

ABOUT THE BR SPACE SOFTWARE

The BR software that is provided on this BR IFIC DVD-ROM should be used to submit all filings to the Bureau, pursuant to Articles 9 and 11, Appendices 30, 30A and 30B, Resolution 49 (Rev. WRC-07) and Resolution 552 (WRC-12). It complies with all modifications and additions made to Appendix 4 of the Radio Regulations as amended by WRC-15.

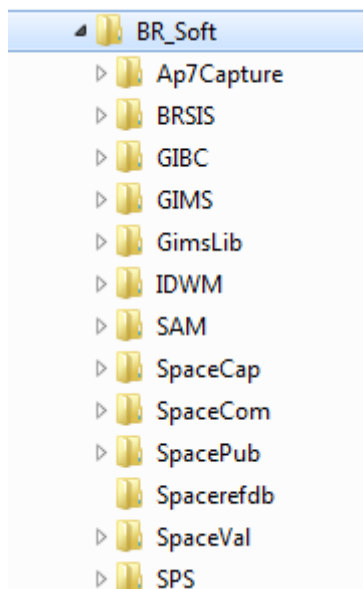
The **SpaceVal** validation software provided on this DVD-ROM is presently used by the Bureau when assessing the completeness of Appendix 4 Forms of Notice, coordination requests and notification for satellite networks or satellite systems, including earth stations, submitted under Articles 9 and 11 and Appendices 30, 30A and 30B. Administrations are encouraged to run the validation software themselves in order to overcome any difficulties in the notices before they are submitted to the Bureau. The Bureau is requesting users to check periodically the latest version of the validation software by accessing the ITU BR software web site at: <http://www.itu.int/ITU-R/go/space-software/en> or on the current BR IFIC (space services) DVD-ROM before using it.

The BR software provided in the BR_soft folder on this BR IFIC DVD-ROM will run under the 32 and 64-bit MS-Windows operating systems. The following software are provided :

- **SAM** - PC-based software package used to launch ITU-BR Space Software Applications
- **SpaceCap**, which allows the electronic capture and submission of Appendix 4 notices
- **SpaceCom** - management of the comments on CR/C, API/A, AP30-30A/F/C and Part A of AP30/E, AP30A/E and AP30-30A/E Special Sections
- **SpacePub**, an interactive tool to print the details of satellite networks and earth stations
- **BRSIS - SpaceQry**, to query the database and retrieve and view the alphanumeric data. This application replaces the old SpaceQry. It is one of the first components of the new information system for BR's space systems (BR-SIS).
- **SpaceVal**, for validating electronic notices that are in the SNS version 8 database format
- **BRSIS-SRSConvert**, to convert the data contained in an existing SRS-formatted database from a version 7 database (WRC-12) into a version 8 database (WRC-15)
- **GIMS**, allows the capture and modification of graphical data relating to the electronic submission of satellite networks in the space radiocommunication services and can be used to view the data stored in the graphical reference database.
- **GIBC**, which provides the user with the ability to carry out calculations on geostationary and non-geostationary satellite systems or networks relating to Power Flux Density (PFD) examinations, Appendix 8, Appendix 30&30A, Appendix 30B and on earth stations relating the determination of the coordination area (Appendix 7). A standalone program AP30BTexCap is distributed with the GIBC package. This program allows updating the reference situation of the Appendix 30B
- **Appendix 7 Capture**, which assists in capturing the input parameters necessary for the running of the Appendix 7 software (see GIBC).
- **IDWM** - The ITU Digitized World Map contains data files (geographical and technical data) and a library which are used by other applications
- **SPS** - allows determination of the coordination requirements for the space networks subject to a Plan in Appendices 30, 30A of the Radio Regulations.
- **SpaceRefdb** - is a setup that will update reference tables used by BR software.

GENERAL PROCEDURE FOR BR SOFTWARE INSTALLATION

- Insert this DVD into the DVD-ROM drive and display the directory/folder listing for the DVD-ROM drive using Explorer or File Manager.
- Open the directory/folder on the DVD-ROM called **BR_Soft**. A list of all available software for installation is displayed. Select the software directory/folder to be installed by clicking on it.



- Run the **setup.exe** program from the BR_Soft folder.
- Follow the instructions that appear on the screen as the installation proceeds.

SAM – Space Application Manager

SAM is a PC-based software package used to launch ITU-BR Space Software Applications.

This software provides the user with a unique tool to easily run all installed BR Space Application software from a global, menu-driven list, rather than searching for and starting applications individually.

This software also provides some additional features such as storing favorites, where the user can reference the most frequently used ITU-BR applications; URL references to some ITU-BR web applications; An electronic User Manual provides all necessary information on using this product.

This product is available in English only.

Installation guidelines: Follow the procedure for installing software using BR_SOFT setup, selecting the SAM option.

SAM is a Microsoft .Net application, as such; you will need to install the Microsoft .Net framework. If your computer does not have the .Net framework, the setup will automatically start the .Net framework installation before installing the SAM software. Please note: You will need administrative privileges on your PC to install the .Net framework.

SpaceCap - Data Capture on PC

SpaceCap is the PC-based data capture for electronic capture and submission of satellite networks and earth stations in the space radiocommunications services, relating to the following procedures:

- Advance publication of satellite networks, No. **9.1** - Appendix 4/VI notice form
- Procedures of coordination No. **9.6, 9.7A** and **9.17** - Appendix 4/II and 4/III notice forms
- Recording in the Master Register, No. **11.2 / 11.12** - Appendix 4/II, 4/III and 4/IV notice forms
- Administrative due diligence, **RES49**
- Articles 2A, 4 and 5 of Appendices **30** and **30A** (the Broadcasting Satellite Service and associated Feeder-Link Plans and Lists)
- Articles 6, 7 and 8 of Appendix **30B** (the Fixed Satellite Service Plan)

The captured information is written to tables in a MS-Access database. The online HELP available following installation provides all necessary information on using this package. This product is available only in English.

The **minimum** hardware and **software** requirements for SpaceCap are the same as for SpaceQry. However the screen resolution must be at least 800 x 600 with small fonts (SVGA).

Installation guidelines: Follow the general procedure for installing software using BR_soft directory/folder.

SpaceCom - management of the comments on CR/C, API/A, AP30-30A/F/C and Part A of AP30/E, AP30A/E, AP30-30A/E Special

SpaceCom is a stand-alone application designed to assist administrations and the Bureau in the management of the comments on CR/C, API/A, AP30-30A/F/C and Part A of AP30/E, AP30A/E and AP30-30A/E Special Sections in order to publish the corresponding Special Sections CR/D/--, API/B/--, AP30-30A/F/D/-- or Part D of AP30/E/--, AP30A/E/-- or AP30-30A/E/-- in the BR IFIC (Space Services).

SpaceCom is designed for three groups of users: potentially affected administrations commenting on the Special Sections, BR and the administration responsible for the satellite network published in Special Section.

Using **SpaceCom**, an administration **can confirm** or **cancel**, within the regulatory four-month period, the need for entering into the coordination procedure with the (notifying) administration responsible for the network published in the Special Section. If an administration not identified by the Bureau, considers that the satellite network subject to the Special Section may affect its own frequency assignments, it **can request to be included** in the coordination procedure by providing additional information justifying this request.

Using **SpaceCom**, the Bureau will collect all these comments received from potentially affected administrations, merge all comments relating to a particular CR/C, API/A, AP30-30A/F/C or Part A of AP30/E, AP30A/E or AP30-30A/E, analyse them and provide the responsible (notifying) administration with a **draft** CR/D/--, API/B/--, AP30-30A/F/D/-- or Part D of AP30/E/--, AP30A/E/-- or AP30-30A/E/-- summarizing the valid comments received (no draft API/B/--).

Using **SpaceCom**, the responsible (notifying) administration completes the list of comments in the draft CR/D/--, API/B/--, AP30-30A/F/D/-- or Part D of AP30/E/--, AP30A/E/-- or AP30-30A/E/-- with those that may not have been received by the Bureau within the regulatory four-month period. The Bureau will update its databases accordingly and publish a Special Section CR/D/--, API/B/--, AP30-30A/F/D/-- or Part D of AP30/E/--, AP30A/E/-- or AP30-30A/E/-- in its BR IFIC (Space Services).

SpaceCom requires as its input the MS-Access files IFICnnnn.mdb or SPS_ALL_IFICnnnn.mdb provided on the BR IFIC (Space Services) DVD-ROM. **SpaceCom** extracts, based on user input, the relevant information for each Special Section by the potentially affected administration. To facilitate the review of these comments, **SpaceCom** generates working report documents. All comments related to all Special Sections contained in a particular BR IFIC (Space Services) should be gathered together into four categories of files prior to sending that file to the Bureau. Finally, **SpaceCom** includes a facility to send, as an email attachment, the comment file to the Bureau.

Installation guidelines: Follow the general procedure for installing software using BR_soft directory/folder.

To view reports in RTF format file, you need to have an RTF reader installed. You can download MS-Word Viewer freely at: <http://www.microsoft.com/downloads/en/default.aspx>

SpacePub - Print Satellite Networks / Earth Stations

SpacePub is a PC-based software utility for printing satellite networks / earth stations from the SRS database. It allows the user to select a satellite network / earth station from the database (in MS-Access format) and creates a MS-Word version 8.0 document in Weekly Circular or Special Section format that can be printed at a local printer. It also allows the user to specify that the associated graphical data be included in the document; this data is taken from the GIMS database. It presently supports the following forms of:

- Appendix 4/II and 4/III notice forms - for satellite networks and earth stations
- Appendix 4/IV notice form for radioastronomy stations
- Appendix 4/VI notice form relating to advance publication of satellite networks
- Notice under Articles 4 and 5 of Appendices **30** and **30A** (the Broadcasting Satellite Service and associated Feeder-Link Plans and Lists)
- Notice under Articles 6, 7 and 8 of Appendix **30B** (the Fixed Satellite Service Plan)

Installation guidelines: Follow the general procedure for installing software using BR_soft directory/folder.

BRSIS-SpaceQry - Space Query and Extract System

SpaceQry provides the user with query software and allows access to the SRS data which is supplied on this DVD-ROM as a MS-Access database container (SRS.MDB); as well as, any Space Publication Circular data (IFIC) which has been downloaded from the ITU/BR Web in the MS-Access database format. SpaceQry also provides access to the related graphical data through GIMS.

An HELP available following installation provides all necessary information on using this package. This product is available only in English.

More information on the SpaceQry product, as well as, occasional software updates in a downloadable format can be found on the SpaceQry website:

<http://www.itu.int/en/ITU-R/software/Pages/brsis.aspx>

Installation guidelines: Follow the general procedure for installing software using BR_soft directory/folder.

SpaceVal - Validation of electronic notices

SpaceVal is the ITU Radiocommunication PC-based software for validating electronic notices (satellite networks / earth stations). It can validate electronic notices captured by the BR SpaceCap system. It can also be used for validating electronic notices that are in the SNS electronic notice format (described in BR Circular-Letter 58 and in the document srs_db.doc) and stored in an MS-Access database.

The present version of this software validates the Appendix 4/Annex 2 (Satellite Networks and Earth Stations) notice forms. The rules for validation for each notice form are available as Acrobat PDF files, after the software is installed. To view the latest changes made to the validation rules and software, please see the WhatsNew.pdf.

Installation guidelines: Follow the general procedure for installing software using BR_soft directory/folder. An important requirement for using this software is that the SpaceCap software must be also installed.

BRSIS-SRSConvert - Database Conversion program

The **SRS Database Conversion** program is a utility which allows the user to convert the data contained in an existing SRS-formatted database (including the SPS_ALL database) from a version 7 into a version 8 database. This conversion is valid for any database produced by the SpaceQry or SpaceCap software packages, as well as the SRS, SPS, and SpaceFIC databases supplied by the Radiocommunication Bureau. The purpose of the utility is primarily to allow the user to "upgrade" their existing, version 7 databases to the new, version 8 database format, so that they may be used with the versions of the BR software that were developed to conform with Appendix 4 of the Radio Regulations (WRC-15).

Installation guidelines: Follow the general procedure for installing software using BR_soft directory/folder.

GIMS - Graphical Interference Management System

GIMS is a PC-based software package, which allows the capture and modification of graphical data (service areas, antenna gain contours and gain towards the geostationary orbit) relating to the electronic notification of satellite networks in the space radiocommunication services. Since version 8, it allows the capture of graphical data related to non-geostationary satellites as images. It also allows for carrying out Power Flux Density (PFD) calculations using graphical data captured via this product either by using the digitizer or by importing a file in the GXT format. The captured diagrams may be saved into Microsoft Access databases for electronic notification. The online HELP available following installation provides all necessary information on using this product. This product is available only in English.

Installation guidelines: Follow the general procedure for installing software using BR_soft directory/folder.

IDWM - The ITU Digitized World Map

The ITU Digitized World Map (IDWM) was developed to integrate into one software package geographical, political, meteorological and technical data required to apply the Radio Regulations and related Agreements.

The IDWM contains two parts: Data Files and Subroutine Libraries.

The Data Files include the following data: geographical data (coastlines, seas, islands, lakes); political data (borders of countries and boundaries of regions); meteorological data (rain climatic zones); technical data (ground conductivity areas, noise zones, allotment areas, propagation zones).

The Subroutine Libraries make it possible to determine for a given point the ITU Region as defined in Article 5 of the Radio Regulations, the geographical area code and administration code, the rain climatic zone; calculate the distance from a given point to the coast in a given azimuth; determine the ground conductivity of each part of a path from a given point in a given azimuth; determine whether a given point is inside a given contour; determine whether two lines cross each other etc.

Installation guidelines: Follow the general procedure for installing software using BR_soft directory/folder.

GIBC – Graphical Interface for Batch Calculations on PC

GIBC (Graphical Interface for Batch Calculations) is a software package that provides the user with the ability to carry out calculations on satellite networks which allow determining the coordination requirements on satellite networks relating to Power Flux Density (PFD) examination Appendix 8 and Appendix 30B (Annexes 3 and 4), and on Earth stations relating to Appendix 7.

The PFD software examines satellite networks with respect to the PFD limits in Article 21 and in Appendices 30 and 30B of the Radio Regulations (2015 Edition of the Radio Regulations). Three types of PFD calculations can be performed for GSO networks: with respect to terrestrial services, with respect to other space services (Appendix 30, Annex 1, Sections 3 and 6 and Appendix 30, Annex 4, Section 3 of Annex 4 of Appendix 30A) and in application of Annex 3 of Appendix 30B. For non-GSO networks or systems calculations can be performed with respect to terrestrial services or other space services.

The Appendix 8 software determines the coordination requirements of a given satellite network under No.9.7, No. 9.21/A, §7.1 of Article 7 of Appendix 30A and relevant provisions of Article 4 of Appendices 30/30A through Appendix 8 calculations and the application of the coordination arc (see Appendix 5, Resolution 55 (WRC-2000) and circular letter CR/180).

Appendix 30B Annex 4 uses C/I as technical criteria to evaluate interference.

Appendix 7 software determines the coordination area around an Earth station.

This product is available in English only.

Installation guidelines: Follow the general procedure for installing software using BR_soft directory/folder.

AP7Capture – Software to Capture Input Parameters for AP7 Analysis

AP7Capture is a stand-alone application designed to assist administrations and the Radiocommunication Bureau (BR) in capturing AP7 input parameters for AP7 Analysis.

The AP7Capture is a simple application which allows you to:

1. Create a new AP7 input case.
2. View and edit AP7 input parameters of existing Earth stations in any SNS formatted database.
3. Create a copy of an existing Earth station and edit its AP7 input parameters.

The database format used by the AP7Capture program and the AP7 analysis program is the SNS format. A database created by AP7Capture can be read by any other BR software that accepts the SNS format and vice versa.

As AP7Capture is a Microsoft® .Net application, you will need to install the Microsoft® .Net framework. If your computer does not have the .Net framework, the setup will automatically start the .Net framework installation before installing the AP7Capture software. Please note that you will need administrative privileges on your PC to install the .Net framework.

Installation guidelines: Follow the general procedure for installing software using BR_soft directory/folder.

SPS – Space Plans System Software

The Space Plans Systems (SPS) is a PC-based software package, which allows the determination of the frequency coordination requirements for geostationary satellite networks of the Space Plans in Appendices **30, 30A** of the Radio Regulations, including the methods and criteria for the Region 2 BSS Plan and the Regions 1 and 3 BSS and associated feeder-link Plans and Lists. SPS consists of three main components: the technical examination software MSPACEg), the SPS reporting tool (SPS_REPORTs) and the SPS utilities to update the reference situation and store results.

SPS uses the SPS_ALL version 8 database for the BSS Plans/Lists.

This product is available in English only.

Installation guidelines: Follow the general procedure for installing software using BR_soft directory/folder. The GIMS reference database (with shaped beams) should also be installed via BR_soft setup by selecting the GIMSDB option, if not already done so.

SpaceRefdb – BR Reference database setup

The SpaceRefdb will update the reference tables used by BR software like SpaceCap, SpacePub, BRSIS-SpaceQry, SpaceVal and others. An up-to-date copy of this reference tables database will be provided on each BR IFIC and the SpaceRefdb setup will update your local BR Soft reference tables database accordingly. The SpaceRefdb is located in the BR_soft folder or can be downloaded from the ITU BR software web site at:

<http://www.itu.int/ITU-R/go/space-software/en>

Installation guidelines: Follow the general procedure for installing software using BR_soft directory/folder.
