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TRADE AND INVESTMENT DEVELOPMENT PROJECT

Final Report

Regional Database on the Use of the Radio Frequency Spectrum

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SUBMITTED BY
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REGIONAL DATABASE FOR ALLOCATION AND USE OF THE RADIO FREQUENCY SPECTRUM

1. Introduction CITEL Working Group PTC II/PTC III/1 is undertaking a project to summarize the allocation and use of the radio spectrum of countries in the Americas for the purpose of facilitating cooperation and planning and maximizing the efficient use of the radio frequency spectrum in the region. The purpose of this report is to describe a data collection computer program which will create a database file containing the information needed to produce the desired spectrum allocations and use document, and associated records.

2. Data Collection Computer Program, CITEL EXE One of the most efficient ways to collect allocation and usage information is through a PC computer program that is designed around the appropriate data elements. It is simple to operate, and is self-executable (is independent of other computer programs). A PC computer program named CITEL EXE (Spanish version CITELS EXE) has been created around these parameters for the purpose of demonstrating how spectrum data collection might be effectively accomplished. Included with the report is a 3 1/2 inch floppy disk containing the CITEL EXE program designed to be operable on any PC, XT or better, under the DOS operating system. The spectrum data proposed to be collected from each country falls into three categories: Allocation Data, Usage Data and Data for Possible New Allocations. As the appropriate data fields are filled out on the computer screen, the program will produce a standardized spectrum allocation and use data file for that country named CITEL2.DBF. In order to make it as simple as possible, the terminology of the data to be collected, within practicable limits, is the same as that contained in the ITU Radio Regulations pertaining to the Preface, notifications, allocation tables, footnotes, regulatory text and definitions. Information for using the CITEL EXE Program is enclosed.

3. Centralizing data collection and preparation of reports The CITEL Secretariat will collect the individual country's data file and prepare appropriate tables and reports. When a country has finished entering all of its spectrum allocation and use data, the completed file CITEL2.DBF should be forwarded to the following address on a PC disk clearly labeled with the country name.

CITEL Secretariat
1889 F Street, N W
Washington, D C

Point of Contact is William Moran, telephone number 202-458-3137

The disk should be accompanied by a return address of the responsible agency. If a country entered national footnotes into the database, a list of these footnotes should also be forwarded.

The individual databases will be combined into a single regional database at the CITEL Secretariat. Its data will be sorted and formatted, as required, to create the desired regional spectrum allocation and use reports and documents.

4 Additional Factors to be Considered Some pertinent factors have not yet been determined and should be addressed by the WG These are

A. Frequency Spectrum What is the spectrum range of data to be collected? Previous discussions considered the range from 960-2500 MHz The frequency range limits will not affect the CITELEX program as it will function satisfactorily in any Megahertz range

B. Reports and their Formats Allocation Tables will generally follow the example of Article 8 of the International Radio Regulations Formats for usage and planning reports or tables also will take guidance from the Article 8 format, however, this issue should be addressed further

C. Ownership of Data The data will be under the care of the CITELE Secretariat and jointly owned by the members of CITELE

D. Availability and Distribution of Data Reports, tables and documents derived from the spectrum allocation and use database are considered proprietary They will be made available by the CITELE Secretariat to CITELE Members upon request The approved method to further distribute these documents is to be determined

E. Electronic Availability of Database A possible goal See paragraph 5

5 New Directions Frequency management data exchange is currently the subject of a number of new efforts within the ITU community, including the ITU-R In 1994, the ITU Radiocommunication Assembly resolved that a Task Group be established for the purpose of exchanging and sharing spectrum management information through electronic means Consequently, the ITU-R established Radiocommunication Task Group 1/4 to exchange experiences and develop guidance to comply with the resolution One of their major tasks is to develop a document that will provide guidance on selected issues for the electronic exchange of national, regional, and interregional spectrum management information CITELE Working Group PTC.II/PTC.III/1 should be aware of these initiatives which could, in the future, help to facilitate a rapid and responsive exchange of spectrum management information within CITELE should the terms of reference of the Working Group be expanded In this event, CITELE countries should consider participating in the program of ITU-R Task Group 1/4.

User Information for the CITEL EXE Program

1 CITEL EXE Data elements and input screens. All data should be entered in lower case, with first letter capitalized, as appropriate

A Input Screen 1, allocation data elements (Fields1 through 22). The fields pertinent to development of the allocation records appear in screen 1 of the program and are listed below. Data selected which would best serve the allocation model follows the example with which everyone in this activity is already familiar - that contained in Article 8 of the Radio Regulations. And therefore, in this program, details for the allocation tables call for the same type of information and terminology as is contained in the Radio Regulations and in known national allocation tables. When entries for the appropriate fields are completed, the recorded information will be contained in a database file that may be arranged to report a country's National Table of Allocations

Field Nbr	Field Name	Information to be collected for each Band
1	Country	Enter the ITU Standard Country Code, usually 3 characters
2	Lower Limit	Enter the numeric value of the lower band edge in megaHertz. The value may be expressed to 4 decimal places
3.	Upper Limit.	Enter the numeric value of the upper band edge in megaHertz. The value may be expressed to 4 decimal places
4-12	Service	Enter the name of the allocated radio service (up to 5 entries). If there is a footnote specific to the service, add its number at the end of the field.
5-13	Category	Enter the category of Service. <u>P</u> for primary service, <u>S</u> for secondary service or <u>X</u> for permitted service. (up to 5 entries)
14-21	FN	Enter the International or national footnotes applicable to this band (up to 8 entries).
22	Comments	Enter comments to explain any of the above fields.

B. Input Screen 2, spectrum usage data elements (Fields23 through 29). The fields pertinent to development of the spectrum usage records appear in screen 2 of the program and are listed below. The ideal model for denoting usage was established as the smallest set of data elements which would provide the desired information. A set of fields was selected which meets this standard, likely to be already available in most countries. When entries for the appropriate fields are completed, the recorded

information will be contained in a database file that may be arranged to report on how a country is using certain parts of the spectrum

Field

Nbr. Field Name Information to be collected for each Band

Nbr.	Field Name	Information to be collected for each Band
23	Number of Assignments	Enter the number of assignments in the Band (Estimate if not known exactly)
24-27	Class of Station	Enter the principal Classes of Station in use in this band. (up to 4 entries)
28	Operational Uses	Describe the most important Systems or uses in the Band
29	Reallocation	Is reallocation being considered for this band (Y/N)?

C Input Screen 3, data elements for new allocations (Fields 30 through 48) The fields pertinent to possible new allocations records appear in screen 3 of the program and are listed below. Data in this category relates to possible changed allocations or new allocations in the frequency band, projected for a future date. If there are plans for new allocations, additional details relating to these plans are called for. When entries for the appropriate fields are completed, the recorded information may be assembled, in the format to be prescribed by the Working Group, to describe a country's plans for possible new allocations

Field

Nbr. Field Name Information to be collected for each Band

Nbr.	Field Name	Information to be collected for each Band
30	Band Lower Limit	Enter the lower limit in MHz of the band that may be reallocated. The value may be expressed to 4 decimal places.
31	Band Upper Limit	Enter the upper limit in MHz of the band that may be reallocated. The value may be expressed to 4 decimal places.
32	Year	Enter year planned for bringing the service into use.
33	WRC Proposal	Will a proposal be made at a future WRC regarding a possible new allocation? Enter Yes or No (Y/N)
34	WRC Date	Enter year of WRC proposal will be made
35,41	Allocation	Enter the allocated service to be added. If there is a footnote specific to the service, add its number at the end of the field
36,42	Category	Enter the category of added service -Primary or Secondary.
43,46	Footnotes	Enter added footnotes, if any.
47	Remarks	Enter remarks. Example: What systems will be placed into use?
48	Deletions	Will an allocation or footnote be deleted (Y/N) ?

D. Input Screen 4, data elements for allocation deletions (Fields 49 through 57)

The fields pertinent to possible deletions of allocated services appear in screen 4 of the program and are listed below. When entries for the appropriate fields are completed, the recorded information may be assembled, in the format to be prescribed by the Working Group, to describe a country's preparing for deletion of allocations or footnotes.

Field

Nbr Field Name Information to be collected for each Band

Nbr	Field Name	Information to be collected for each Band
49,52	Allocation	Enter the allocated service to be deleted
53,56	Footnotes	Enter footnotes to be deleted
57	Remarks	Enter remarks

2. The following programs are necessary in order to operate the English version of the Spectrum Data Collection Process. Be sure they are all contained on your program disk. If any file is missing, it is probable that the program will not operate as intended.

CITEL.EXE	- The principal executable program.
1CITEL2.NTX	- Index file for CITEL EXE
2CITEL2.NTX	- Index file for CITEL EXE
USERHELP.DBF	- Secondary file containing Help records.
USERHELP.DBT	- Secondary file containing Help records.
1USERHELP.NTX	- Index file for Help records
CITEL2.DBF	- The Database file containing the spectrum records.
CITEL2.TXT	- An ASCII text file needed to create CITEL2.DBF database.
CITEL2_1.SCR,	- Data input screen
CITEL2_2.SCR,	- Data input screen
CITEL2_3.SCR,	- Data input screen
CITEL2_4.SCR:	- Data input screen.

3. Program instructions. The Main Menu appears at the top of the screen when the program starts. It provides the following choices: **Add, Copy, Edit, Delete, Report, View, Maintenance, Quit**. Menu choices may be selected by typing the first letter of the menu choice and then pressing the ENTER key or a choice may be selected by moving the cursor with the arrow key, highlighting the choice and then pressing the ENTER key. **Help** for each field can be obtained by pressing the F1 key.

Using the Main Menu. Please note that there are menu choices that are not necessary for creating the allocation and use database file. These are noted

- Add** lets you add a new record to the database. This choice moves the cursor to the first field of data input. The record will be automatically saved upon entering data into the last field of the record. It may also be saved at any time by pressing the **Ctrl-End** keys simultaneously.
- Copy** Information from the prior record is copied into the new record. You can then edit the information into the new record. This is an easy way to add new records when records are similar and only a few fields have to be changed in the new record.
- Edit** Allows you to change information in the currently displayed record.
- Del** Marks the current record for deletion. You must confirm deletion when quitting the program by pressing Y for YES when you are asked if you want to PACK the database.
- Report** This choice can display a listing of the database records which have been entered.
- View** This choice will produce another menu from which individual records may be retrieved by searches for examination or editing.
- Maint** A feature not intended for use in data collection.
- Quit.** Exit the program. If any records were marked for deletion during the current session, you will be asked if you want to PACK them before leaving. The term PACK signifies that records marked for deletion will be deleted before leaving the program.

Other Actions

- Help** Every field has a HELP screen. Press the F1 function key.
- Next page** The next data input screen may be reached via the PageDown Key.
- Previous Page** The previous screen may be reached via the PageUp Key.
- Saving** The record is saved automatically after keying the last field of the record or, at any time, by pressing the Ctrl-End Keys simultaneously.