INTERNATIONAL TELECOMMUNICATION UNION

Radiocommunication Bureau
(Direct Fax N°. +41 22 730 57 85)

Circular Letter
CR/215

9 July 2004

To Administrations of Member States of the ITU*

Subject: Formats for electronic notification of digital broadcasting requirements to be used for the planning exercise and the development of a draft plan for the second session of the Regional Radiocommunication Conference for the planning of digital terrestrial broadcasting service in parts of Regions 1 and 3, in the frequency bands 174-230 MHz and 470-862 MHz.

Reference: Resolutions of the first session of the Regional Radiocommunication Conference for the planning of digital terrestrial broadcasting service in parts of Regions 1 and 3, in the frequency bands 174-230 MHz and 470-862 MHz – (RRC-04), Geneva, 2004

To the Director General

Dear Sir/Madam,

1 I am writing to inform you of the formats for electronic notification of digital broadcasting requirements to be used for the planning exercise and the development of a draft plan for the second session of the Regional Radiocommunication Conference for the planning of digital terrestrial broadcasting service in parts of Regions 1 and 3, in the frequency bands 174-230 MHz and 470-862 MHz (RRC).

2 The formats have been developed based on the decisions taken by the first session of the RRC as detailed in Chapter 6 of the Report annexed to Resolution 1 of the first session of the RRC and in accordance with the time schedule indicated in Annex 2 to Resolution COM5/1.

3 A general description of the formats for electronic notification is described in Annex 1. These formats are based on the file structure currently used in the context of the VHF/UHF broadcasting electronic notices (as explained in Circular Letter CR/120 of 31 March 1999), suitably amended to include the additional data elements as decided by RRC-04. The Circular Letter CR/120 is available from the ITU website at http://www.itu.int/md/meetingdoc.asp?type=sitems&lang=e&parent=R00-CR-CIR-0120.

* This Circular Letter is primarily addressed to the Member States of Region 1 (except Mongolia) and to the Islamic Republic of Iran. It is for information only for other Member States.

Place des Nations
CH-1211 Geneva 20
Switzerland

Telephone +41 22 730 51 11
Telefax Gr3: +41 22 733 72 56
Gr4: +41 22 730 65 00

Telex 421 000 uit ch
Telegram ITU GENEVE

Internet: itumail@itu.int
X.400 S=itumail; P=itu
A=400net; C=ch

4 Five (5) types of electronic notices for digital broadcasting requirements are described in separate annexes (Annexes 2 to 6). Definitions of individual data items are given in Annex 7. The five types of electronic notices are:

- DT1 - Digital television (DVB-T) broadcasting assignment requirement;
- DT2 - Digital television (DVB-T) broadcasting allotment requirement;
- DS1 - Digital sound (T-DAB) broadcasting assignment requirement;
- DS2 - Digital sound (T-DAB) broadcasting allotment requirement;
- DA1 - Sub allotment area for a broadcasting (DVB-T or T-DAB) allotment requirement.

5 For the RRC, a database model has been developed that is based on the existing TerRaSys database structure with the addition of the new data elements as defined by the RRC-04. Information on this database model and its data entity/relational structure is available at http://www.itu.int/ITU-R/conferences/rrc/index.html.

6 The Radiocommunication Bureau is also developing the data capture software that would enable administrations to create their digital broadcasting requirements in the specified electronic format. The target date for completion of the software, as indicated in Annex 2 to Resolution COM5/1, is 1 September 2004. The Bureau will inform administrations of the Member States of the status of the development of these applications through the RRC-page on the ITU web site (http://www.itu.int/ITU-R/conferences/rrc/index.html).

7 The electronic formats described in this Circular Letter are to be used by the administrations of the Member States belonging to the planning area for submission of their digital broadcasting requirements for the planning exercise (deadline for submission: 28 February 2005) and for the production of the draft plan (deadline for submission: 31 October 2005). Therefore, it would be very important for the administrations to familiarize themselves fully with this format. To assist the administrations in this respect, the Bureau will present this subject, together with the applications referred to in paragraph 5 of this Circular Letter, at the forthcoming seminars and workshops, including the biennial BR Seminar in Geneva, from 15 to 19 November 2004.

8 In accordance with the schedule of activities in the intersessional period, as indicated in Annex 2 to Resolution COM5/1, the Bureau was instructed to implement the planning software, which is to be provided to the BR by 1 September 2004, and to verify this software, using test data (see Annex 2 to Resolution COM5/1). Resolution COM5/1 specifies that these test data will be generated by BR and the experts nominated for the Planning Exercise Team. Your administration may wish to submit data for these purposes and if so decided, it should provide them in the format described in the annex to this Circular Letter with the indication “Digital broadcasting requirements for test purposes”.

9 The Bureau remains at the disposal of your administration for any clarification you may require with respect to the subjects covered in this Circular Letter.

Yours faithfully,

V. Timofeev
Director, Radiocommunication Bureau

Annexes: 7

Distribution:
– Administrations of Member States of the ITU
– Members of the Radio Regulations Board

ANNEX 1

A general description of the format for electronic notification

1 General file structure

The file is a sequential, record-oriented file, which follows the general outline of an **SGML** (Standard Generalized Markup Language) file, using a tagging scheme. However, to simplify the approach for electronic notices, neither the SGML Document Type Definitions, nor tags for each data element are used.

The file consists of three or more sections. The first section is the **HEAD** section. The last section is the **TAIL** section. Between the **HEAD** and **TAIL** sections, there is one section for each notice. These sections are named **NOTICE**. Each section contains one or more keys, with a value (specified as a text string) associated with the key. Each section may also have sub-sections; at this time, only the **NOTICE** section may contain sub-sections.

For each section there is a defined beginning: the start-tag, and a defined end: the end-tag. The start-tag has the format <section_name>, and the end-tag has the format </section_name>, as in SGML.

As indicated, a section may or may not have sub-sections. The sub-sections are also defined using start-tags and end-tags, using the formats <sub-section_name> and </sub-section_name>.

This concept is recursive, so that there may also be sub-sub-sections, etc.

The keys within a section or sub-section follow the start-tag, and continue until the corresponding end-tag. Start-tags and end-tags are mandatory.

Sub-sections are grouped at the end of the section.

Within a section or sub-section, each value is preceded by a key, like in the example below:

t_action = ADD

Within each section or sub-section, each key shall be unique, except for specific keys, these keys are rrc_contour_id and t_remarks in the <NOTICE> section and t_adm in the <COORDINATION> sub-section.

The general schema for a single file with several notices is:

<HEAD>
key1=string
key2=string
.....
</HEAD>
<NOTICE>
key1=string
key2=string
.....
</NOTICE>
<NOTICE>
key1=string

key2=string
.....
</NOTICE>
<NOTICE>
key1=string
key2=string
.....
</NOTICE>
.....
<TAIL>
key1=string
</TAIL>

The lines in the files are variable length. Each line in the file is terminated with a CR/LF (carriage return/linefeed) combination, a CR (carriage return), or an LF (linefeed).

The ISO 8859-1 (Latin-1) coded character set is to be used throughout the file. Only printable characters (plus carriage return and linefeed) may be used.

The **HEAD** section must be the first section in the file. The **TAIL** section must be the last section in the file. The **NOTICE** sections may be in any order within the file between the **HEAD** and **TAIL** sections. The name of the section may be in uppercase, lowercase, or mixed case. White space (e.g. blanks) must *not* appear before a start-tag or end-tag, nor within a start-tag or end-tag.

The keys for a section or sub-section may be in any order within that section or sub-section; they are referenced by name - within this section or sub-section - rather than by position. The name of the key may be in uppercase, lowercase, or mixed case. White space (e.g. blanks) must *not* appear before, nor within a key name.

Each key is composed of alphanumeric text and must be unique within its section. Each key is followed by the symbol = and then by the value associated with this key There can be zero or more spaces between the key and the equal sign, and zero or more spaces after the equal sign and before the value corresponding to the key. The first non-space character after the equal sign will be the first character of the value corresponding to the key; in other words, the first character of a field can never be a space. However, white space is permitted within the value associated with the key. (For example, the Transmitting Antenna Site Name may consist of several words, separated by blank spaces.)

Each string associated with a key is an undelimited text string; there are no quotation marks or other delimiters.

Administrations are requested to strictly conform to this format in order to avoid unnecessary errors.

2 Structure of numeric and other data

Each string must be less than or equal to the length allowed on the corresponding paper notice form.

If the string contains numeric data (e.g. power), then:

- no white space (e.g. blanks) may appear within the string;
- the decimal separator - if used - is the FULL STOP character (not a comma, for example);
- there must be no thousands separators in the string; that is, the value ten thousand, for example, would be submitted as **10000** and *not* as 10,000 nor as 10.000. In fact, 10.000 would be interpreted as ten, not ten thousand;

- the sign, if any, must be at the beginning of the string. With the exception of the geographic coordinates, the plus sign is optional if the value is greater than or equal to zero.

Each key and its corresponding value must be on a separate line, and must terminate with CR/LF, CR, or LF, as described above.

Currently, the names of the sections and sub-sections are in English only.

The keys in each section correspond to the name of a data element being notified. The string associated with the key is the value of the data element. To avoid any conflicts with the Radiocommunication Data Dictionary (RDD) being developed by ITU-R Study Group 1, all data element names are prefixed with **t_** for data items already in **TerRaSys** and **rrc_** for those related to RRC planning activities.

Keys which do *not* begin with **t_** or **rrc_** will be ignored. Therefore, administrations wishing to send the same file to the Bureau and to other users can use additional keys for other purposes without disrupting the electronic notice process. All unknown keys beginning with **t_** or **rrc_** within a section will be flagged as errors to be referred to the administration submitting the notice; as typographical errors will be suspected.

Dates in the electronic notices are to be specified as follows:

Dates must follow the ISO 8601 standard. That is, they must be in the format **yyyy-mm-dd**, where:

yyyy is the full year (4 digits)

mm is the month, from 1 through 12

dd is the day, from 1 through 31

For example, 06 July 2004 would be represented as 2004-07-06.

Geographic coordinates contain the longitude and latitude of the transmitting or receiving sites. The seconds of the longitude and latitude are recommended.

The **longitude** must be submitted in one of the two following formats, depending on whether seconds are submitted:

±DDDMMSS or

±DDDMM

where:

- East Longitude is represented by a mandatory plus sign; West Longitude is represented by a minus sign;
- DDD refers to the degrees portion of the longitude, with one or two leading zeros if this is less than 100;
- MM refers to the minutes portion of the longitude, with a leading zero if this is less than 10;
- SS refers to the seconds portion of the longitude, with a leading zero if this is less than 10.

Examples are:

-0750015

-07500

The **latitude** must be submitted in one of the two following formats, depending on whether seconds are submitted:

±DDMMSS or

±DDMM

where:

- North Latitude is represented by a mandatory plus sign; South Latitude is represented by a minus sign;
- DD refers to the degrees portion of the latitude, with a leading zero if this is less than 10;
- MM refers to the minutes portion of the latitude, with a leading zero if this is less than 10;
- SS refers to the seconds portion of the latitude, with a leading zero if this is less than 10.

Examples are:

+401213

+4012

ANNEX 2

DT1 - Format of electronic notification for a digital television broadcasting (DVB-T) assignment requirement

DT1 Notice[1]	M/O[2]	Comments
<HEAD>	M	Beginning of the HEAD section containing general data elements related to all notices
t_char_set = ISO-8859-1	O	The character set used in the file.
t_adm = SUI	M	The three-character code for the name of the administration submitting the notice.
t_email_addr = mail@ofcom.ch	O	The electronic mail address.
</HEAD>	M	Indicating the end of the HEAD section
<NOTICE>	M	Beginning of section <NOTICE>
t_notice_type = DT1	M	The type of notice is DT1 for DVB-T assignment
t_fragment = RC06	M	The part of the database to be updated.
t_action = ADD	M	The action to be taken regarding this notice (ADD, MODIFY or SUPPRESS)
t_adm_ref_id = SUI00001	M	Administration's unique identifier, assigned by the administration.
t_trg_adm_ref_id =	(M)	The Administration Unique Identifier of the notice under treatment to be modified or withdrawn.
t_ctry = SUI	M	The three-character code for the name of the geographic area where the transmitting antenna is located.
t_site_name = GRUYERES	M	The name of the site where the transmitting antenna is located.
t_long = +0070600	M	The longitude of the transmitting antenna site.
t_lat = +463500	M	The latitude of the transmitting antenna site.
t_site_alt = +500	M	Altitude of site (metres above sea level, a sign followed by a number).
rrc_sys_var =	(M)	Digital television system including DVB-T variants
rrc_rx_mode =	(M)	Reception mode
rrc_nb_carr =	(M)	Number of carriers (2k or 8k)
rrc_guard_interval	(M)	Guard interval
rrc_ref_plan_cfg = RPC2	(M)	Reference Planning Configuration (RPC1, RPC2 or RPC3)
t_erp_h_dbw = 30	(M)	The maximum horizontally polarized Effective Radiated Power (dBW).
t_erp_v_dbw =	(M)	The maximum vertically polarized Effective Radiated Power (dBW).
rrc_sfn_id =	(M)	Identifier for SFN
rrc_sfn_tx_tim =	(M)	Relative timing of transmitter within an SFN

1 Detailed descriptions of data items, listed in alphabetical order, can be found in Annex 7.
Values of data items are given as examples only.

2 M = Mandatory, O = Optional and (M) = conditionally mandatory - depending on the data in one or more other related field(s)

The above footnotes apply to all tables that follow.

DT1 Notice[1]	M/O[2]	Comments
rrc_adm_allot_id =	O	Administration unique identifier of DVB-T allotment to which this assignment is related
t_polar = H	M	Polarization (H, V, M or U).
t_hgt_agl = 30	M	The height (metres) above ground level of the centre of radiation.
rrc_ant_dir = D	M	Directivity (D/ND)
t_eff_hgtmax = 229	M	The maximum effective height (metres).
rrc_spect_mask = N	M	Spectrum mask
t_d_adm_ntc = 2004-07-06	O	The date that the administration gives to this notice.
rrc_conv_freq_assgn =	O	Assigned frequency of the origin analogue assignment for conversion otherwise blank.
rrc_conv_lat =	O	Latitude of the origin analogue assignment for conversion otherwise blank
rrc_conv_long =	O	Longitude of the origin analogue assignment for conversion otherwise blank
t_remarks =	O	Remarks to be stored in database.
rrc_channel = UHF	O	One, many or a range of acceptable channels. For example VHF, 5-9 (channels 5 to 9) or 45, 47, 49
<ANT_HGT>	M	Beginning of sub-section <ANT_HGT> for effective antenna heights.
t_eff_hgt@azmzzz = 300	M	Effective antenna height at azimuth zzz degrees from the True North (zzz from 0 to 350 step 10)
</ANT_HGT>	M	End of sub-section <ANT_HGT> for effective antenna heights.
<ANT_DIAGR_H>	(M)	Beginning of sub-section <ANT_DIAGR_H> for attenuation of the horizontal polarised component (dB)
t_attn@azmzzz = 3	(M)	Antenna attenuation (normalised to 0dB) at azimuth zzz degrees from the True North (zzz from 0 to 350 step 10)
</ANT_DIAGR_H>	(M)	End of sub-section <ANT_DIAGR_H> for the attenuation (dB).
<ANT_DIAGR_V>	(M)	Beginning of sub-section <ANT_DIAGR_V> for attenuation of the vertical polarised component (dB)
t_attn@azmzzz = 3	(M)	Antenna attenuation (normalised to 0dB) at azimuth zzz degrees from the True North (zzz from 0 to 350 step 10)
</ANT_DIAGR_V>	(M)	End of sub-section <ANT_DIAGR_V> for the attenuation (dB).
<COORD>	O	Beginning of sub-section <COORD>
t_adm = F	O	Affected administration that gives agreement. Repeat as appropriate.
</COORD>	O	End of sub-section <COORD>
</NOTICE>	M	End of section <NOTICE>
<NOTICE>	M	Beginning of notice 2
		Data items for notice 2
</NOTICE>	M	End of Notice 2
<TAIL>	M	Beginning of section <TAIL> indicating the total number of notices in the notification file
t_num_notices = 2	M	The number of notices contained in the file
</TAIL>	M	End of section <TAIL>

ANNEX 3

DT2 - Format of electronic notification for a digital television broadcasting (DVB-T) allotment requirement

DT2 Notice[1]	M/O[2]	Comments
<HEAD>	M	Beginning of the HEAD section containing general data elements related to all notices
t_char_set = ISO-8859-1	O	The character set used in the file.
t_adm = SUI	M	The three-character code for the name of the administration submitting the notice.
t_email_addr = mail@ofcom.ch	O	The electronic mail address
</HEAD>	M	Indicating the end of the HEAD section
<NOTICE>	M	Beginning of section <NOTICE>
t_notice_type = DT2	M	The type of notice DT2 for DVB-T allotment
t_fragment = RC06	M	The part of the database to be updated.
t_action = ADD	M	The action to be taken regarding this notice (ADD, MODIFY or SUPPRESS)
t_adm_ref_id = SUI00002	M	Administration's unique identifier, assigned by the administration.
t_trg_adm_ref_id =	(M)	The Administration Unique Identifier of the notice under treatment to be modified or withdrawn.
t_ctry = SUI	M	The three-character code for the name of the geographic area where the transmitting antenna is located.
rrc_allot_name = GRUYERES	M	Digital broadcasting allotment name.
rrc_sys_var =	(M)	Digital television system including DVB-T variants
rrc_rx_mode =	(M)	Reception mode
rrc_ref_plan_cfg = RPC2	(M)	Reference Planning Configuration (RPC1, RPC2 or RPC3)
rrc_typ_ref_netwk = RN1	M	Type of Reference Network (RN1, RN2, RN3 or RN4)
rrc_sfn_id =	(M)	Identifier for SFN
t_polar = H	M	Polarization (H, V, M or U).
rrc_geo_area =	(M)	If all test points are on the country boundary, enter the identifier for the national boundary otherwise blank.
rrc_nb_sub_areas = 1	(M)	If field rrc_geo_area is blank, enter number of sub-areas (9 maximum)
t_d_adm_ntc = 2004-07-06	O	The date that the administration gives to this notice.
rrc_conv_freq_assgn =	O	Assigned frequency of the origin analogue assignment for conversion otherwise blank
rrc_conv_lat =	O	Latitude of the origin analogue assignment for conversion otherwise blank
rrc_conv_long =	O	Longitude of the origin analogue assignment for conversion otherwise blank
t_remarks =	O	Remarks to be stored in database.
rrc_channel = 6-8	O	One, many or a range of acceptable channels. For example VHF, 5-9 (channels 5 to 9) or 45, 47, 49

DT2 Notice[1]	M/O[2]	Comments
rrc_contour_id = 0001	(M)	Unique contour number of sub-area, repeating for all contours that make up the allotment area.
<COORD>	O	Beginning of sub-section <COORD> for coordination data
t_adm = F	O	Affected administration that gives agreement. Repeat as appropriate
</COORD>	O	End of sub-section <COORD> for coordination data
</NOTICE>	M	End of section <NOTICE>
<NOTICE>	M	Beginning of notice 2
		Data items for notice 2
</NOTICE>	M	End of notice 2
<TAIL>	M	Beginning of section <TAIL> indicating the total number of notices in the notification file
t_num_notices = 2	M	The number of notices contained in the file
</TAIL>	M	End of section <TAIL>

ANNEX 4

DS1 - Format of electronic notification for a digital sound broadcasting (T-DAB) assignment requirement

DS1 Notice[1]	M/O[2]	Comments
<HEAD>	M	Beginning of the HEAD section containing general data elements related to all notices
t_char_set = ISO-8859-1	O	The character set used in the file.
t_adm = SUI	M	The three-character code for the name of the administration submitting the notice.
t_email_addr = mail@ofcom.ch	O	The electronic mail address
</HEAD>	M	Indicating the end of the HEAD section
<NOTICE>	M	Beginning of section <NOTICE>
t_notice_type = DS1	M	The type of notice DS1 for T-DAB assignment
t_fragment = RC06	M	The part of the database to be updated.
t_action = ADD	M	The action to be taken regarding this notice (ADD, MODIFY or SUPPRESS)
t_adm_ref_id = SUI00003	M	Administration's unique identifier, assigned by the administration.
t_trg_adm_ref_id =	(M)	The Administration Unique Identifier of the notice under treatment to be modified or withdrawn.
t_ctry = SUI	M	The three-character code for the name of the geographic area where the transmitting antenna is located.
t_site_name = GRUYERES	M	The name of the site where the transmitting antenna is located.
t_long = +0070600	M	The longitude of the transmitting antenna site.
t_lat = +463700	M	The latitude of the transmitting antenna site.
t_site_alt = +500	M	Altitude of site (metres above sea level, a sign followed by a number).
rrc_ref_plan_cfg = RPC4	(M)	Reference Planning Configuration (RPC4 or RPC5)
t_erp_h_dbw = 30	(M)	The maximum horizontally polarized Effective Radiated Power (dBW).
t_erp_v_dbw =	(M)	The maximum vertically polarized Effective Radiated Power (dBW).
rrc_sfn_id =	(M)	Identifier for SFN
rrc_sfn_tx_tim =	(M)	Relative timing of transmitter within an SFN
rrc_adm_allot_id =	O	Administration unique identifier of T-DAB allotment to which this assignment is related
t_polar = H	M	Polarization (H, V, M or U).
t_hgt_agl = 30	M	The height (metres) above ground level of the centre of radiation.
rrc_ant_dir = D	M	Antenna directivity (D/ND)
t_eff_hgtmax = 229	M	The maximum effective height (metres).
rrc_spect_mask = 1	M	Spectrum mask
t_d_adm_ntc = 2004-07-07	O	The date that the administration gives to this notice.
rrc_freq_block = 5A	O	One or many acceptable frequency blocks, separated by commas. For example: 5A, 5B, 5C, 5D

DS1 Notice[1]	M/O[2]	Comments
<ANT_HGT>	M	Beginning of sub-section <ANT_HGT> for effective antenna heights.
t_eff_hgt@azmzzz = 200	M	Effective antenna height at azimuth zzz degrees from the True North (zzz from 0 to 350 step 10)
</ANT_HGT>	M	End of sub-section <ANT_HGT> for effective antenna heights.
<ANT_DIAGR_H>	(M)	Beginning of sub-section <ANT_DIAGR_H> for attenuation of the horizontal polarised component (dB)
t_attn@azmzzz = 3	(M)	Antenna attenuation (normalised to 0dB) at azimuth zzz degrees from the True North (zzz from 0 to 350 step 10)
</ANT_DIAGR_H>	(M)	End of sub-section <ANT_DIAGR_H> for attenuation of the horizontal polarised component (dB).
<ANT_DIAGR_V>	(M)	Beginning of sub-section <ANT_DIAGR_V> for attenuation of the vertical polarised component (dB)
t_attn@azmzzz = 3	(M)	Antenna attenuation (normalised to 0dB) at azimuth zzz degrees from the True North (zzz from 0 to 350 step 10)
</ANT_DIAGR_V>	(M)	End of sub-section <ANT_DIAGR_V> for attenuation of the vertical polarised component (dB).
<COORD>	O	Beginning of sub-section <COORD>
t_adm = F	O	Affected administration that gives agreement. Repeat if appropriate.
</COORD>	O	End of sub-section <COORD>
</NOTICE>	M	End of section <NOTICE>
<NOTICE>	M	Beginning of notice 2
		Data items for notice 2
</NOTICE>	M	End of Notice 2
<TAIL>	M	Beginning of section <TAIL> indicating the total number of notices in the notification file
t_num_notices = 2	M	The number of notices contained in the file
</TAIL>	M	End of section <TAIL>

ANNEX 5

DS2 - Format of electronic notification for a digital sound broadcasting (T-DAB) allotment requirement

DS2 Notice[1]	M/O[2]	Comments
<HEAD>	M	Beginning of the HEAD section containing general data elements related to all notices
t_char_set = ISO-8859-1	O	The character set used in the file.
t_adm = SUI	M	The three-character code for the name of the administration submitting the notice.
t_email_addr = mail@ofcom.ch	O	The electronic mail address.
</HEAD>	M	Indicating the end of the HEAD section
<NOTICE>	M	Beginning of section <NOTICE>
t_notice_type = DS2	M	The type of notice DS2 for T-DAB allotment
t_fragment = RC06	M	The part of the database to be updated.
t_action = ADD	M	The action to be taken regarding this notice (ADD, MODIFY or SUPPRESS)
t_adm_ref_id = SUI00004	M	Administration's unique identifier, assigned by the administration.
t_trg_adm_ref_id =	(M)	The Administration Unique Identifier of the notice under treatment to be modified or withdrawn.
t_ctry = SUI	M	The three-character code for the name of the geographic area where the transmitting antenna is located.
rrc_allot_name = GRUYERES	M	Digital broadcasting T-DAB allotment name.
rrc_ref_plan_cfg = RPC4	(M)	Reference Planning Configuration (RPC4 or RPC5)
rrc_typ_ref_netwk = RN5	M	Type of Reference network (RN5 or RN6)
rrc_sfn_id =	(M)	Identifier for SFN
t_polar = H	M	Polarization (H, V, M or U).
rrc_geo_area =	(M)	If all test points are on the country boundary, enter the identifier for the national boundary otherwise blank.
rrc_nb_sub_areas = 2	(M)	If field rrc_geo_area is blank, enter number of sub-areas (9 maximum)
t_d_adm_ntc = 2004-07-06	O	The date that the administration gives to this notice.
t_remarks =	O	Remarks to be stored in database.
rrc_freq_block = 5A	O	One or many acceptable frequency blocks, separated by commas. For example: 5A, 5B, 5C, 5D
rrc_contour_id = 0003	(M)	Unique contour number of sub-area 1.
rrc_contour_id = 0004	(M)	Unique contour number of sub-area 2, repeating for all contours that make up the allotment area.
<COORD>	O	Beginning of sub-section <COORD>
t_adm = F	O	Affected administration that gives agreement, repeating as appropriate
</COORD>	O	End of sub-section <COORD>
</NOTICE>	M	End of section <NOTICE>

DS2 Notice[1]	M/O[2]	Comments
<NOTICE>	M	Beginning of notice 2
		Data items for notice 2
</NOTICE>	M	End of notice 2
<TAIL>	M	Beginning of section <TAIL> indicating the total number of notices in the notification file
t_num_notices = 2	M	The number of notices contained in the file
</TAIL>	M	End of section <TAIL>

ANNEX 6

DA1 - Format of electronic notification for a Sub Allotment Area for digital broadcasting requirement (DVB-T or T-DAB)

DA1 Notice[1]	M/O[2]	Comments
<HEAD>	M	Beginning of the HEAD section containing general data elements related to all notices
t_char_set = ISO-8859-1	O	The character set used in the file.
t_adm = SUI	M	The three-character code for the name of the administration submitting the notice.
t_email_addr = mail@ofcom.ch	O	The electronic mail address.
</HEAD>	M	Indicating the end of the HEAD section
<NOTICE>	M	Beginning of notice for sub allotment area 1
t_notice_type = DA1	M	The type of notice DA1 for sub allotment area notification
t_fragment = RC06	M	The part of the database to be updated.
t_ctry = SUI	M	The three-character code for the name of the geographic area where test points are located.
rrc_contour_id = 0001	M	Unique contour ID number
rrc_nb_test_pts = 60	M	Number of test points (maximum of 99)
t_remarks =	O	Remarks
<POINT>	M	Beginning of sub-section <POINT> for point 1
rrc_lat = +453700	M	The latitude of the test point 1
rrc_long = +0070700	M	The longitude of the test point 1
</POINT >	M	End of sub-section <POINT > for point 1
<POINT>	M	Beginning of sub-section <POINT>. Repeat for next test point in correct sequence
rrc_lat =		
rrc_long =		
</POINT>	M	End of sub-section </POINT >
</NOTICE>	M	End of notice for sub allotment area 1
<NOTICE>	M	Beginning of notice 2
		Data items for notice 2
</NOTICE>	M	End of notice for notice2
<TAIL>	M	Beginning of section <TAIL> indicating the total number of notices in the notification file
t_num_notices = 2	M	The number of notices contained in the file
</TAIL>	M	End of section <TAIL>

ANNEX 7

Detailed data information and validation rules

This Annex gives detailed information on the data to be notified, validation principles that will be applied and further explanations when necessary. Data items are listed in alphabetical order.

Data item	**Description and validation rules**
rrc_adm_allot_id	Optional. Administration identifier of DVB-T allotment to which the assignment is related. Maximum of 20 characters limited to upper-case letters A to Z, digits 0 to 9, parenthesis, dash and forward slash. The field shall be unique for the notifying administration.
rrc_allot_name	Mandatory. Digital Allotment name. The field allows a maximum of 30 characters of the printable characters in the ISO 8859-1 coded character set. However, it is recommended to use upper-case letters A to Z, digits 0 to 9 and space.
rrc_ant_dir	Mandatory. Directivity of antenna - Column 9 of the Preface. Acceptable values are D if the antenna is directional and ND if it is non-directional.
rrc_channel	Optional. Acceptable DVB-T channels. A band or one or many acceptable channels in a band can be notified. The field allows a maximum of 30 characters. Acceptable values are given in Section 3.1 of the Report of RRC04 where a channel number is given. For example: 5-9 for Channels 5 to 9. 43, 45, 47 or VHF for Band III and UHF for Bands IV/V.
rrc_contour_id	Mandatory if all test points are not on the country boundary and therefore a number of sub areas are notified. Unique contour number of a sub area that is a part of the allotment area. The field allows four-digit integer.
rrc_conv_freq_assgn	Optional. Assigned frequency of the origin analogue assignment for conversion in MHz. If notified, rrc_conv_lat and rrc_conv_long must also be notified.
rrc_conv_lat	Optional. Latitude of the origin analogue assignment for conversion. Acceptable format is described in Annex 1. If notified, rrc_conv_freq_assgn and rrc_conv_long must also be notified.
rrc_conv_long	Optional. Longitude of the origin analogue assignment for conversion. Acceptable format is described in Annex 1. If notified, rrc_conv_freq_assgn and rrc_conv_lat must also be notified.
rrc_freq_block	Optional. Acceptable T-DAB frequency blocks, separated by commas. The field allows for a maximum of 30 characters. Acceptable values are two to three-character string: a number from 5 to 12, followed by a character that is either A, B, C or D. Table A.3.1-10 of the Report of the RRC04 includes information on centre frequency, block bandwidth, etc. for all T-DAB frequency blocks.
rrc_geo_area	Mandatory if all test points are on the country boundary otherwise blank. National boundary identifier. The value shall be identical to the corresponding country code.
rrc_guard_interval	Mandatory if SFN is used and RPC is *not* notified. Guard interval. The field is an integer. Acceptable values are 4 (guard interval = 1/4), 8 (1/8), 16 (1/16) and 32 (1/32).

Data item	Description and validation rules
rrc_lat	Mandatory (DA1 only). Latitude of the test point N. Acceptable format is described in Annex 1.
rrc_long	Mandatory (DA1 only). Longitude of the test point N. Acceptable format is described in Annex 1.
rrc_nb_carr	Mandatory if SFN is used and RPC is *not* notified. Number of carriers. The field has two characters. Acceptable values are 2k or 8k.
rrc_nb_sub_areas	Mandatory if all test points are not on the country boundary. Acceptable values are from 1 to 9.
rrc_nb_test_pts	Mandatory. Number of test points. Maximum of 99 test points allowed.
rrc_ref_plan_cfg	Mandatory if rrc_rx_mode and rrc_sys_var are not notified. Reference Planning Configuration (RPC) is a representative combination of criteria and parameters to be used for frequency planning purposes. For DVB-T notification, acceptable values are RPC1, RPC2 and RPC3. For T-DAB notification, acceptable values are RPC4 and RPC5.
rrc_rx_mode	Mandatory if RPC is not notified. Acceptable reception mode values are F for fixed, M for mobile, A and B for indoor and outdoor reception respectively.
rrc_sfn_id	Mandatory if SFN is used. Identifier for SFN allows a maximum of 30 characters limited to upper case letters A to Z, digits 0 to 9, parenthesis, dash and forward slash. The field shall be unique for the notifying administration.
rrc_sfn_tx_tim	Mandatory if SFN is used. Relative timing of transmitter within an SFN(µs), the field is an integer.
rrc_spect_mask	Mandatory (DT1 and DS1 only). Spectrum mask identifier - 1 character. For T-DAB, acceptable values are 1 or 2 (Rec. ITU-R BS.1660). For DVB-T, acceptable values are N (non-critical) or S (sensitive).
rrc_sys_var	Mandatory if RPC is not notified. Digital television system DVB-T variants. The field has two characters. The first indicates the modulation system: A for QPSK, B for 16-QAM and C for 64-QAM. The second indicates the code rate: 1 for 1/2, 2 for 2/3, 3 for 3/4, 5 for 5/6 and 7 for 7/8.
rrc_typ_ref_netwk	Mandatory. Type of reference network. Acceptable values are RN1, RN2, RN3 and RN4 for DVB-T allotments and RN5 and RN6 for T-DAB allotments.
t_action	Mandatory. Acceptable values are ADD, MODIFY or SUPPRESS
t_adm (in HEAD section)	Mandatory. Notifying administration - Column B of the Preface. It shall correspond to the code of the notifying administration.
t_adm in COORD sub-section	Optional. Affected administration with whom coordination successfully completed. The coordination sub-section contains multiple occurrences of administration codes. Administration codes shall correspond to ITU's administration symbols.
t_adm_ref_id	Mandatory. Administration Unique Identifier. The field allows a maximum of 20 characters limited to upper case letters A to Z, digits 0 to 9, space, parenthesis, dash and forward slash. This field shall be unique for the notifying administration in the given fragment

Data item	Description and validation rules
t_attn@azmzzz in ANT_DIAGR_H and the ANT_DIAGR_V sub-sections	Mandatory if antenna is directional. Attenuation, normalised to 0dB, of the horizontal and vertical components sub-sections Columns 9NH and 9NV of the Preface. The sub-section of attenuation of the horizontal component shall be filled if the antenna is directional and the polarization is horizontal or mixed. Similarly, the sub-section of attenuation of the vertical component shall be filled if the antenna is directional and the polarization is vertical or mixed. The attenuation sub-sections contain 36 values of attenuation (dB), in azimuths 0, 10, … 350 degrees. Duplication of keys for a given azimuth will be considered as an error, and a key corresponding to an azimuth not multiple of 10 degrees will be ignored.
t_char-set	Optional. If not specified, the default value is ISO-8859-1. This is also currently the only acceptable value.
t_ctry	Mandatory. The code of the geographical area where the antenna site is located - Column 4B of the Preface. Acceptable values shall be within the list of geographical areas in the Planning area.
t_d_adm_ntc	Optional. Date of Notice. The date that the administration gives to the notice. Acceptable format is given in Annex 1.
t_eff_hgt@azmzzz in ANT_HGT sub-section	Mandatory. Effective antenna height at different azimuths - Column 9EC of the Preface. The effective antenna height sub-section contains 36 values of effective antenna heights (m), in azimuths 0, 10, … 350 degrees. The value of effective antenna height in azimuth zzz degrees shall be preceded by the key t_eff_hgt@azmzzz. Duplication of keys for a given azimuth will be considered as an error, and a key corresponding to an azimuth not multiple of 10 degrees will be ignored.
t_eff_hgtmax	Mandatory. Maximum effective antenna height in metres - Column 9EB of the Preface.
t_email_addr	Optional. If notified, it will be used by the Bureau for any correspondence related to the completeness and validity of the notices included in the file.
t_erp_h_dbw	Mandatory if polarization is H or M and does not exist if polarization is V. Maximum effective radiated power of the horizontally polarized component Column 8BH of the Preface. This is the maximum effective radiated power of the horizontally polarized component independent of azimuth and beam tilt.
t_erp_v_dbw	Mandatory if polarization is V or M and does not exist if polarization is H. Maximum effective radiated power of the vertically polarized component Column 8BV of the Preface. This is the maximum effective radiated power vertically polarized component independent of azimuth and beam tilt.
t_fragment	Mandatory. The fragment of the database to be updated. The only acceptable value is RC06
t_hgt_agl	Mandatory. Height of antenna above ground level - Column 9E of the Preface. The height (metres) of the centre of radiation above ground level.
t_long and t_lat	Mandatory. Geographical Coordinates - Column 4C of the Preface. The geographical coordinates are checked vis-à-vis the ITU geographical borders database (IDWM) to verify that the corresponding point does not fall in another geographical area than the one notified or in the sea at a distance more than 10 km from the border.

Data item	Description and validation rules
t_notice_type	Mandatory. Acceptable values are DT1 for DVB-T assignment, DT2 for DVB-T allotment, DS1 for T-DAB assignment, DS2 for T-DAB allotment and DA1 for sub allotment area notification.
t_num_notices	Mandatory. The number of notices contained in the file. If the number of notices in the file differs from this value, the file is presumed corrupted, and will be returned to the notifying administration.
t_polar	Mandatory. Polarization - Column 9D of the Preface. Acceptable values are H for horizontal, V for vertical, M for mixed and U for unspecified.
t_remarks	Optional. Additional remarks. It is not validated. Any information in this field will be captured as is.
t_site_alt	Mandatory. Altitude of the site (metres above sea level, a sign followed by a number) - Column 9EA of the Preface.
t_site_name	Mandatory. Transmitting Antenna Site Name - Column 4A of the Preface. The field allows a maximum of 30 characters of the printable characters in the ISO 8859-1 coded character set. However, it is recommended to use upper-case letters A to Z, digits 0 to 9 and space.
t_trg_adm_ref_id	Mandatory if t_action is MODIFY or SUPPRESS. Administration Unique Identifier of the target. The field allows a maximum of 20 characters limited to upper case letters A to Z, digits 0 to 9, space, parenthesis, dash and forward slash. This field is used to uniquely identify the requirement to be modified or suppressed. For an addition notice, this field shall not be notified.