly involved with public safety, security of State, and those services requiring close coordination with the public safety services.

**ANNEX 1 TO RECOMMENDATION PCC.II/REC. 16 (VII-06)**

**CHANNELING PLAN FOR THE BAND 4 940 TO 4 990 MHz FOR  
BROADBAND PUBLIC SAFETY OPERATIONS**

This frequency channeling plan consists of ten 1 MHz channels and eight 5 MHz channels as per Figure 1 and Table 1. Channels may be aggregated for higher capacity or higher bandwidth applications to allow maximum flexibility and implementation of future broadband technologies. Some countries may also choose to partition the 5 MHz channels.

**Figure 1**

**Table 1:** Channeling Plan for the Band 4 940 - 4 990 MHz for Public Safety

<b>Channel</b>	<b>Lower Frequency (MHz)</b>	<b>Upper Frequency (MHz)</b>
1	4940	4941
2	4941	4942
3	4942	4943
4	4943	4944
5	4944	4945
6	4945	4950
7	4950	4955
8	4955	4960
9	4960	4965
10	4965	4970
11	4970	4975
12	4975	4980
13	4980	4985
14	4985	4986
15	4986	4987
16	4987	4988
17	4988	4989
18	4989	4990

**PCC.II/REC. 17 (VII-06)<sup>9</sup>**

**USE OF WIRELESS SYSTEMS IN COMMERCIAL OPERATION, AND THEIR ASSOCIATED  
BANDS, FOR UNIVERSAL ACCESS IN RURAL AND LOW POPULATION DENSITY AREAS**

The VII Meeting of the Permanent Consultative Committee II: Radiocommunications including Broadcasting,

**CONSIDERING:**

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<sup>9</sup> Document CCP.II-RADIO/doc. 1069/06 rev.4  
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- a) That in the Americas there is a need to meet the Universal Access objective, especially in rural and low-population density areas;
- b) That many communities, including some urban areas, are particularly under-served and could be considered to meet the Universal Access objective;
- c) That CITEL has adopted the PCC.II/REC. 10 (V-05) “Use of the 410-430 MHz and 450-470 MHz bands for fixed and mobile services for digital communication particularly in low population areas”;
- d) That in the region, there are other frequency bands allocated for fixed and mobile services around 850 MHz, 900 MHz, 1800 MHz and 1900 MHz that may facilitate access to services in rural and low-population density areas;
- e) That wireless technologies that use the above mentioned bands can offer additional options to provide services in rural and low-population density areas,

**RECOGNIZING:**

- a) That Universal Access is one of the objectives proposed by CITEL Member States;
- b) The substantial differences among countries with regard to the coverage and modernization of telecommunications services and the major insufficiencies of telecommunications infrastructure and access to information in most Member States;

**RECOMMENDS:**

1. That CITEL Member States, where there is a need to find solutions for the provision of Universal Access in rural and low-density population areas, consider the possibility of using some or all of the frequency bands indicated in *considering c)* and *d)*, in accordance with each Administration’s laws and regulations.
2. That CITEL Member States take into consideration the existing uses of frequency bands indicated in *considering c)* and *d)* that require protection.

**PCC.II/REC. 18 (VII-06)<sup>10</sup>**

**ALTERNATIVE USE OF THE 698 – 806 MHZ BAND IN THE AMERICAS FOR ADVANCED WIRELESS SYSTEMS AND PUBLIC PROTECTION AND DISASTER RELIEF APPLICATIONS**

The VII Meeting of the Permanent Consultative Committee II: Radiocommunications including Broadcasting,

**CONSIDERING:**

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<sup>10</sup> Document CCP.II-RADIO/doc. 1099/06 rev.1  
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- a) That there is an urgency in the Americas towards fulfilling fundamental Universal Access objectives, and the urgent need for socio-economic progress, especially in developing countries;
- b) That many communities are particularly under-served as compared to urban centers across the Americas;
- c) That the growing telecommunication and radiocommunications needs of public protection agencies and organizations, including those dealing with emergency situations and disaster relief, are vital to the maintenance of law and order, protection of life and property, disaster relief and emergency response;
- d) That many administrations wish to promote interoperability and interworking between systems used for public protection and disaster relief (PPDR), both nationally and for cross-border operations in emergency situations and for disaster relief;
- e) That for the purposes of this recommendation advanced wireless systems include, but are not limited to, broadband wireless access, advanced mobile and mobile broadcasting systems;
- f) That there is a need, in many developing countries and countries with large areas of low-population density, for the cost-effective implementation of PPDR applications and advanced wireless systems;
- g) That the propagation characteristics of frequency bands below 806 MHz result in larger cells and service areas and lower infrastructure costs;
- h) That systems used for PPDR may operate with significantly different characteristics than advanced wireless systems, which may require some measures to ensure adjacent band radio frequency interference (RFI) compatibility;
- i) That administrations should take into account the need to protect the existing and future broadcasting service stations, both analog and digital, in the 698 – 806 MHz band,

**RECOGNIZING:**

- a) That the 698 - 806 MHz band is extensively used in many countries for broadcasting systems;
- b) That portions of the 698 – 806 MHz band are currently used in some countries for PPDR systems;
- c) That although the 698 - 806 MHz band is used for television broadcast in some areas, there are other areas in great need of communications coverage where this band may be underutilized, in particular, rural areas;
- d) That in many areas throughout the Americas, there is a great need of communications coverage where this band may be underutilized, in particular, rural areas;
- e) That spectrum planning is done at the national level, taking into account the need for interoperability and the benefits of neighboring administrations using harmonized frequency bands;

f) That there are benefits of spectrum harmonization, including economies of scale, expanded equipment availability, and enhanced cross-border coordination;

g) That countries, particularly developing countries, have an urgent need for low-cost communications equipment;

h) That the band 470 - 806 MHz will be heavily used in many administrations during transition from Analog to Digital TV,

**RECOMMENDS:**

1. That CITELE administrations planning alternative uses of the 698-806 MHz band consider:

- the sub-bands 698 to 764 MHz and 776 to 794 MHz for advanced wireless systems
- the sub-bands 764 to 776 MHz and 794 to 806 MHz for PPDR applications;
- measures to ensure RFI compatibility between the advanced wireless systems and systems used for PPDR applications, operating in adjacent bands; and
- adopting the necessary measures in order to protect the broadcasting service<sup>11</sup>;

2. That CITELE administrations utilize applicable ITU-R Recommendations in planning spectrum use, as described in recommends 1, for PPDR applications and advanced wireless systems.

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<sup>11</sup> Broadcasting service as defined in Article 1 in the ITU Radio Regulations  
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#### IV. DECISIONS

The VII Meeting of the Permanent Consultative Committee II: Radiocommunications including Broadcasting:

#### DECIDES:

<b>PCC.II/DEC. 42 (VII-06)</b> <sup>12</sup>	<p>That the Chairman of the PCC.II inform the COM/CITEL Coordination on Human Resources Development regarding the following:</p> <p>a) The importance that PCC.II has given to the implementation of a theory/practice course on harmful interferences in satellite systems, as part of the 2007 CITEL Training Program.</p> <p>b) That the CITEL Regional Training Centers: Federal Telecommunications Commission of Mexico (COFETEL) and National Telecommunications Training Institute of Peru (INICTEL) have offered to conduct the aforementioned course.</p> <p>c) That course materials and instructors are available for other CITEL Regional Training Centers that may want to offer this course.</p> <p>d) Requests to consider the possibility of awarding CITEL/OAS scholarships to provide CITEL Member States with the opportunity to participate in the above mentioned course due to its importance for the detection, consideration and elimination of harmful interferences in the satellite systems operating in the region.</p> <p style="text-align: center;"><b>ANNEX TO DECISION PCC.II/DEC. 42 (VII-06)</b></p> <p style="text-align: center;"><b>COURSE ON HARMFUL INTERFERENCES TO SATELLITE SYSTEMS</b></p> <p><b>Scope</b></p> <p>To provide the necessary tools to technical personnel and staff that regulate, supervise or operate transmitting earth stations for the prevention of harmful interferences.</p> <p><b>Objectives</b></p> <ol style="list-style-type: none"><li>1. Strengthen knowledge of staff responsible for transmitting earth stations regarding basic concepts of satellite communications.</li><li>2. Raise awareness of personnel responsible for transmitting earth stations regarding the importance of preventing harmful</li></ol>
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<sup>12</sup> Document CCP.II-RADIO/doc. 1093/06 rev.1  
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interferences.

3. Highlight the importance of the method to prevent harmful interferences and the proper installation of transmitting earth stations.
4. Teach personnel the existing technical methods for detecting interferences.

**Course provided by:** Satélites Mexicanos, S.A. de C. V.

**Designed for:** technical personnel and staff that regulate, supervise and operate transmitting earth stations.

**Course duration:** 1 week

**Program**

1. Introduction to satellite communications
  - i. Concept
  - ii. Subsystems
  - iii. Launching
  - iv. Orbits
  - v. Applications
2. Monitoring of carriers
  - i. Monitoring tools
  - ii. Digital signal processor (DSP)
  - iii. Database
3. Recommendations for the installation and maintenance of earth stations
  - i. Radio environment
  - ii. Antenna level
  - iii. Direction and isolation
  - iv. Receiving stations
  - v. Transmitting stations
  - vi. Gain balance
  - vii. Maintenance
4. Access procedure
  - i. Antenna directed to receiver
  - ii. Coordination of access with the satellite operator
  - iii. Verification of spurious emissions
5. Radio-frequency interferences
  - i. Accidental interferences
  - ii. Intentional interferences
  - iii. CITELE actions
  - iv. Geolocation of interferences

	<p>6. Practical cases</p> <ol style="list-style-type: none"> <li>i. Visit to a Satellite Control Center</li> <li>ii. Identification of an earth station</li> <li>iii. Main equipment for signal transmission and reception</li> <li>iv. Geolocation of an interference</li> </ol>
<p><b>PCC.II/DEC. 43 (VII-06)</b><sup>13</sup></p>	<p>To request the CITEI Secretariat to distribute among the Member States the text that appears in the Annex to document CCP.II-RADIO/doc. 1096/06, which invites them to take an active involvement in the preparatory work of the Working Group to prepare CITEI for WRC-07 and encourages CITEI to develop views on the structure of WRC-07 Committees and Working Groups and consider potential nominations from CITEI to chair WRC-07 Committees and Working Groups.</p> <p style="text-align: center;"><b>ANNEX TO DECISION PCC.II/DEC. 43 (VII-06)</b></p> <p>“ Considering the progress of the negotiations in the framework of the ITU WRC-07 Informal Group mentioned in the enclosed document CCP.II-RADIO/doc. 1011/06 cor.1 “WRC-07 STRUCTURE AND SCHEDULE”, which encourages CITEI to develop views on the structure of WRC-07 committees and working groups and consider potential nominations from CITEI to lead WRC-07 committees and working groups.</p> <p>As we know, the final structure that the ITU adopts for WRC-07 will have a direct influence on the possibilities of each national delegation to participate in the discussion of matters of interest to them.</p> <p>Furthermore, the nomination by CITEI of officers to chair the WRC-07 committees and working groups contributes to the harmony of proceedings at the meeting. In evaluating potential nominations for the aforesaid positions, we deem it relevant to bear in mind previous experience in Regional and World Radiocommunications Conferences, as well as the dedication and availability that these positions demand.</p> <p>Finally, we draw attention to the advancements made by other regions in reaching common positions on the issues on the WRC-07 agenda and we urge the CITEI Member States to become actively involved in the preparatory work of the PCC.II Working Group to prepare CITEI for the Regional and World Radiocommunications Conferences.”</p>
<p><b>PCC.II/DEC. 44 (VII-06)</b><sup>14</sup></p>	<p>1. To acknowledge receipt of the request from the Permanent</p>

<sup>13</sup> Document CCP.II-RADIO/doc. 1096/06

<sup>14</sup> Document CCP.II-RADIO/doc. 1101/06

	<p>Consultative Committee I, Telecommunications on the information on broadband over power lines / power line communications (BPL/PLC), in particular what is related to the subject to interferences.</p> <p>2. To request the Executive Secretary to inform the above mentioned Committee that once the analysis are finished, send the requested information will be sent.</p>
<p><b>PCC.II/DEC. 45 (VII-06)<sup>15</sup></b></p>	<p>To instruct the Secretariat of CITEL to bring the document CCP.II-RADIO/doc. 963/06 rev.1 to the attention of the Member States and request their comments in time for the next meeting of PCC.II.</p>

## V. LIST OF BASIC DOCUMENTS

Summary Minutes of the Inaugural Session and the First Plenary Session:	CCP.II-RADIO/doc. 1072/06
Summary Minutes of the Second Plenary Session:	CCP.II-RADIO/doc. 1100/06
Summary Minutes of the Third Plenary Session and Closing Session:	CCP.II-RADIO/doc.1104 /06
List of Documents:	CCP.II-RADIO/doc. 915/06 rev.5
List of Participants:	CCP.II-RADIO/doc. 916/06 rev.1
Final Report for the Meeting	CCP.II-RADIO/doc. 1105/06 rev.1

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<sup>15</sup> Document CCP.II-RADIO/doc. 1098/06  
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