

Brief Description of SPACEVAL Space Validation software

The Validation software must be used to validate electronic submissions relating to space & earth stations' frequency assignments. Details on the usage and applicability of this software are provided in BR Circular-letter 284 dated 16 May 2008.

SpaceVal Beta version 8.0 is the latest version of the SpaceVal software released in November 2016. It is to be used to validate electronic filings submitted under Appendix 4 to the Radio Regulations amended by WRC-2015. It carries out all the validation checks that were implemented in the previously existing Space validation software – SpaceVal V7. All previously existing validation rules are implemented here, in addition to new rules. These rules are provided in the corresponding Validation Rules documents (presently available only in English), along with an explanation. The validation rules are of three types :

1. **Basic** – mandatory / conditional / optional requirement and valid values for a data item; rule numbers 1 and 2; all data items have these checks;
2. **Cross-check** – presence or value of a data item being dependent on another data item, which could be in the same table or elsewhere in the notice structure;
3. **Complex** – these are validation rules involving many data items, possibly with calculations to be performed using them.

The Space validation software is integrated with the BR's Data Capture software – SpaceCap version 8.0 and above – to provide data capture users with an **on-line validation** capability. During on-line validation, only the data items that are on the currently displayed screen are validated with respect to the basic rules. Some cross-check rules are also executed on-line if the data items involved are on the same currently displayed screen. The objective of on-line validation is to eliminate typing and simple errors of a repetitive nature, which could be duplicated via the cloning (copy-and-paste) facility of SpaceCap.

After a filing has been validated using SpaceVal, the user can view the result of the validation (error messages and warnings) by launching the “**Validation Report Viewer**”. This can be done by clicking on the “View Report” button on the SpaceVal user interface dialog, which is enabled after validation is complete. Options are provided on the “SNS Validation Errors” dialog to select only Fatal errors or all errors and the user can print the Validation Error Report at a local printer.

PLEASE NOTE that following the completion of capture of the filing, the SpaceVal software must be executed on the filing, in order to apply all validation rules.

What's new in version 8.0.20 (April 2019)

Submission of Earth Station Coordination is not available at this time.

Plan:

- Addition of rule 8 for item 703, e_as_stn.long_dec:
 - o 8: E: for submission under AP30B, AP30/30A, except Art.2A, Test Point location must be beyond geographic areas subject of special arrangements (F)
- Modification of rule 669, 4.3. This is not applicable to submissions under Art2A of AP30/30A.

What's new in version 8.0.19 (March 2019)

Includes the new version of IDWM. The modification concerns:

- The data files:
 - o Addition and refinement of islands of Salvador and Honduras in the Gulf of Fonseca (Central America)
 - o Update of the ground conductivity map Rec. ITU-R P.832 MF of Germany.

What's new in version 8.0.18 (February 2019)

- Cross validation with GIMS reference database on SQL server for BR users.

Non-plan:

- For external users, when the action code of the notice is "A" then validation doesn't provide any error if the satellite name is not present in the reference database.
- Modification of the lowest frequency value allowed for Space Services:
 - o Assgn.freq_mhz Rule 753 2: must be a numeric value between 7 (inclusive) and 400000 (inclusive) (F)
- Modification of rule 559 for item s_beam.f_all_orbit when item non_geo.ref_body is "D":
 - o 1: conditionally required (W)
 - o 2: symbol must be "Y" or "N" (F)
 - o 3: C: this item must be provided if item 201 (non_geo.ref_body) is not = "D" (F)
 - o 4: E: if value is "Y" then orbit_lnk should not be filled (F)
 - o 5: E: if value is "N" and non_geo.ref_body is "T" then orbit_lnk should be filled (F)
- Correction of the inconsistency in validation rule 260 phase.orb_sat_id.
This field should be provided for notice code ngfss and ngr46. A new code has been created to grouped those two codes: **ngfs9**: nongeo satellites in the FSS subject to 22.5C, 22.5D, 22.5F (applicable frequency bands in Appendix 8) or for nongeo under 9.11A (applicable frequency bands in Appendix 9) .
- Lower the severity of error type "Value required only for notice type xxxxx" from Fatal to Warning

What's new in version 8.0.16 (November 2018)

- Addition of a message indicating that Earth Station Coordination under no 9.21 is not currently validated by SpaceVal.

What's new in version 8.0.15 (October 2018)

- Revision of rules 643 (grp.noise_t) and 693 (e_as_stn.noise_t) for Plan submissions
- Addition of rules:
 - o 230.4 (orbit.orb_id):
E: Period calculated using the apogee (orbit.apog and orbit.orbit_exp) and perigee (orbit.perig and orbit.perig_exp) should be within 10% of the period (orbit.prd_ddd, orbit.prd_hh, orbit.prd_mm) provided in the notice (F)

What's New in SpaceVal V8.0.20

- 213.4 (non_geo.attch_simult_ops):
E: For Coordination notice, if sum of orbit.nbr_sat_pl for all orbits is greater or equal to 2, then this field must be greater or equal to 1 (F)
- BR internal validation of new items:
 - 637: grp.d_reg_limit
 - 638: grp.d_rcv_start
- Addition of a code "H" for Mercury for reference body (item 201: non_geo.ref_body)
- Improvement of rule 559.4 (s_beam.f_all_orbit)
- Validation of Earth station coordination under No.9.17 for the exclusive use of Administrations.

What's new in version 8.0.14 (June 2018)

- Addition of rule 631.7 (srv_cls.stn_cls):
 - E: If value = "ET", frequency assignment must be within frequency band and direction of Appendix 11 of the Annex (F)

What's new in version 8.0.13 (May 2018)

- Improvement of SRSfix module.

What's new in version 8.0.12 (April 2018)

Non-Plan:

- Addition of country code BVT for res163
- Modification of rule 706 (e_srvcls.stn_cls): suppression of code "UC"

Plan:

- Addition of rule 669/3.4 (emiss.design_emi):
 - E: For AP30/30A, except Art2A, the value of assigned frequency band - item 642 - should be equal to the value of necessary bandwidth portion of this item (W)
- Modification of rule 505 (s_beam.pnt_acc):
 - 1: conditionally required for AP30/30A and AP30B and mandatory for Art2A of AP30/30A (F)
 - 2.1: E: must be a numeric value between 0.00 (inclusive) and 0.10 (inclusive) for AP30/30A and AP30B (if = 0 (W)/if > 0.10 or < 0 (F)
 - 2.2: E: for Art2A of AP30/30A, must be a numeric value greater than 0 if s_beam.gain is between 0 and 4 dBi (inclusive), and must be a numeric value between 0 and 0.1 (inclusive) if s_beam.gain is greater than 4 dBi (F)
 - 3: E: this item must be provided for elliptical beams (item 514 is provided) for AP30/30A and AP30B (F)

Improvement of SRSFIX module

What's new in version 8.0.11 (January 2018)

Modification following the deletion of the option:"Bands 21.4 to 22 GHz" in SpaceCap Software.

What's new in version 8.0.10 (November 2017)

Non-Plan Submissions:

- New rules:
 - Item 752, assgn.freq_assgn:
8: E: The use of the bands 4 500-4 800 MHz (space-to-Earth), 6 725-7 025 MHz (Earth-to-space) by geostationary-satellite systems in the fixed satellite service shall be in accordance with the provisions of Appendix 30B (F)

What's New in SpaceVal V8.0.20

The use of the bands 10.7-10.95 GHz (space-to-Earth), 11.2-11.45 GHz (space-to-Earth) and 12.75-13.25 GHz (Earth-to-space) by geostationary-satellite systems in the fixed-satellite service shall be in accordance with the provisions of Appendix 30B (F)
The use of the band 17.3-17.8 GHz (Earth-to-space) by geostationary-satellite systems in the fixed-satellite service is limited to feeder links for the broadcasting-satellite service in accordance with the provisions of Appendix 30A (F)

The bands 4 500-4 800 MHz (space-to-Earth), 6 725-7 025 MHz (Earth-to-space) in the fixed satellite service shall NOT be included in the non-geostationary-satellite systems (F)

o Item 628, grp.st_cur:

1: conditionally required - BR internal validation (W)

2: E: for a notice with item 6 (act_code) = "A" or "M", this item must not be equal to 52 (F)

Plan Submissions:

- Modification of rule 643.4 and 643.5, grp.noise_t:

4: E: For AP30A: value in the range 0 to 290 K (W). If negative (F)

5: E: For AP30B: value in the range 0 to 290 K in 6 GHz and 13 GHz band (W). If negative (F)

What's new in version 8.0.9 (October 2017)

- Fix a bug and improvement of SRSfix module.

What's new in version 8.0.8 (October 2017)

- Fix a bug in SRSfix module in relation to the designation of emission for AP30B submissions.

What's new in version 8.0.7 (September 2017)

- Improvement of SRSFix v8 module

What's new in version 8.0.6 (June 2017)

Non-Plan Submissions:

- Cross validation with GIMS of GSO orbital position

- Validation of antenna diameter for 24GHz using GIMS service area diagram, item 710.2 and 710.2.2

- Validation of Res 553 notices

- Validation of countries in service area diagrams for 18.1-18.4GHz and 14.5-14.8 GHz (Cross validation with GIMS – new rule for item 647.5 grp.area_no)

Plan Submissions:

- For submission under AP30/30A within the frequency ranges 11.7-12.7 GHz or 14.5-14.8 GHz or 17.3-18.1 GHz all ES with the same pattern and diameter should have the same max. gain and 3dB beamwidth (item 694.5)

What's new in version 8.0.5 (March 2017)

Addition of rule 671.4 for Satellite Network and 1671.5 for Earth station:

- E: submitted value of power spectral density (pwr_ds_max) should be defined using the method of Recommendation SF.675, i.e. is averaged over the worst averaging bandwidth (W)

What's new in version 8.0.4 (March 2017)

Non-Plan Submissions:

What's New in SpaceVal V8.0.20

- Modification of rule 273.7: add a control on emission reception code equal to "E"
- Improvement of cross validation of a MOD notice with GIMS database.

What's new in version 8.0.3 (February 2017)

Non-Plan Submissions:

- Modification of rule 706.5: remove symbol "UF" in the condition.

What's new in version 8.0.2 (January 2017)

Non-Plan Submissions:

- Modification of rule 657, item grp.f_1143a: the rule apply only for Notification filing.

What's new in version 8.0 (December 2016)

SpaceVal version 8.0 is to be used to validate electronic filings submitted under Appendix 4 to the Radio Regulations amended by WRC-2015.

What's new in version 7.1.15 (28 July 2016)

Non-Plan Submissions:

- Modification of rule 706 regarding new class of station **UG** - Earth station on board unmanned aircraft communicating with a space station of a geostationary-satellite network in the fixed-satellite service for the control and non-payload communications of unmanned aircraft systems in non-segregated airspaces in the frequency bands listed under *Resolves* 1 of Resolution **155 (WRC-15)**.
- Suppression of rule 708.5 e_as_stn.pattern_id: value must be added by BR as a primary key in the antenna pattern reference table.
- Modification of cross validation with GIMS database: Gain contour diagram must be provided if there is at least one associated earth station for this beam (i.e. if there are no associated earth station in the beam, the gain contour diagram is not required).

What's new in version 7.1.14 (17 June 2016)

Non-Plan Submissions:

- Modification of rule 730.2: the severity of the error has changed to a warning.

What's new in version 7.1.13 (31 May 2016)

Non-Plan Submissions:

- Modification of rule 663 and 664 for items freq_min and freq_max :
 - o For API not subject to coordination, items 664-663 must not be smaller than 1kHz.

What's new in version 7.1.12 (03 May 2016)

Plan Submissions:

- Addition of rule 703.7: Validation about test points.
- Addition of rules 605.4 and 606.4: Operating agency/Responsible administration codes should be unique within the notice ID..
- Modification of rule 750.2 :
 - o More than 20 assignments per group for a R1&3 network in 17 GHz band and more than 7 assignments per group for a R1&3 network in 14 GHz band (AP30/AP30A, except Art.2A).

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- More than 20 assignments per pbeam for a Region 2 network (AP30/AP30A, except Art.2A).
- Addition of rule 697.4: Radiation pattern is not submitted for Earth station antenna.
- Addition of rule 783.4: AP30B strapping validation (systematic check that each of the 10 and 11GHz bands are strapped)
- Modification of rules 533.4.1, 533.4.2, 534.5.1, 534.5.2
- Modification of rule in relation to WRC-15 decisions:
 - 507.1: Satellite antenna gain towards the geostationary satellite orbit (GSO) in 12.5-12.7GHz.
 - 675.1 and 675.2: Power density averaged over necessary bandwidth also required to be submitted for 14.5-14.8 GHz.

Non-Plan Submissions:

- Remove check for existing records in sat_oper table for API not subject to coordination.
- Remove Fatal error if modulation type is not provided for an API

What's new in version 7.1.11 (24 March 2016)

Plan Submissions:

- Fix bug when cross validating SNS and GIMS data regarding ellipse data.

What's new in version 7.1.10 (10 March 2016)

- Addition of validation of Resolution 49 filings:
 - New items: 120 to 132, 608, 663 and 664
 - Modification of item 501

Non-Plan Submissions:

- Introduction of new class of station symbols for a station in the Aeronautical Mobile-Satellite (AMS)(R) service and the AMS (OR) service.
- Introduction of a new class of station symbol UF, for an earth station in motion communicating with geostationary space station in the fixed-satellite service in the frequency bands referred to under provision No. 5.527A.

Plan Submissions:

- Addition of rule 670.4: Cross check between maximum total peak envelop power and maximum peak envelop power.
- Addition of item 649: Area name should be the same in SNS and GIMS databases.
- Addition of rule 531.3: SNS coordinates should be one of the GIMS boresight.
- Additions of rules 781.4 and 781.5: strapping of frequency bands within AP30B networks.

What's new in version 7.1.9 (20 October 2015)

Non-Plan Submissions:

- Modification of rules regarding sat_oper table for Non GSO filings:
 - Item 312 (sat_oper.nbr_op_sat): Must be a numeric value greater or equal to 1 (inclusive)
 - sat_oper table is mandatory for ngfss networks
- When open a Gims database, uses the same dialog box as the one used in GIMS software
- Display a message: This type of notice is not currently validated by Spaceval, if try to validate RS49, RS552, RS553, Radioastronomy or earth station under 9.17 type of notice

What's New in SpaceVal V8.0.20

- eirp_nom – additional check. Must not be provided for where there is an associated earth station

Plan Submissions:

- Addition of validation rules to item 675 (emiss.pwr.ds.nbw):
 - o Maximum Power density per Hz over a reference bandwidth is less than that over the necessary bandwidth for an analogue emission
 - o Maximum power density per Hz over a reference bandwidth is different from that over the necessary bandwidth for a digital emission
- Modification of validation rule of item 670 (emiss.pep_max):
 - o Maximum transmitting power of feeder link
- Modification of validation rule of item 695 (e_as_stn.bmwidth):
 - o Produce a fatal error for Regions 1 & 3 MODTES and R13TES: if the 3dB beamwidth is greater than 0.25 degrees

What's new in version 7.1.8 (30 June 2015)

- Modification of validation rules of items 612.2 (pub_no for Space Station) and 1612.2 (pub_no for Earth Station):
 - o Must contain a numeric value between 1 (inclusive) and 99999 (inclusive)

What's new in version 7.1.7 (June 2015)

- Implementation of new rules for Cross Validation with Gims data:
 - o Check whether 0dB contour is provided, for the case of steerable beams.
 - o Check whether required contour are provided in GIMS, and in the correct order.
 - o Validation against regional limitation (not available for external users)
- Implementation of new rules, related to test points, for Planned submission:
 - o Altitude of test point should not be missing
 - o If the same test points (with the same geographical coordinates) are submitted in the different grp_id (within one network (ntc_id)) those E_as_stn.ant_alt values shall be equal.
 - o Check that test point coordinates in decimal are consistent with those in degree, minute and second
 - o Check if there is more than 20 test points per group
 - o At the group level two or more test points should not have the same coordinates

What's new in version 7.1.5 (February 2014)

Introduction of new Class of station code **UC** for the E/S (No. **5.526**) - "earth stations at specified or unspecified points or while in motion".

What's new in version 7.1.4 (October 2013)

Non-Plan Submissions:

- Fix a problem in validation of carrier frequency (item 780).

What's new in version 7.1.3 (July 2013)

Non-Plan Submissions:

- Revision of validation rules of item 102 and 103 (geo.tol_east and geo.tol_west).

What's new in version 7.1.2 (June 2013)

Plan Submissions:

- Revision of validation rules of item 695 (e_as_stn.gain), 9 (notice.ntf_occurs), 642 (grp.bdwidth) and 656 (grp.bdwidth_aggr).

What's new in version 7.1.1 (May 2013)

Non-Plan Submissions:

- Revision of validation rules for d_inuse which is mandatory only for Notifications submissions.

What's new in version 7.1 (April 2013)

The program has a new validation report. It's not necessary any more to open SpaceQry to view validation errors.

What's new in version 7.0.2 (February 2013)

Non-Plan Submissions:

- Addition of item 698 (e_as_stn.attch_e): if item 708 (pattern_id) is not provided then item 697 or 698 must be provided
- Revision of Space validation rules

Plan Submissions:

- Revision of validation rules for d_inuse which is mandatory only for Notifications submissions.

What's new in version 7.0 (November 2012)

SpaceVal version 7.0 is to be used to validate electronic filings submitted under Appendix 4 to the Radio Regulations amended by WRC-2012.

What's new in version 6.2 (September 2012)

SpaceVal V6.2 allow users to cross check the existence of diagrams captured using SpaceCap against the diagrams captured using GIMS for graphical data stored in GIMS mdb format. Administrations will then be able to verify that both the graphical part and the non-graphical part of the submission are consistent. The software will also check that all diagrams (B.3.b. antenna gain contour diagrams, C.11.a service area diagrams, and B.3.e: antenna gain towards geostationary satellite orbit diagrams) for all beams of a geostationary satellite network captured using SpaceCap have been provided in the graphical part in GIMS mdb format.

Steps for Cross validation of SNS and Gims data for a Geostationary Satellite Network

Select the SNS Microsoft Access database which contains the non graphical data for the submission to be validated, by clicking the "Open" button:



Then select the *Notice Id* from the combobox

What's New in SpaceVal V8.0.20

Database Info
 Location: c:\temp\104540001.mdb
 Notice Id 



Indicate the corresponding Gims Microsoft Access database by checking the box “Cross validation with Gims mdb file”.

Cross validation with Gims mdb file
 Gims database:

Then select the database from the Open dialog box.

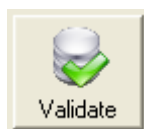
Select a GIMS Database

Create a new empty database
 Location : ...
 Name : .mdb
 Description : (This is a string that shortly describes the database. Max. 255)

Open an existing file

More files...
 REFDB
 c:\temp\test\snsdb.mdb

Clear List OK Cancel



Finally, start the validation

Steps of the validation process:

GIMS Cross Validation first checks that the GIMS Diagram headers match the corresponding SNS values for the following items: ntc_id, sat_name, adm, ntf_rsn.

If GIMS and SNS headers are different, the GIMS Cross Validation will issue a warning/error*.

GIMS Cross Validation will issue a warning/error* if it finds either extra or missing diagrams in GIMS, for the network being validated.

In the validation report, the Validation item no. corresponding to a GIMS Cross Validation warning/error* will be 9000:

The following are examples of warnings found concerning GIMS Cross Validation:

9000	1	W				MISSING DIAG IN GIMS [beam_name:CWDN / emi_rcp:E / diag_type:SA / polariz:C / area_no:2]
9000	1	W				EXTRA DIAG IN GIMS [beam_name:CWDN / emi_rcp:R / diag_type:CO / polariz:C]

What's New in SpaceVal V8.0.20

*warning/error: Errors in headers as well as missing or extra diagrams will be flagged as warnings in GIMS Cross Validation up till 31 December 2012. After that date, they will be flagged as fatal errors.

What's new in version 6.1.14 (June 2012)

Non-Plan Submissions:

- Modification of validation rules of items 5 (prov) and 13 (ntf_rsn) to include new provision codes 9.6-RES553, 9.6-21.4-22G and 11.2-RES553.

What's new in version 6.1.13 (June 2012)

Non-Plan Submissions:

- Revision of Earth validation rules 1611.3 and 1611.4
- Revision of Space validation rules

Plan Submissions:

- Revision of validation rules for Submissions under Article 2A Notification.

What's new in version 6.1.12 (March 2012)

Plan Submissions:

- Revision of validation rules for table e_srvcls, mod_char and grp.diag_area
- Validation of the number of decimals entered for numeric fields according to the Preface.
- Validation of strapping for Region 2

What's new in version 6.1.8 (December 2010)

Correction of validation rule 706 (e_srvcls, stn_cls). Class of Station code "UV" is now valid.

What's new in version 6.1.7 (November 2010)

Non-Plan Submissions:

- Revision of validation rules:
 - o Items 631, 730, 735, 736 for API subject to coordination
 - o Items 751 rule 3.3. Maximum permitted frequency has now increased to 3000 GHz.

What's new in version 6.1.5 (April 2010)

Plan Submissions:

- Revision of validation rules 4.1, 4.2 of item 533 and 5.1, 5.2 of item 534 (for AP30B, major and minor axis less than 1.60 in 6/4GHz band, and less then 0.80 in 13/10-11GHz band are acceptable)

What's new in version 6.1.4 (March 2010)

Non-Plan Submissions:

- Revision of some validation rules.
- Improved the accuracy of checking of assignments for the need of No.9.11A procedure by checking also the class of stations and direction of transmission, in addition to the frequency range.

Plan Submissions:

- Revision of rules of items 533, 534 (s_beam.maj_axis, s_beam.min_axis) and 694, 695, 710 (e_as_stn.gain, e_as_stn.bmwidth, e_as_stn.ant_diam).

What's new in version 6.1.3 (September 2009)

- Revision of validation rules of item 101 (geo.long_nom) for Plan Submissions (related to EIRP check in Annex 7 to Appendix 30)

What's new in version 6.1.2 (July 2009)

- Implementation of rules related to the validation of submissions under AP30B (WRC07).

What's new in version 6.1 (February 2009)

- Decimal separator is no longer limited to a dot (.). The Validation checks the decimal separator with the Regional Settings in the Control Panel.
- Possibility of starting the Batch Validation from SpaceCap.
- Revision of validation rules for Non-Plan submissions (See the *Validation rules for Satellites* document for items 9, 260, 695)

What's new in version 6.0.11 (November 2008)

- Revision of validation rules for Plan submissions (See the *Validation rules for Plans* document for items 531 and 532)
- Revision of validation rules for Non-Plan submissions (See the *Validation rules for Satellites* document for items 551, 552 and 752)

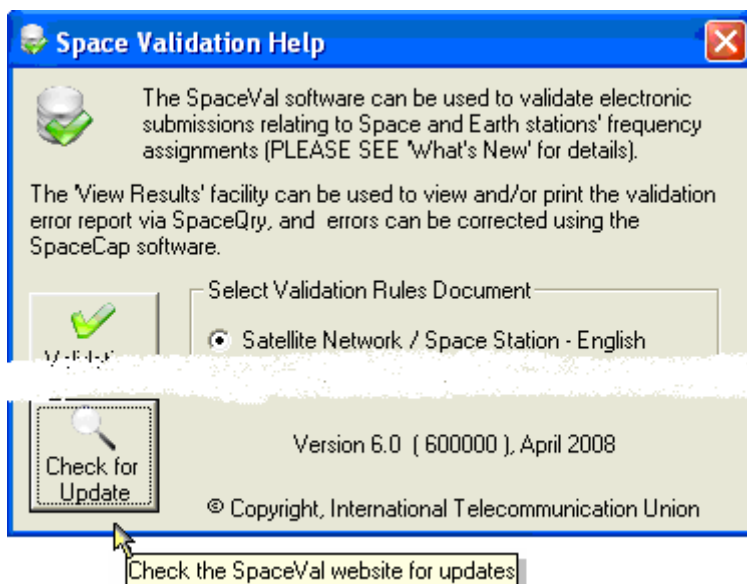
What's new in version 6.0.10 (September 2008)

- Implementation of Extended validation rules for Plan submissions (See the *Space Plans Validation rules* document for items 101, 675 and 752)

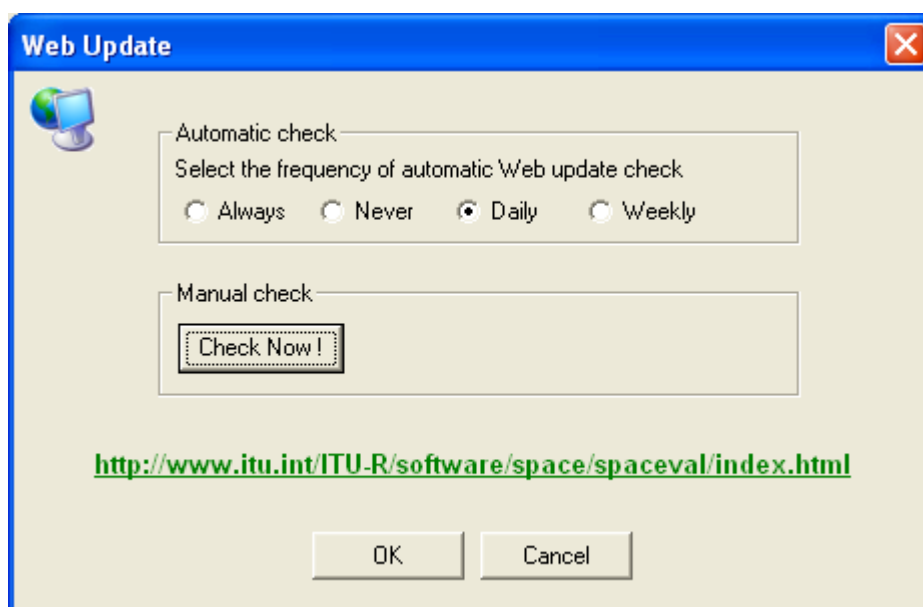
What's new in version 6.0 (June 2008)

- Revision of validation rules according to changes made to Appendix 4 at WRC-07.
- Addition of Extended validation rules for Plan submissions (See the *Space Plans Validation rules* document).
- Web update settings:
The Web Update form allows you to manage the frequency of Web Update Checks.
To load this form, click on the *Check for Update* button located at the bottom of the SpaceVal Help window, as shown here:

What's New in SpaceVal V8.0.20



The Web Update can be done either Manually or Automatically (Always, Never, Daily or Weekly)



What's new in version 5.3 (February 2008)

Inclusion of Validation for Plan submissions

This SpaceVal 5.3 version allows for the validation of submissions under Articles 2A, 4 and 5 of Appendices **30** and **30A** and Articles 6, 7 and 8 of Appendix **30B**.

To validate Plan notices click the *use plan rules* checkbox at the top of the interface:

What's New in SpaceVal V8.0.20

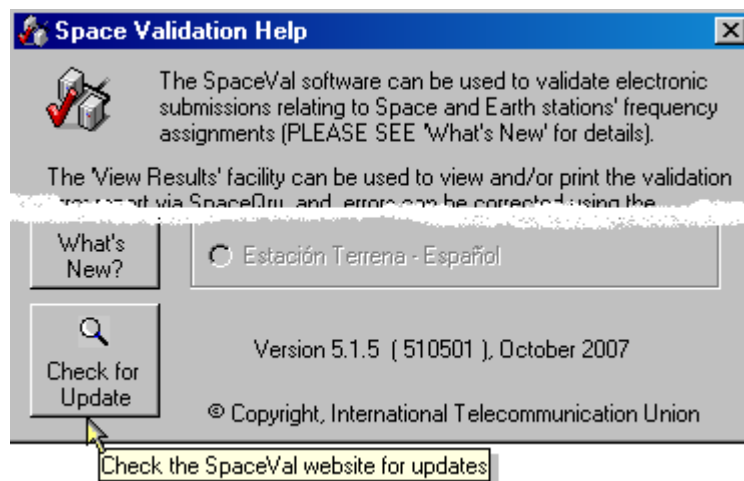


See the *Space Plans Validation rules* document which you can launch from the SpaceVal Help window.

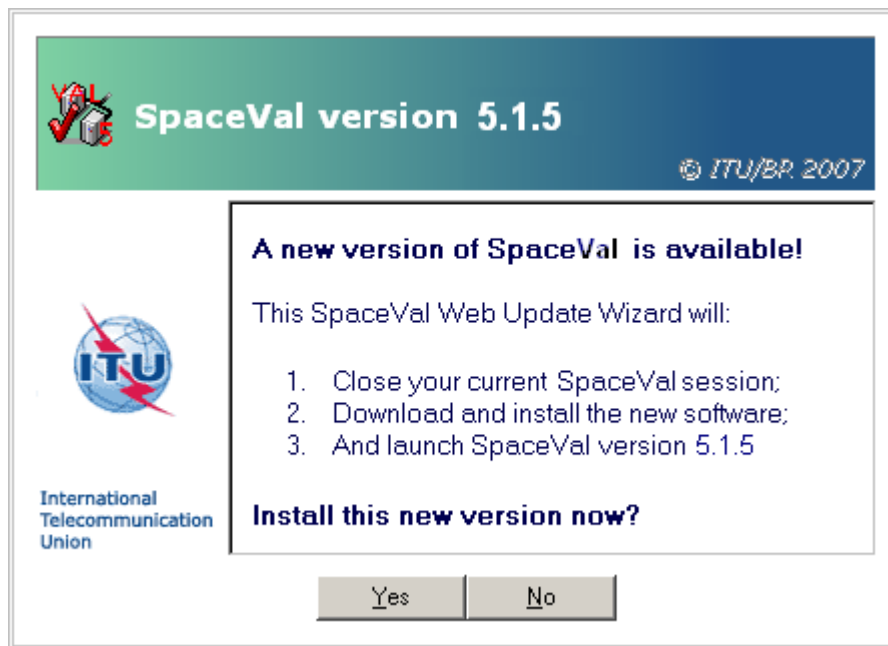
What's new in version 5.1.5 (11 October 2007)

Inclusion of the Space Validation Web Update Wizard

The SpaceVal Web Update Wizard is a utility which will automatically check the SpaceVal website for updates to its software. If an update is available, you are notified and given an option to download and install the new version of the software. To run this utility, click on the *Check for Update* button located at the bottom of the SpaceVal Help window, as shown here:



Once the Web Update Wizard is launched, if an update is available, you will see the following window which requests whether or not you wish to download and perform the update:



The following corrections were made to the Space Validation processing:

Each occurrence of the pattern_id field is now validated against the *rf_ant_type* table located in the Space Reference Database and *not* against the values of the *ant_type* table located in the validated database container.

What's new in version 5.1.4 (24 September 2007)

General enhancement to include Advanced Publication (API) notice validation.

The following additions were made to the Space validation rules:

1. **Item 1** (notification ID field) **rule 6.3**: E: 4th to 5th digits have to be "54" if item 5 (provision) is "9.1/IA" or "9.1/IB" or "9.1/IA,IB" - BR internal validation (W)
2. **Item 17** (f_mod_type) : if item = 'A', then validation is not performed.
3. **Item 603** (date in use) **rule 5.1**:E: if item 13 (notification reason) = "A", this date must not be later than the date of receipt (item11) plus seven years (F)
4. **Item 603** (date in use) **rule 5.2**: E: if item 13 (notification reason) = "A", this date must not be earlier than the date of receipt (item11) (W)
5. **Item 631** (class of station) **rule 6**: E: if value = "ES" and associated space station is non-GSO, the coordination-not-required form is requested (W)
6. **Item 730** (associated satellite name) **rule 5**: E: if present, then item 735 - station type - must be "G" for API's of geostationary satellites not requiring coordination (F)

What's new in version 5.1.3 (30 November 2006)

The following corrections were made to the Space validation rules:

1. Item 9 (notification occurs field) rules were changed so that a value is no longer necessary for notices which are not submitted under provisions RR1488, S11.2, and 11.2.

What's new in version 5.1.2 (28 September 2006)

In an attempt to make the SpaceVal software a little more user-friendly, the user interface has been changed. The following illustration shows the initial SpaceVal window after launching the application in the BR environment.



Select/Open Button. This button allows the user to select and open a notification database (MS-Access) for validation; or, in the case of BR users validating notices in the SNS database, this button connects to and opens the Ingres database specified by the choice of DSN.



Validate Button. Once the database has been selected, the notice ID chosen, and any validation options selected, this button will launch the validation process.



View Results Button. After the validation process is finished, clicking on this button will launch the SpaceQry software and automatically invoke the *Validation Report* query for the notice being validated.

What's New in SpaceVal V8.0.20



Help/Info Button. This button invokes the Help dialogue which allows the user to select and view a number of documents including the *Validation Rules* documents.

What's new in version 5.0.5 (24 May 2005)

All the modifications in this version relate to the implementation of the “vis-à-vis” check of the Request for Coordination (CR) or Notification (N) filing against its Advance Publication of Information (API) filing that has been previously processed in the SNS Ingres database. These are internal BR validation checks and refer to the following validation rules :

1. Rule 4 of item 100 (geostationary satellite name).
2. Rule 4 of item 200 (non-geostationary satellite name).
3. Rules 4, 5, 6 and 7 of item 753 (Mhz assigned frequency of the group).
4. Rule 3 of items 1014, 1015 and 1016 has been modified to allow the values to be absent if it is a specific station working with a non-geostationary satellite.

What's new in version 5.0.4 (24 March 2005)

The following corrections were made to the validation software :

1. The checking of the frequency bands for Rule 3 of items 648 (attch_reg) and 710 (ant_diam) were modified to use the whole of the frequency band (+/- half-the-bandwidth) and not just the center frequencies.
2. Item 710 was added to Rule 5 of item 680.
3. For internal BR use only, the checks for item 1, rules 3 through 6.2 were implemented.

What's new in version 5.0.3 (26 January 2005)

The following corrections were made to the validation software :

1. Modified to not require coordination data for a non-geostationary satellite NOT under RR 9.11A.
2. For non-geostationary satellites, added check for API special section information.
3. Rule 3 of item 506 was modified to be compared against items 509 and 514.
4. For non-geostationary satellites and geostationary satellites working with ISS, rule 4 for item 514 was added and rule 3 for item 514 was aligned with this new rule.
5. Rule 6 for item 631 was removed, as the relevant Rule of Procedure (23.13) was suppressed.

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6. The list of valid symbols for items 621 and 1621 was corrected, to be aligned with the Preface.
7. Rule 3 for items 709 and 1045 (pattern_id) was added.
8. Rule 3 for items 1015 and 1016 was adapted for Radio-astronomy stations and renumbered as rule 4.
9. Rule 6 for item 1036 (for radio-astronomy stations) was modified to check only for antenna pattern name or attachment.
10. Item 1642 (bandwidth) was made applicable for all types of earth station.
11. Corrections were made to not require nature-of-service, emission, special-section and coordination data for radio-astronomy stations.
12. The error message severity for rule 5 of item 1643 was corrected to 'W' – in line with the rule.
12. The identification of non-geostationary stations in the FSS subject to 22.5C, 22.5D and 22.5F was being incorrectly done in certain cases. This was corrected.
14. A software modification was made to prevent the error message for Rule 4 of item 736 from being incorrectly generated in certain cases.
15. The bands 47.5 – 47.9 GHz, 48.2 – 48.54 GHz, 49.44 – 50.2 GHz and 81 – 84 GHz were added to the list of frequency bands with bi-directional utilization. The band 74 – 75.5 GHz was removed from the list (attribution modified by WRC-2000).
16. The bands 1164 – 1215, 1215 – 1300 and 1559 – 1610 MHz were added to the list of frequency bands applicable to provisions 9.11A – 9.15.

What's new in version 5.0.2 (8 October 2004) **(Correction made 27th October 2004 regarding item 12 below)**

The following corrections were made to the validation software :

1. Implementation of rule 0 for item 204 was aligned to match the description of the validation rule; i.e. this item is required for all non-geo satellites.
2. The comparison of notified frequency bands (assigned frequency +/- (half-bandwidth)) against the tables of bi-directional and 9.11A frequency bands (appendices 4 and 9 of the rules) was modified to not include cases where the match was only on the band-edge (eg. now, a notified frequency band 2535 – 2655 MHz will not match with the bi-directional band 2655 – 2690 MHz).
3. Validation rules for item 1021 (f_pfd_se in table e_stn) have been implemented.
4. Implementation of rule 622.3 corrected to correspond to description of the validation rule.
5. A correction was made to prevent an incorrect error message was being produced for item 1036 rule 4.
6. Band 1675 – 1710 MHz was removed from the list of frequency bands with bi-directional utilization (subsequent to WRC-03) and band 1670 – 1675 MHz (WRC-03) was added.

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7. Band 17.3 – 17.7 GHz (WRC-03) added to the list of frequency bands with bi-directional utilization.
8. The validation of item 1014 rule 4 was modified to give an error message if the data item is provided for an earth station working with a non-geostationary satellite.
9. Item 656 rule 4 was modified to check only with respect to a receiving beam.
10. Item 1644 (C.8.g.1) is no longer validated as it is of type **C** in Appendix 4. The consequent check in item 1670 (rule 5), which compares item 1670 with this item is removed.
11. Modified text for item 150 rule 1 and item 160 rule 1 to indicate that these data items (referring to strap and noise-gamma data) are optional under Appendix 4 (WRC-2003). Also modified text on the SpaceVal user interface to indicate this.
12. Validation rule 4 of item 710 was modified to be executed only if rule 3 for item 710 was satisfied. A correction was made relating to proper output of the error message for Rule 3 of this item on 27th October 2004.
13. Items 244 and 249 were made optional.
14. Implementation of validation rule 6 of item 511 was corrected to match the description of the rule.
15. List of valid antenna radiation patterns was updated as follows :
 - Item 506: REC-1528 added
 - Item 696: REC-1295, AP8 & AP30B added
 - Item 1036: REC-1295, AP8 & AP30B added
16. For internal BR use : SpaceVal now works with the Ingres databases.

What's new in version 5.011 (3 July 2004)

The following corrections were made to the validation software :

1. The antenna pattern "AP7" was inadvertently missing from the list of valid antenna patterns for item 696 (**ant_type** of **e_as_stn** table). It has been added.
2. The error message for rule 3 of item 230 was making an incorrect reference to item 220. This has been corrected to refer to item 204.
3. The severity of the message for rule 3.1 of item 681 has been changed from F to W.
 4. The severity of the message for rule 3.2 of item 681 has been changed from W to F.

What's new in version 5.01 (28 May 2004)

The following corrections were made to the validation software :

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1. An error message for rule 3 of item 707 (duplicate class-of-station / nature-of-service symbol) was being incorrectly generated due to non-sequential numbering of the rows in the **e_srvcls** table. This has been corrected.
2. The check for frequency bands applicable for provisions 9.11A – 9.15 (at the beam and group levels) was being applied to all satellite networks; this is now applied only to non-geostationary satellite networks.
3. The existing rule 4 for item 163 has been modified as follows and the software has been updated accordingly:
“The range of numbers represented by items 162 and 163 must be included in the set of numbers for item 150”.