



Preparation of requirements for T-DAB and DVB-T Part II

Preparation and validation of notification

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Notification scope

The notification to the BR in the pursuance to the decisions of the First session of the Regional Radiocommunication Conference GE04 consists of:

- 1 Notification of the digital requirement for the purpose of planning exercise or production of draft Plan (RRC06)
- 2 Notification for the purpose of identification (and update of RRC relevant elements) of the assignments to be taken as a reference situation in broadcasting and in other than broadcasting primary services (RRC06)



1. Notification of the digital requirement for the purpose of planning exercise or production of draft Plan (RRC06)

The basics of notification of the digital broadcasting requirement for the purpose of the RRC-06 as described in the Chapter 6 of the Report to the second session - Annex 1 to the Resolution 1 (RRC-04) are:

- Administrations shall collate data for requirements for digital broadcasting services for the planning exercises during the intersessional period and for the second session of the conference (§6.1)
- All data regarding the digital broadcasting requirements shall be submitted in electronic form (§6.1)
- Geographical longitude and latitude coordinates in the requirements should preferably be based on the World Geodetic System 1984 (WGS84) (§6.1)
- For the planning exercise as well as for the production of the draft Plan the administrations have the option of submitting a new set or modifying previously submitted set of requirements. The Intersessional Planning Group (IPG) will always use the latest set of requirements. All requirements have the same status in the planning process, irrespective of the date they were submitted (§6.2)



Types of digital requirement notifications 1

§6.2 has specified four types of requirements:

- a digital television broadcasting assignment requirement;
- a digital television broadcasting allotment requirement;
- a digital sound broadcasting assignment requirement;
- a digital sound broadcasting allotment requirement.



Types of digital requirement notifications 2

TABLE 6.2-1

Data	
No	
1	Add, modify, suppress
2	ITU symbol for administration responsible
3	Unique identifier given by the administration responsible
3a	Unique identifier given by the administration responsible for MOD or SUP
4	ITU symbol for country in which allotment is sited
5	Name of the location of the transmitting station
6	Geographical coordinate, latitude
7	Geographical coordinate, longitude
8	Altitude of site (metres above sea level)
9a	Digital television system (including DVB-T)
9b	Reception mode (e.g. fixed, portable, mobile)
10	Reference planning configuration (RPC 1, 4 or 5)
11	List of acceptable frequency blocks
12	Complete 12 and/or 13, based on the value of field 11
13	Maximum e.r.p. of horizontally polarized component in the horizontal plane relative to the maximum e.r.p. as given above (at 10° intervals, starting at North, clockwise), mandatory if field 18 = D
14	Maximum e.r.p. of vertically polarized component in the horizontal plane relative to the maximum e.r.p. as given above (at 10° intervals, starting at North, clockwise), mandatory if field 18 = D
15	Relative timing of transmitter within an S
16	Polarization (H-horizontal/V-vertical/M-mixed/U-undefined)
17	Height of antenna (metres)
18	Directivity (directional/non-directional)
19	Antenna attenuation – horizontal. 36 values of e.r.p. reduction (dB) of the horizontally-polarized component in the horizontal plane relative to the maximum e.r.p. as given above (at 10° intervals, starting at North, clockwise), mandatory if field 18 = D
20	Antenna attenuation – vertical. 36 values of e.r.p. reduction (dB) of the vertically-polarized component in the horizontal plane relative to the maximum e.r.p. as given above (at 10° intervals, starting at North, clockwise), mandatory if field 18 = D
21	Maximum effective antenna height (m)
22	36 values of effective antenna height (metres, at 10° intervals, starting at North); if not provided, the value of the maximum effective antenna height should be used for all
23	Spectrum mask
24	Date of notification by administration
25	Successfully pre-coordinated with ...
26	Remarks

TABLE 6.2-4

Data for a digital sound broadcasting allotment requirement

No	Item	Mand./Opt.	App. 4 ref.	TerRaBase ref.
1	Add, modify, suppress			
2	ITU symbol for administration responsible	M		t_action
3	Unique identifier given by the administration responsible	M		t_adm
3a	Unique identifier of the target given by the administration for MOD or SUP	M		t_adm_ref_id
4	ITU symbol for country in which allotment is sited	(M)		t_trg_adm_ref_id
5	Name of the location of the transmitting station	M	4B	t_ctry
6	Geographical coordinate, latitude	M		
7	Geographical coordinate, longitude	M		
8	Altitude of site (metres above sea level)	M		
9	Reference planning configuration (RPC 4 or RPC 5)	M		
10	List of acceptable frequency blocks	O		
11	Identifier for SFN	(M)		
12	Polarization (H-horizontal/V-vertical/M-mixed/U-undefined)	M	9D	t_polar
13	If the test points on country boundary for the allotment are to be used, enter the identifier for national boundary or sub-boundary	(M)		
14	If previous field is blank, enter number (up to 9) of sub-areas within this allotment (if there is no subdivision, enter 1)	(M)		
15	Enter for each sub-area (up to 9) a unique contour number, its number of boundary test points (up to 99) and the coordinates of its associated allotment test points	(M)		
16	Date of notification by administration	O		t_d_adm_ntc
17	Origin: conversion of an analogue assignment	O	11	t_adm in COORD sub-section
18	Successfully pre-coordinated with ...	O		
19	Remarks	O		t_remarks
20	Antenna attenuation – horizontal. 36 values of e.r.p. reduction (dB) of the horizontally-polarized component in the horizontal plane relative to the maximum e.r.p. as given above (at 10° intervals, starting at North, clockwise), mandatory if field 18 = D	(M)	9NH	t_attn@azmxx0 in ANT_DIAGR_H sub-section
21	Antenna attenuation – vertical. 36 values of e.r.p. reduction (dB) of the vertically-polarized component in the horizontal plane relative to the maximum e.r.p. as given above (at 10° intervals, starting at North, clockwise), mandatory if field 18 = D	(M)	9NV	t_attn@azmxx0 in ANT_DIAGR_V sub-section
22	Maximum effective antenna height (m)	M	9EB	t_eff_hgtmax
23	36 values of effective antenna height (metres, at 10° intervals, starting at North); if not provided, the value of the maximum effective antenna height should be used for all	M	9EC	t_eff_hgt@azmxx0 in ANT_HGT sub-section
24	Spectrum mask	O		
25	Date of notification by administration	O		t_d_adm_ntc
26	Successfully pre-coordinated with ...	O	11	t_adm in COORD sub-section
27	Remarks	O		t_remarks



Types of digital requirement notifications 3

§6.2 has specified four types of requirements:

- a digital television broadcasting assignment requirement;
- a digital television broadcasting allotment requirement;
- a digital sound broadcasting assignment requirement;
- a digital sound broadcasting allotment requirement.

...however, in practical application (see CR/215) the Bureau has designed five types of requirements:

- **DS1** - Digital Sound Broadcasting (T-DAB) Assignment;
- **DT1** - Digital Television Broadcasting (DVB-T) Assignment;
- **DS2** - Digital Sound Broadcasting (T-DAB) Allotment;
- **DT2** - Digital Television Broadcasting (DVB-T) Allotment;
- **DA1** - Sub Allotment Area for Digital Broadcasting



Sub allotment notification

TABLE 6.2-2

Data for a digital television broadcasting allotment requirement

No	Item	Mand./Opt.
1	Add, modify, suppress	M
2	ITU symbol for administration responsible	M
3	Unique DVB-T identifier for the allotment given by the administration (AdminRefId)	M
3a	Unique identifier given by the administration for the target allotment, only for MOD or SUP	(M)
4	ITU symbol for country in which allotment is sited	M
5	Digital broadcasting allotment name	M
	Enter either 6a + 6b or 7	
6a	Digital television system (including DVB-T variant) ¹	(M)
6b	Reception mode (e.g. portable, mobile...)	(M)
7	Reference planning configuration (RPC 1, RPC 2 or RPC 3)	(M)
8	Type of the reference network (RN 1, RN 2, RN 3 or RN 4)	M
9	Identifier for SFN	(M)
10	Polarization (H-horizontal/V-vertical/M-mixed/U-unspecified)	M
11	List of acceptable channels	O
12	If all the test points are on the country boundary for this allotment, enter the identifier for national boundary	(M)
13	If previous field is blank, enter number (up to 9) of sub-areas within this allotment (if there is no subdivision, enter 1)	(M)
14	Enter for each sub-area (up to 9) a unique contour number, its number of boundary test points (up to 99) and the coordinates of its associated allotment test points	(M)
15	Date of notification by administrations	O
16	Origin: conversion of an analogue assignment ²	O
17	Successfully pre-coordinated with ...	O
18	Remarks	O

TABLE 6.2-4

Data for a digital sound broadcasting allotment requirement

No	Item	Mand./Opt.	Ap pr
1	Add, modify, suppress	M	
2	ITU symbol for administration responsible	M	
3	Unique T-DAB allotment identifier given by the administration (AdminRefId)	M	
3a	Unique identifier given by the administration for the target allotment, only for MOD or SUP	(M)	
4	ITU symbol for country in which allotment is sited	M	4
5	Digital broadcasting allotment name	M	
6	Type of the reference network	M	
7	Reference planning configuration (RPC 4 or RPC 5)	M	
8	List of acceptable frequency blocks	O	
9	Identifier for SFN	(M)	
10	Polarization (H-horizontal/V-vertical/M-mixed/U-unspecified)	M	9
11	If the test points on country boundary for the allotment are to be used, enter the identifier for national boundary or sub-boundary	(M)	
12	If previous field is blank, enter number (up to 9) of sub-areas within this allotment (if there is no subdivision, enter 1)	(M)	
13	Enter for each sub-area (up to 9) a unique contour number, its number of boundary test points (up to 99) and the coordinates of its associated allotment test points	(M)	
14	Date of notification by administration	O	
15	Successfully pre-coordinated with ...	O	1
16	Remarks	O	

¹ The DVB-T variant should fully identify the system used (e.g. modulation mode, number of carriers, ...)

² BR will determine a suitable way to identify the corresponding analogue assignment (if any) and inform the IPG if there is a need for advice.



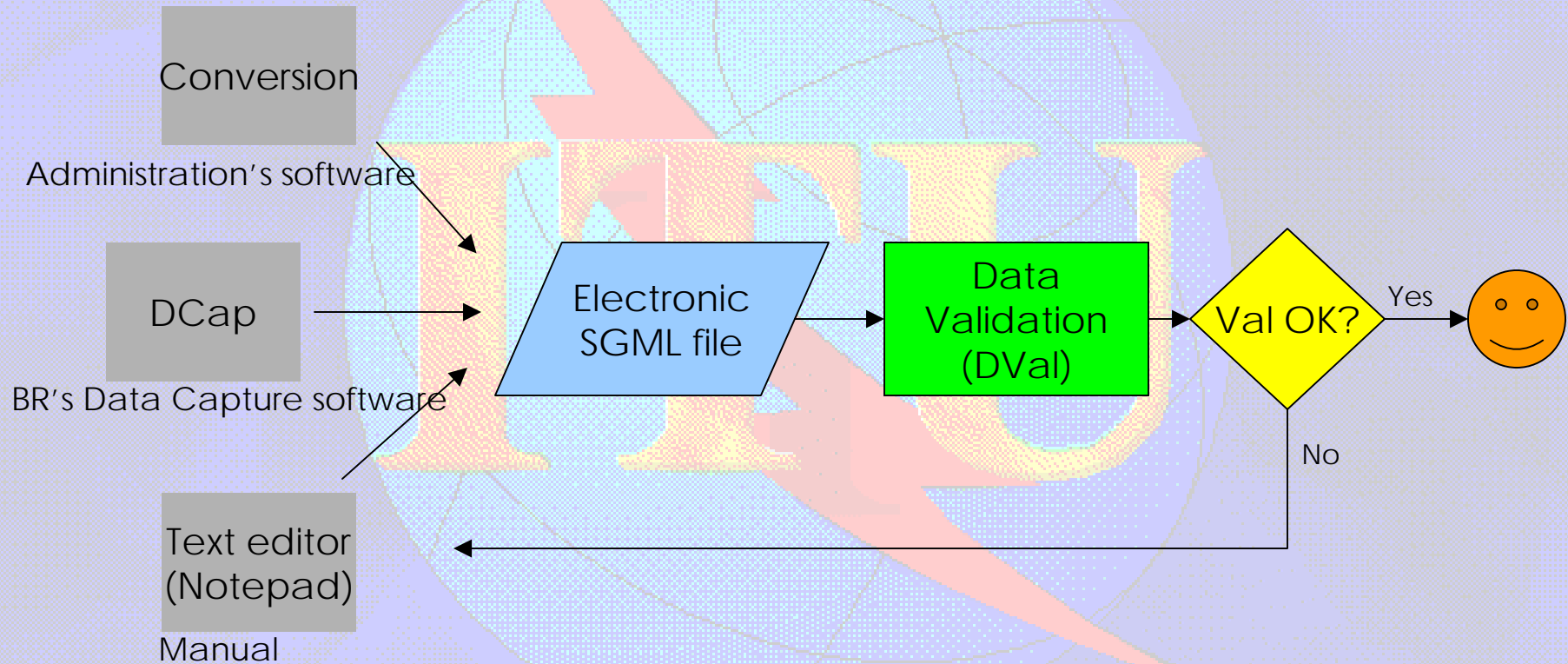
How to create electronic notification?

- Combining the use of:
 - Administration's own software utilities
 - BR's software
 - Data Capture
 - Data Validation
 - Data Correction
 - Word processors
 - MS Access

- REMEMBER to submit notifications as soon as possible (before 28-02-2005) for test purposes and preparation of error free notification

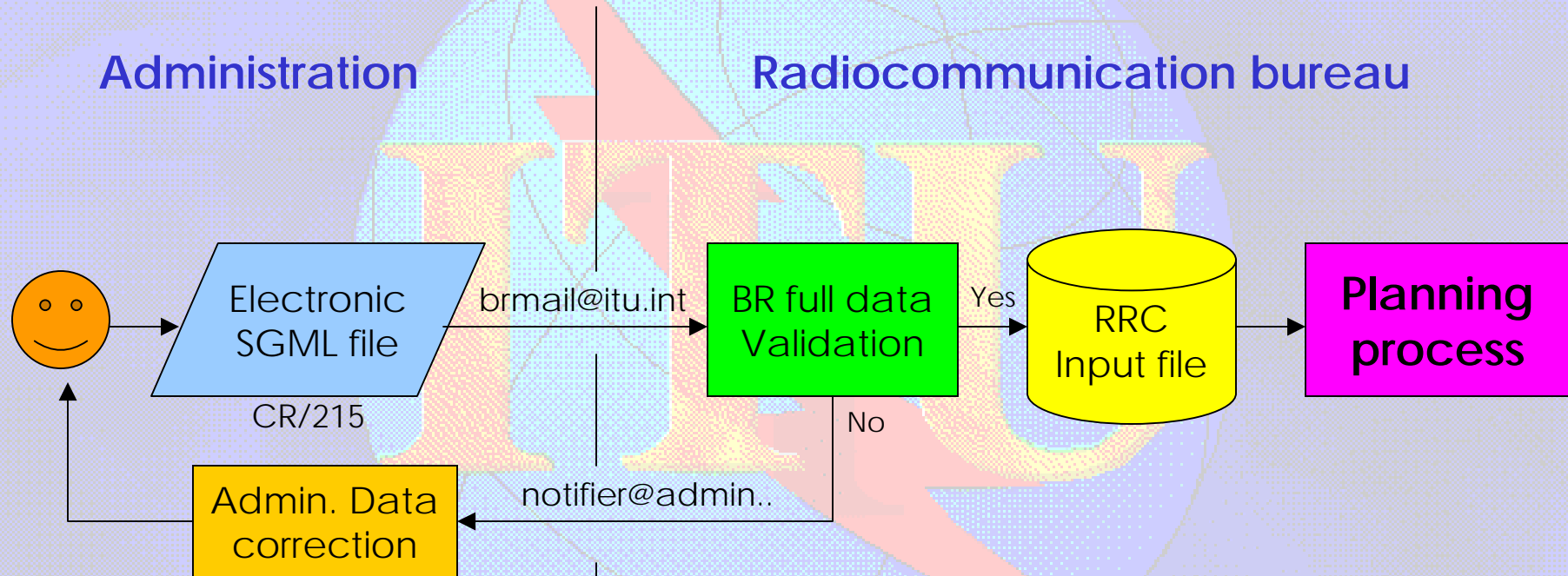


How to create error free electronic notification?





How to notify error free electronic notification?

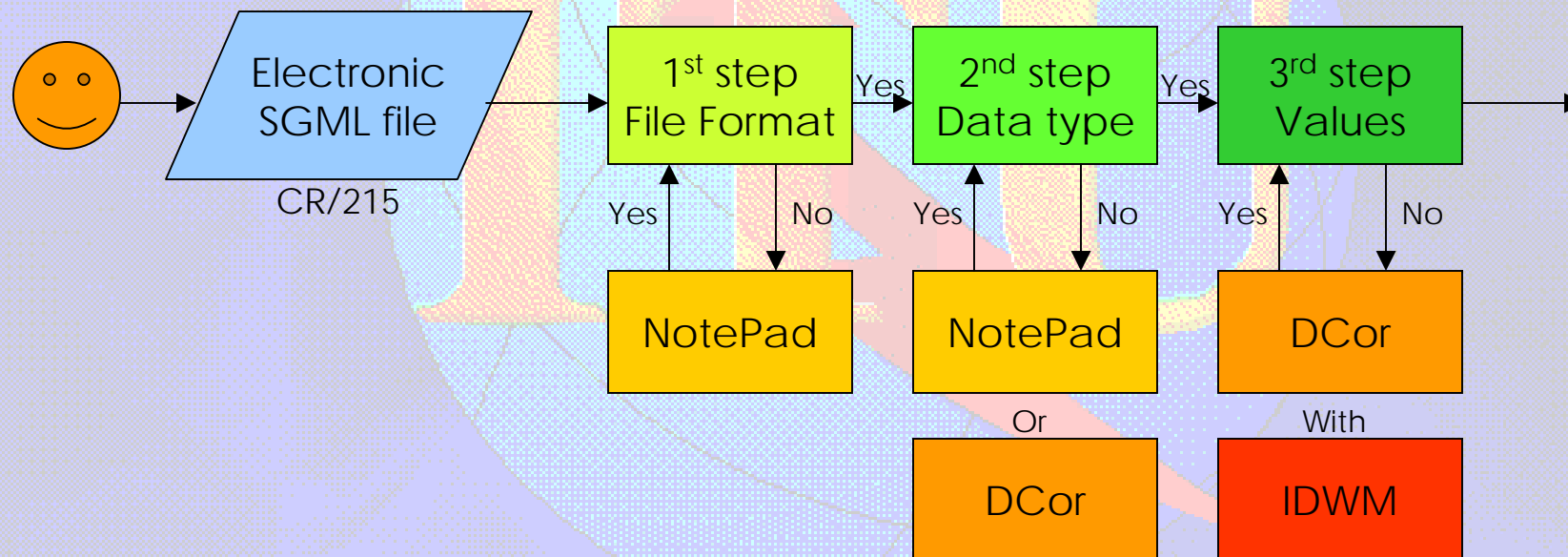


Before 28-02-2005 / 31-10-2005



Data validation program DVal

Administration




Before 28-02-2005 / 31-10-2005



CR/219 Data capture software 1

BR/TSD/TPR Offline Data Capture System - Terrestrial Broadcasting Services

 Language options

English Français Español

Select one Notice Form type from the list below

DS1 - Digital Sound Broadcasting (T-DAB) Assignment

DT1 - Digital Television Broadcasting (DVB-T) Assignment

DS2 - Digital Sound Broadcasting (T-DAB) Allotment

DT2 - Digital Television Broadcasting (DVB-T) Allotment

DA1 - Sub Allotment Area For Digital Broadcasting

Go Exit

RRC-04 DCap BCBT Digital Version 1.02 / 07.09.2004



DT2 Digital Television Broadcasting (DVB-T) Allotment - Data Capture - RRC-04 DCap BCBT Digital Version 1.02 / 07.09.2004

Date of Notification (dd/mm/yyyy) Add Mod Sup

e-mail

Administration's unique ID of the notice

RRC-04 new parameters (ref: RRC-04 Report Chapter 6)

Ref. Planning List of Channels

Origin of the analog assignment

Freq	Longitude	E/W	Latitude	M/S
<input type="text" value="482"/> [MHz]	<input type="text" value="020"/> <input type="text" value="31"/> <input type="text" value="00"/>	<input type="text" value="E"/>	<input type="text" value="44"/> <input type="text" value="41"/> <input type="text" value="00"/>	<input type="text" value="N"/>

SFN ID

Typ. Ref. Network

Allotment Parameters

Allot. name Nb.Sub area(s)

Sub Area Parameters

Sub Area Contour ID

11 - Coordination successfully completed with the following administrations

File name

C:\RRC04\SEMINAR2004\DT2-20041022-23459-Borislav.txt

Notice Number

Notified remarks

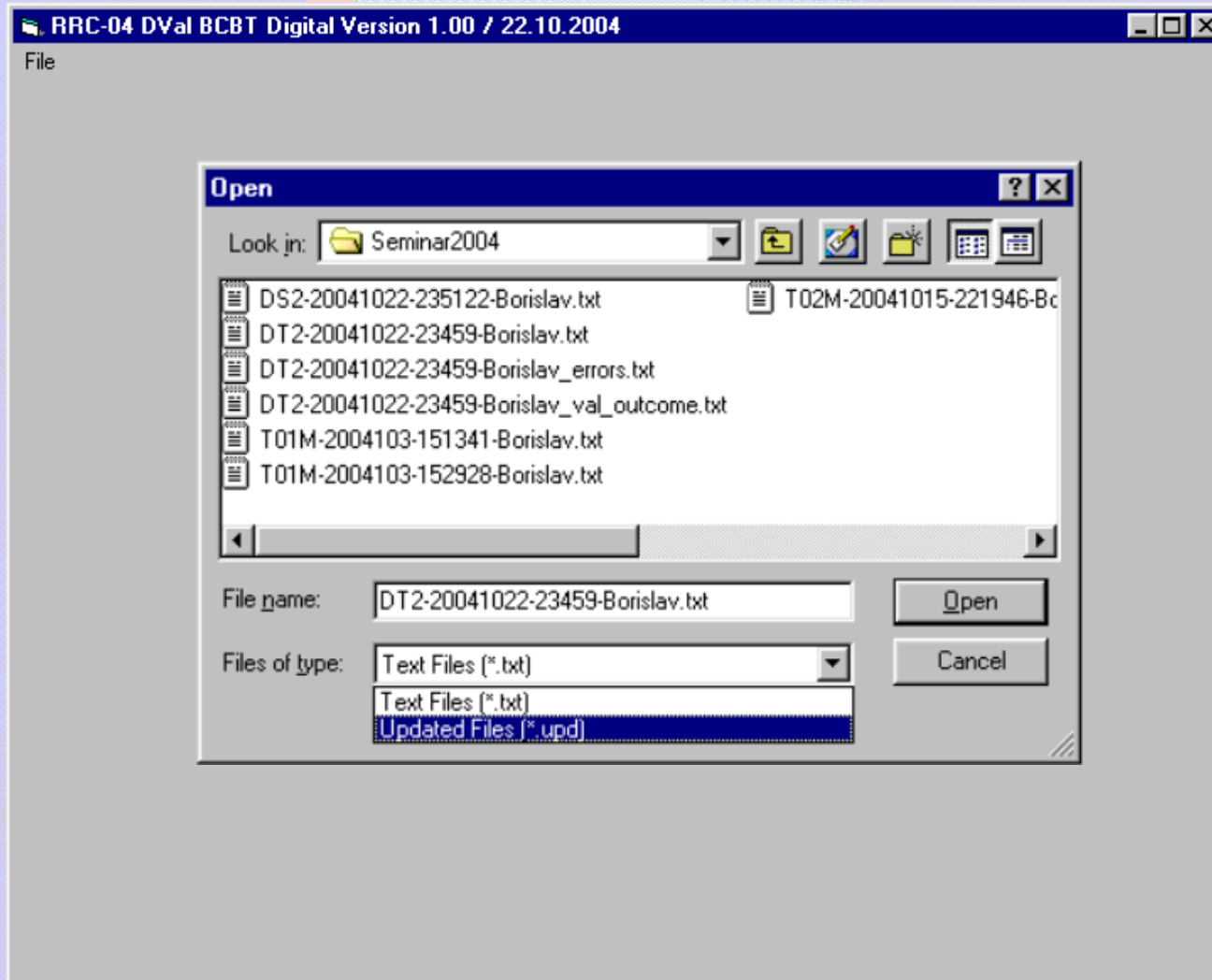
Internal remarks



```
DT2-20041022-23459-Borislav.txt - Notepad
File Edit Search Help
File captured on 10/22/04-11:44:07 PM
Processed by Borislav
Program Id: RRC-04 DCap BCBT Digital Version 1.02 / 07.09.2004
<HEAD>
t_adm = SCG
t_email_addr = borislav.rackov@itu.int
</HEAD>
<NOTICE>
t_remarks = This is a demo notification
Notice No = 1
t_notice_type = DT2
t_d_adm_ntc = 2004-10-22
t_fragment = RC06
t_action = ADD
t_ctry = SCG
t_adm_ref_id = TEST BMR
t_polar = H
rrc_ref_plan_cfg = RPC1
rrc_typ_ref_netwk = RN1
rrc_channel = 21-23, 28
rrc_conv_freq_assgn = 482
rrc_conv_long = +0203100
rrc_conv_lat = +444100
rrc_allot_name = AVALA
rrc_nb_sub_areas = 1
rrc_contour_id = 001
<COORDINATION>
t_adm = BIH
t_adm = HRV
t_adm = HNG
t_adm = ROU
t_adm = BUL
t_adm = MKD
t_adm = ALB
</COORDINATION>
</NOTICE>
<TAIL>
t_num_notices = 1
</TAIL>
```

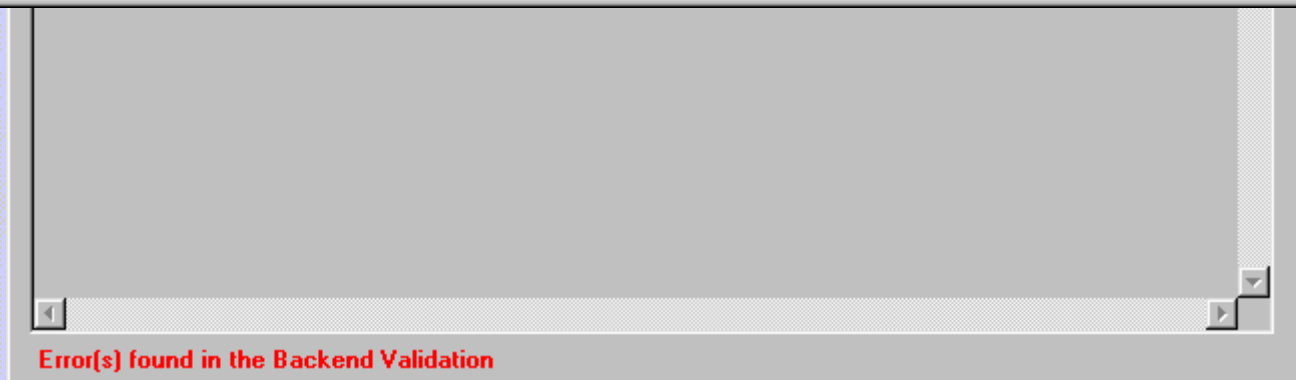
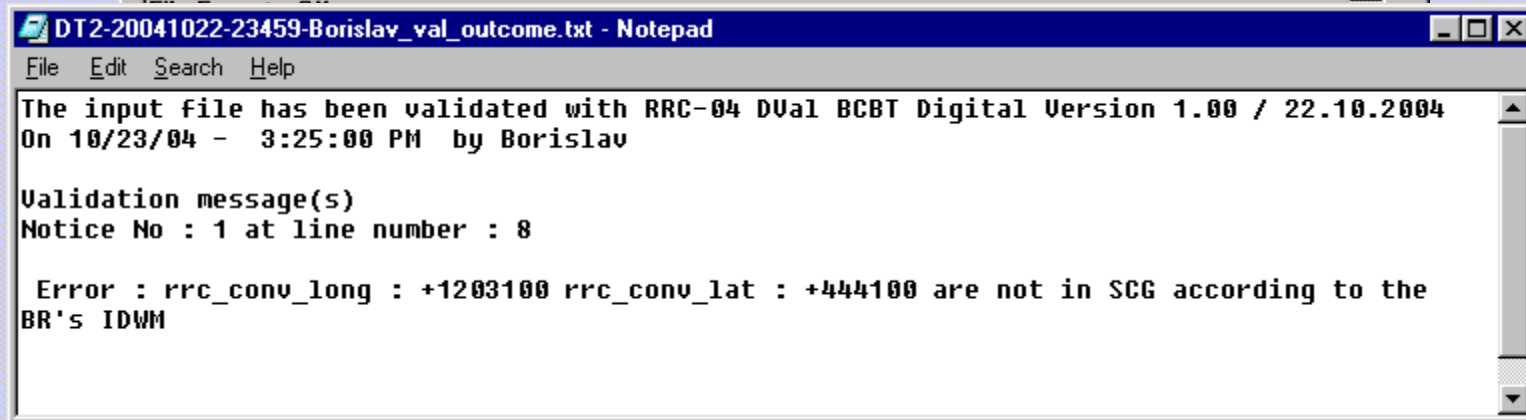
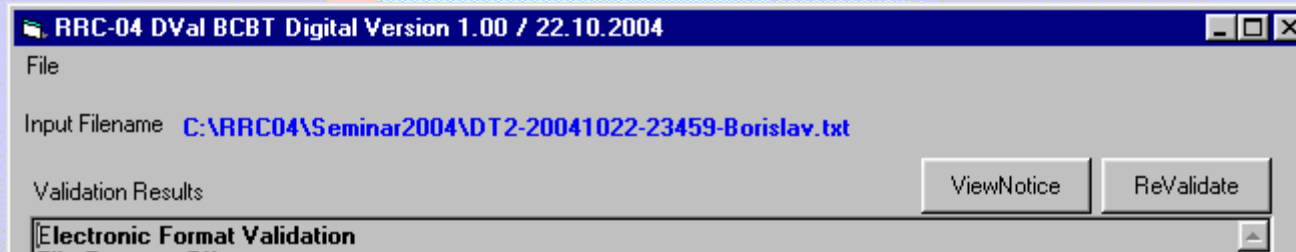


Program DVal





Program DVal 1





Program DVal 2

```
DT2-20041022-23459-Borislav.txt - Notepad
File Edit Search Help
File captured on 10/22/04-11:44:07 PM
Processed by Borislav
Program Id: RRC-04 DCap BCBT Digital Version 1.02 / 07.09.2004
<HEAD>
t_adm = SCG
t_email_addr = borislav.rackov@itu.int
</HEAD>
<NOTICE>
t_remarks = This is a demo notification
Notice No = 1
t_notice_type = DT2
t_d_adm_ntc = 2004-10-22
t_fragment = RC06
t_action = ADD
t_ctry = SCG
t_adm_ref_id = TEST BMR
t_polar = H
rrc_ref_plan_cfg = RPC1
rrc_typ_ref_netwk = RM1
rrc_channel = 21, 22, 23, 28
rrc_conv_freq_assgn = 482
rrc_conv_long = +1203100
rrc_conv_lat = +444100
rrc_allot_name = AVALA
rrc_nb_sub_areas = 1
rrc_contour_id = 001
<COORDINATION>
t_adm = BIH
t_adm = HRV
t_adm = HNG
t_adm = ROU
t_adm = BUL
t_adm = MKD
t_adm = ALB
</COORDINATION>
</NOTICE>
<TAIL>
t_num_notices = 1
</TAIL>
```

ViewNotice ReValidate



Program DVal 3

File Edit Search Help

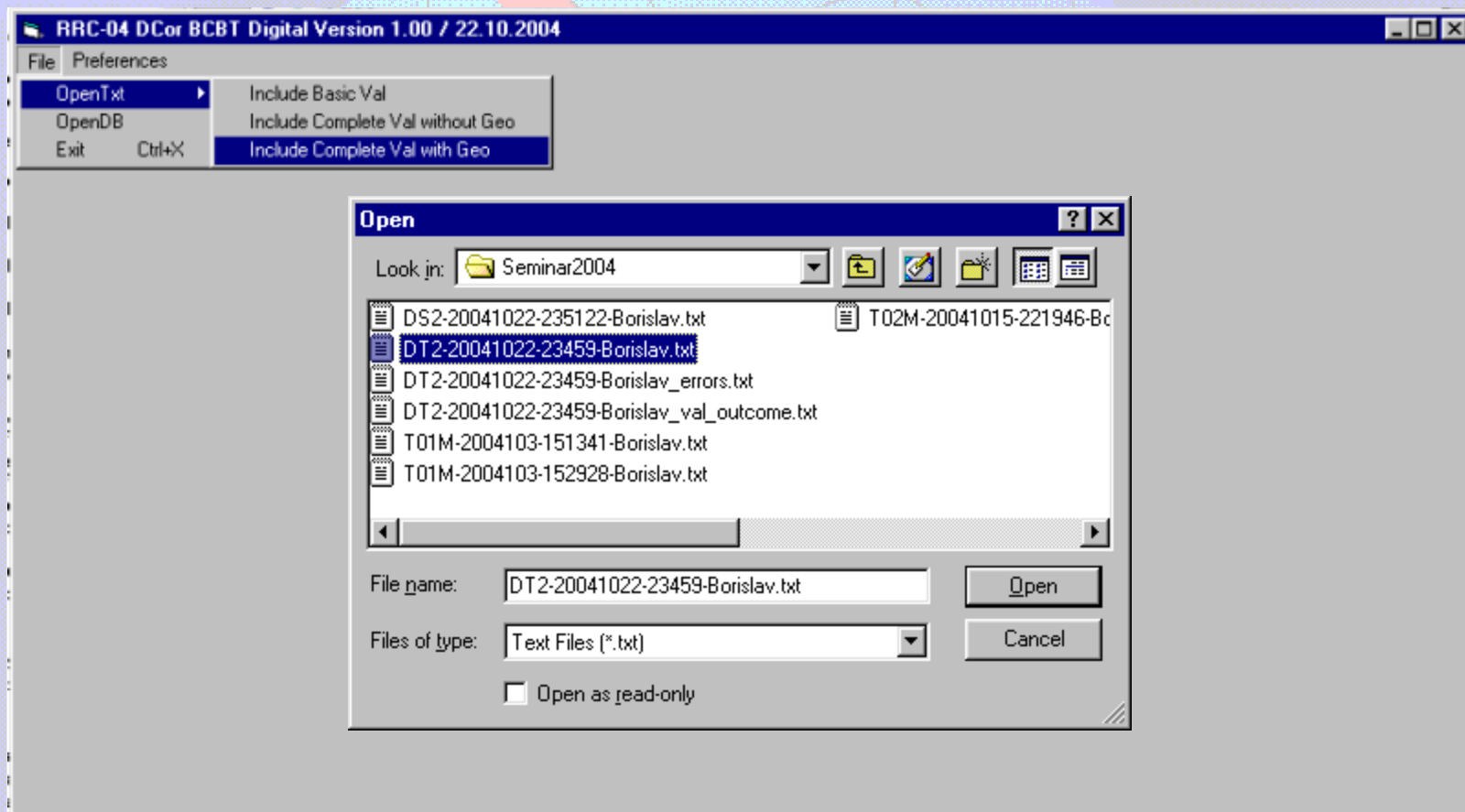
t_polar = H
rrc_ref_plan_cfg = RPC1
rrc_typ_ref_netwk = RM1
rrc_channel = 21, 22, 23, 28
rrc_conv_freq_assgn = 482
rrc_conv_long = +0203100
rrc_conv_lat = +444100
rrc_allot_name = AVALA
rrc_nb_sub_areas = 1
rrc_contour_id = 001
<COORDINATION>
t_adm = BIH
t_adm = HRU
t_adm = HNG
t_adm = ROU
t_adm = BUL
t_adm = MKD
t_adm = ALB
</COORDINATION>
</NOTICE>
<TAIL>
t_num_notices = 1
</TAIL>

=====
=====
The input file has been validated with RRC-04 DVal
BCBT Digital Version 1.00 / 22.10.2004
File Structure : OK
Basic Data Validation : OK
Exhaustive Data Validation with validation of
geographical coordinates: OK
On 10/23/04 - 3:30:21 PM by Borislav
Number of notices validated 1
FILE READY FOR LOADING
=====
=====

Done - Input file stamped



Program DCor





ASBU - ITU Workshop 2004
on Digital Broadcasting

22-25 November 2004

Damascus, Syria

DT2 Digital Television Broadcasting (DVB-T) Allotment - Data Correction - RRC-04 DCor BCBT Digital Version 1.00 / 22.10.2004

Date of Notification: 22 10 2004 Add SCG email: borislav.rackov@itu.int

Administration's unique ID of the notice: TEST BMR

4B SCG 9D H

RRC-04 new parameters (ref: RRC-04 Report Chapter 6)

Ref. Planning: 88 List of Channels: 21, 22, 23, 28

SFN ID: []

Allotment Parameters: Allot. name: AVALA

11 - Coordination successfully completed with the foll: BIH HRV HNG ROU B

Notice Error(s)

88 is an Invalid channel

Close

File name: C:\RRC04\Seminar2004\DT2-20041022-23459-Borislav.mdb

Notice Number: 1

Update Delete Validate Close

Notified remarks: This is a demo notification

Internal remarks: []



DT2 Digital Television Broadcasting (DVB-T) Allotment - Data Correction - RRC-04 DCor BCBT Digital Version 1.00 / 22.10.2004

Date of Notification: 22 10 2004 email:

Administration's unique ID of the notice:

RRC-04 new parameters (ref: RRC-04 Report Chapter 6)

Ref. Planning: List of Channels:

Origin of the analog assignment

Freq	Longitude	E/W	Latitude	N/S
482 [MHz]	020 31 00	E	44 41 00	N

SFN ID:

Typ. Ref. Network:

DCor_BCBT_Dig

The notice was successfully updated in the Database

Allotment Parameters

Allot. name:

11 - Coordination successfully completed with the following administrations:

File name

C:\RRC04\Seminar2004\DT2-20041022-23459-Borislav.mdb

Notice Number

Notified remarks

This is a demo notification

Internal remarks



Program Dcor 3

RRC-04 DCor BCBT Digital Version 1.00 / 22.10.2004

File Preferences

Input TEXT FILE : C:\RRC04\Seminar2004\DT2-20041022-23459-Borislav.txt

RecordIndex	AdminRefID	Adm	Intent	Notice Type	Fragment	Longitude	Latitude	SiteName	Freq Block
1	TEST BMR	SCG	ADD	DT2	RC06	° ' "	° ' "		

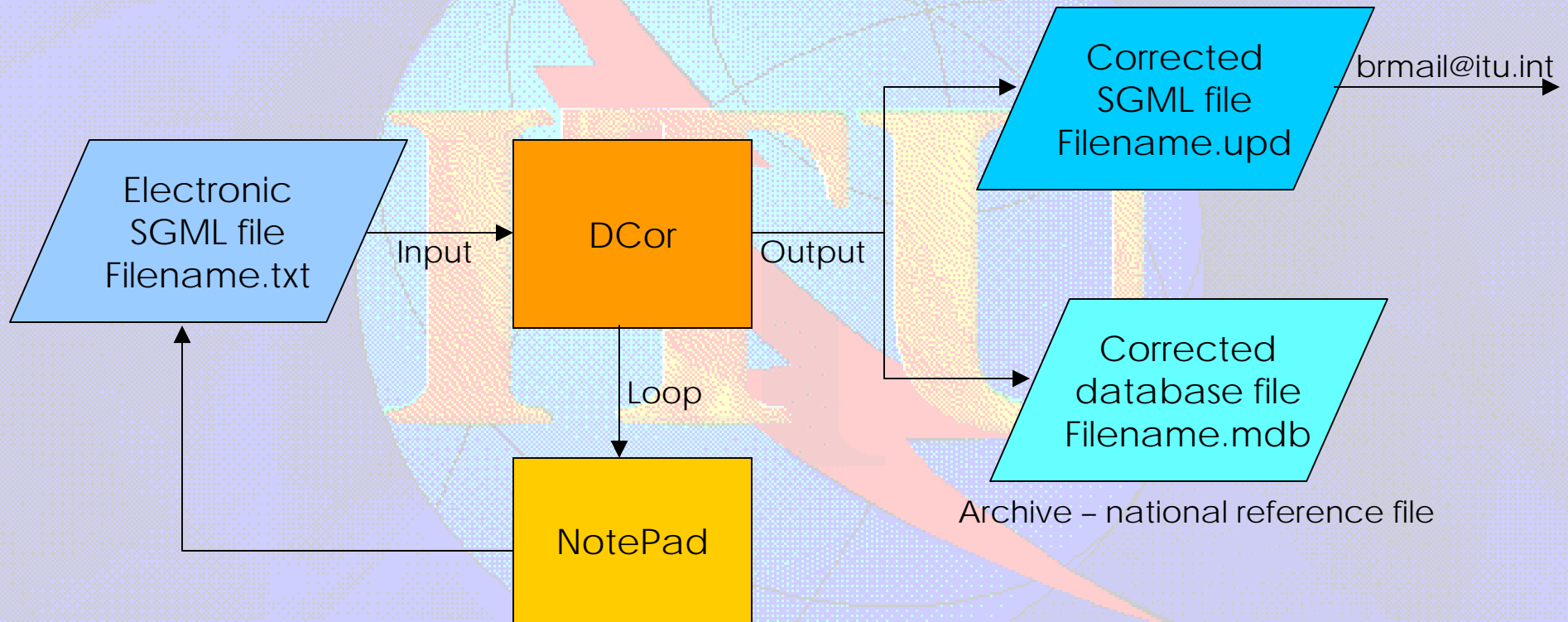
Write to Electronic format

Do you want to save the changes to an electronic file?

Database was successfully updated - Number of notices : 1



Recapitulation



Before 28-02-2005 / 31-10-2005



2 Notification for the purpose of reference situation in broadcasting and in other than broadcasting primary services (RRC06)

The definitions of existing and planned assignments and allotments of the broadcasting service and existing and planned assignments of other primary services are contained in § 1.7 of the Report to the second session. In context of the above, the following notifications are applicable:

- Resolution COM5/1 in Annex 2 specifies that for administrations that have not submitted data, it is assumed that all the existing and planned broadcasting or other services assignments, according to the definition provided in § 1.7, shall be protected in the planning process
- However, the administrations shall indicate:
 - those existing and planned **broadcasting assignments/allotments that are not to be taken** into account in the planning process; and
 - those existing and planned assignments of **other primary services that are to be taken** into account in the planning process



Notification for the purpose of reference situation in broadcasting services (RRC06)

The administrations are expected to notify only those frequency assignments which are **not to be taken** into account during the planning process. In other words, the notification has the purpose to exclude the notified assignment from the reference situation.

For this purpose, the Bureau has developed a specific notice form **BC6** which serves to indicate through given identifying parameters the assignments to be excluded from the reference file, or to reinstate in the file previously excluded assignments.

The notice form in paper format contains data for up to five assignments per page to be processed.

Notice form **BC6** exists in electronic format as well.



Notification for the purpose of reference situation in other than broadcasting primary services (RRC06)

The administrations are expected to notify only those frequency assignments which are **to be taken** into account during the planning process.

At the same time, the administrations shall update the identified assignment with RRC-06 specific information on Service type code (see Annex 4.1 to the Chapter 4 of the Report to the second session. In addition, the administrations have the possibility to update the coordination information (field 11 – Successfully coordinated with).

For this purpose, the Bureau has developed a specific notice form **R06** which serves to indicate through given identifying parameters the assignments to be included to the reference file, and to update the above indicated parameters.

The notice form in paper format contains data for up to three assignments per page to be processed.

Notice form **R06** exists in electronic format as well.



Notice form R06

Date of notification Day Month Year <input type="text"/>	B: Notifying Administration <input type="text"/>	FORM OF NOTICE IDENTIFICATION AND UPDATE OF THE COORDINATION INFORMATION AND SERVICE TYPE CODE OF RECORDED TERRESTRIAL STATION OF A PRIMARY SERVICE OTHER THAN BROADCASTING IN RRC-06 PLANNING AREA AND IN FREQUENCY BANDS TO BE TAKEN INTO ACCOUNT DURING THE PLANNING	R06
--	---	---	-----

(For BR use only)	<input type="checkbox"/> ADD recorded assignment to the Reference file	<input type="checkbox"/> WITHDRAW previously added assignment from the Reference file	Previously recorded Administration Unique Identifier, or <input type="text"/>		
Identifying parameters of the recorded assignment					
O-1a: Assigned frequency (MHz) <input type="text"/>	O-6a: Class of station <input type="text"/>	O-7a: Designation of emission <input type="text"/>	O-10b: Hours of operation From (UTC) To (UTC) <input type="text"/>	O-4e: Geographic area to which the typical station is applicable or <input type="text"/>	O-4c/5c: Coordinates / centre of circular area (Long./Lat.) deg. min. sec. E/W deg. min. sec. N/S <input type="text"/>
Particulars of the assignment to be updated					
11: Successfully completed coordination with other Administrations Symbols designating the Administration <input type="text"/>			Service type code <input type="text"/>	Remarks <input type="text"/>	

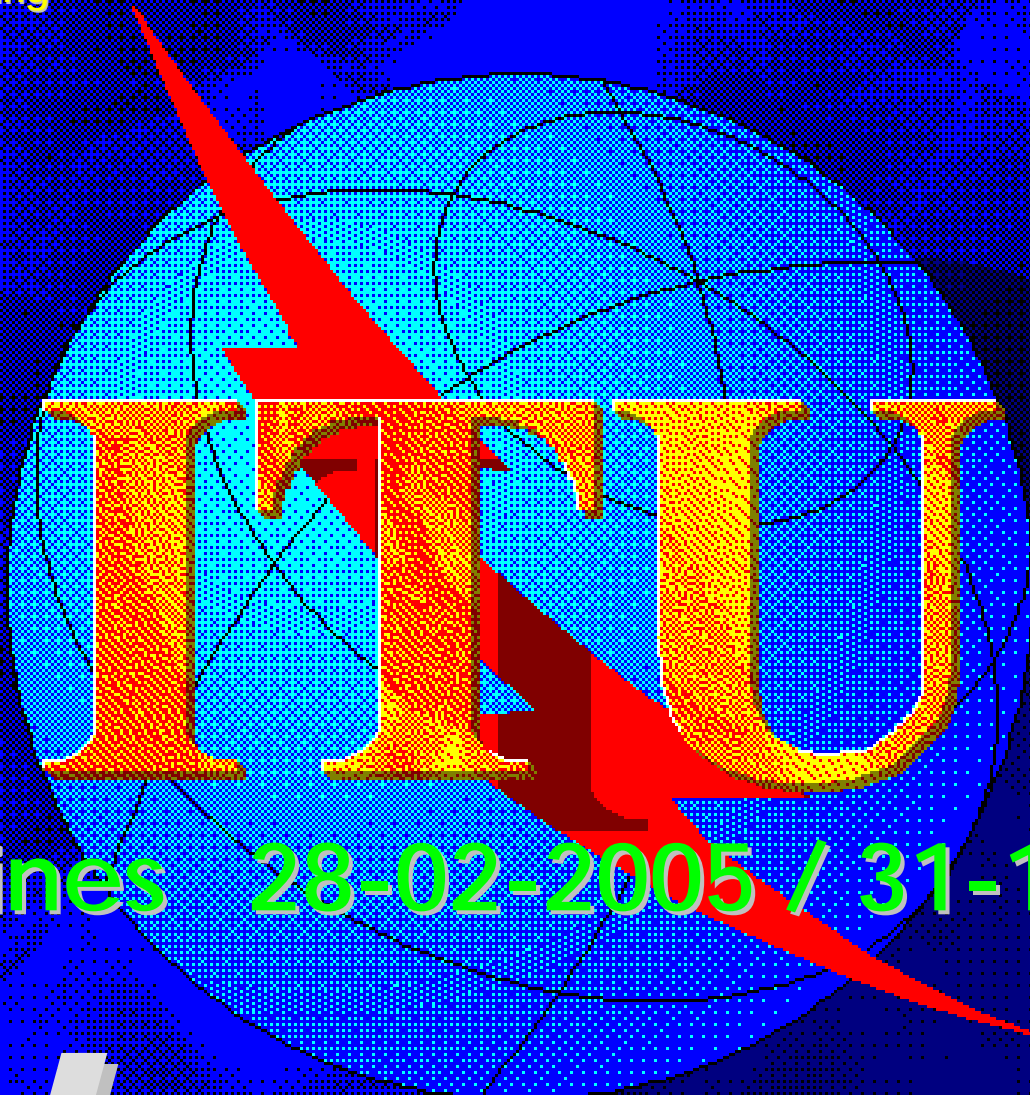
(For BR use only)	<input type="checkbox"/> ADD recorded assignment to the Reference file	<input type="checkbox"/> WITHDRAW previously added assignment from the Reference file	Previously recorded Administration Unique Identifier, or <input type="text"/>		
Identifying parameters of the recorded assignment					
O-1a: Assigned frequency (MHz) <input type="text"/>	O-6a: Class of station <input type="text"/>	O-7a: Designation of emission <input type="text"/>	O-10b: Hours of operation From (UTC) To (UTC) <input type="text"/>	O-4e: Geographic area to which the typical station is applicable or <input type="text"/>	O-4c/5c: Coordinates / centre of circular area (Long./Lat.) deg. min. sec. E/W deg. min. sec. N/S <input type="text"/>
Particulars of the assignment to be updated					
11: Successfully completed coordination with other Administrations Symbols designating the Administration <input type="text"/>			Service type code <input type="text"/>	Remarks <input type="text"/>	

(For BR use only)	<input type="checkbox"/> ADD recorded assignment to the Reference file	<input type="checkbox"/> WITHDRAW previously added assignment from the Reference file	Previously recorded Administration Unique Identifier, or <input type="text"/>		
Identifying parameters of the recorded assignment					
O-1a: Assigned frequency (MHz) <input type="text"/>	O-6a: Class of station <input type="text"/>	O-7a: Designation of emission <input type="text"/>	O-10b: Hours of operation From (UTC) To (UTC) <input type="text"/>	O-4e: Geographic area to which the typical station is applicable or <input type="text"/>	O-4c/5c: Coordinates / centre of circular area (Long./Lat.) deg. min. sec. E/W deg. min. sec. N/S <input type="text"/>
Particulars of the assignment to be updated					
11: Successfully completed coordination with other Administrations Symbols designating the Administration <input type="text"/>			Service type code <input type="text"/>	Remarks <input type="text"/>	

ASBU – ITU Workshop 2004
on Digital Broadcasting

22 – 25 November 2004

Damascus, Syria



ITU

Deadlines 28-02-2005 / 31-10-2005

The end