SPACEQRY

ITU Radiocommunication Bureau's
Space Data and Publication Circular
Query and Extract System

Geneva, 14 September 2012

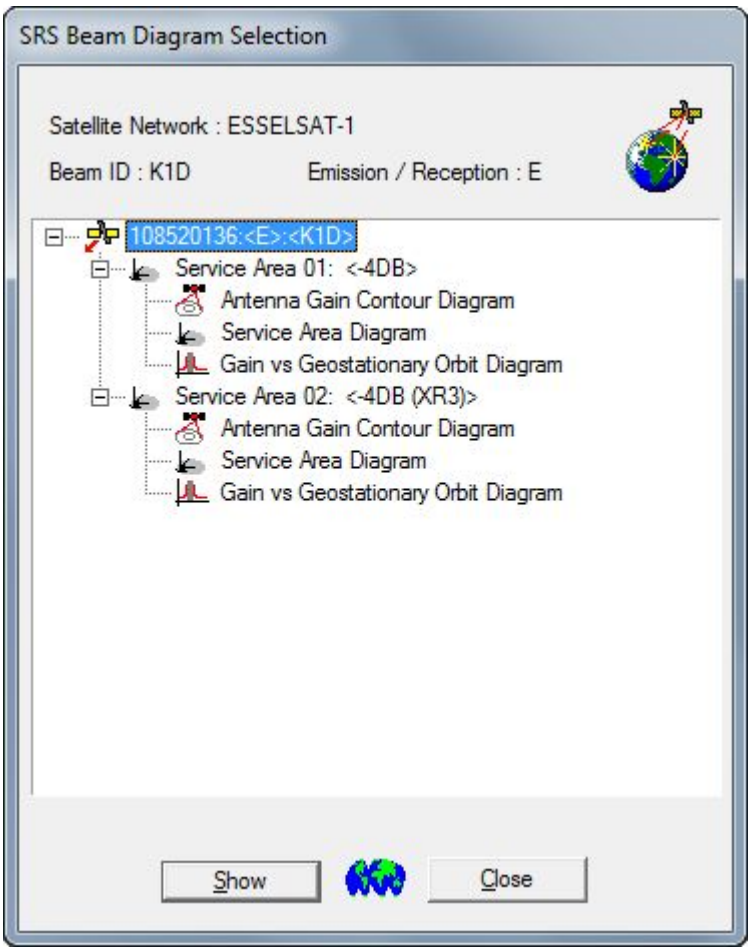
SpaceQry version 7.0 - What's New?

If at any time during the execution of the SpaceQry program, you wish to view this document, you can select the *What's New in Version 7.0* option from the *Help* menu, or click on the *What's New in Version 7.0* toolbar button.

General Enhancements in Version 7.0

A New Look for the GIMS Diagram Selection Dialogue

Following the release of GIMS version 8.0, and the necessity to include the ability to select diagrams for non-geostationary satellites, it was decided to redesign the *GIMS Diagram Selection* dialogue of SpaceQry. The use of a tree structure to display the available diagrams is similar to the new GIMS Database Explorer dialogue:



To display a specific diagram, select (highlight) the desired diagram and click on the *Show* button. Multiple (simultaneous) diagram selection is not permitted – if more than one diagram is desired, then each diagram should be selected and shown individually. To close the dialogue and return to the *Network Detail* window, click on the *Close* button.

Please note that it is still possible to bypass the diagram selection dialogue by pre-selecting a diagram type using the context menu associated with the *Show Diagrams* button. Pre-selecting the diagram type will immediately display the chosen diagram (if it exists) when the button is clicked.

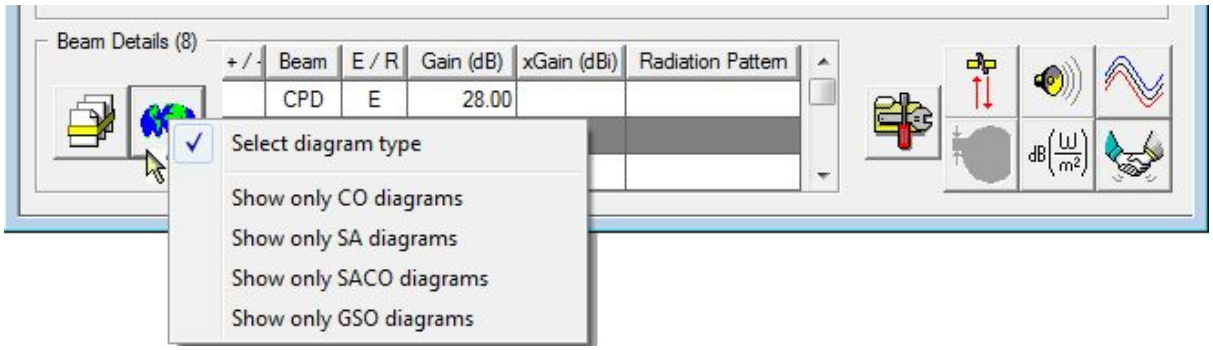
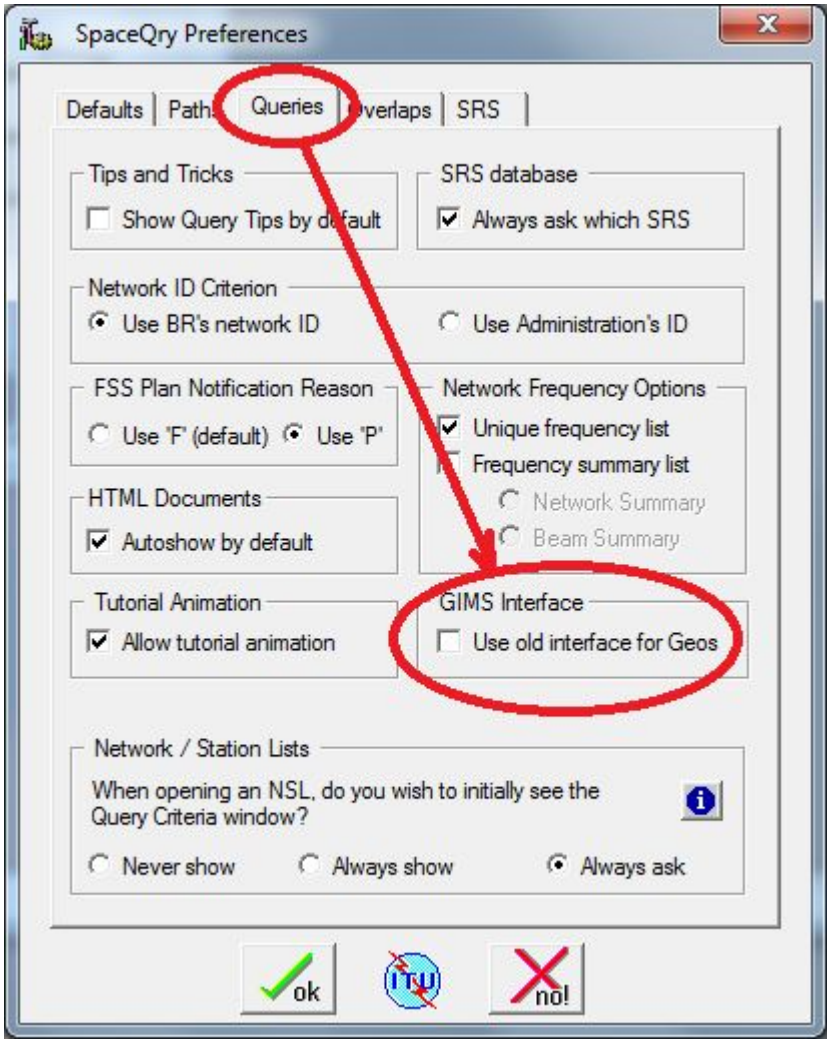
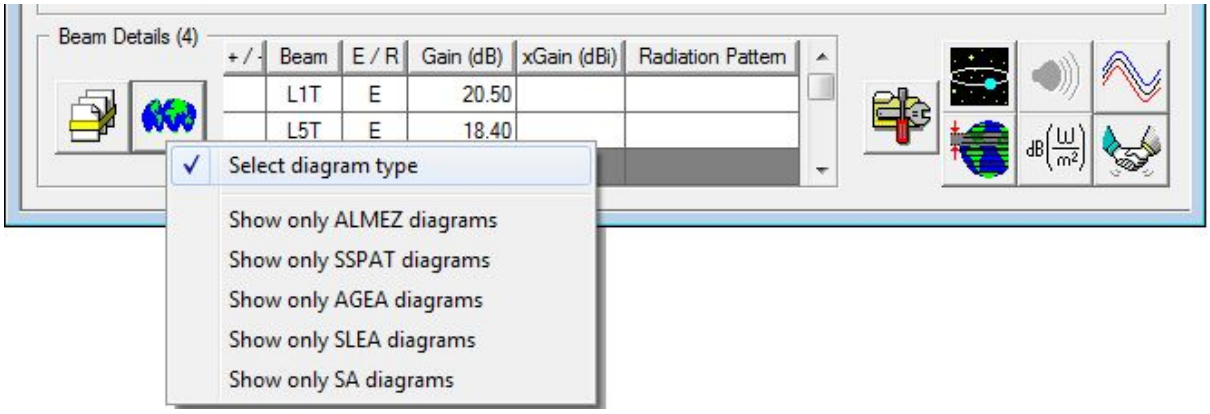


Diagram selection for non-geostationary satellites (see the next section) is only available using the new format of the *GIMS Diagram Selection* dialogue. If, however, you prefer to use the old format for geostationary satellites, you can do so by selecting the *Use old interface…* option located on the *Queries* tab of the *SpaceQry Preferences* dialogue as seen below:

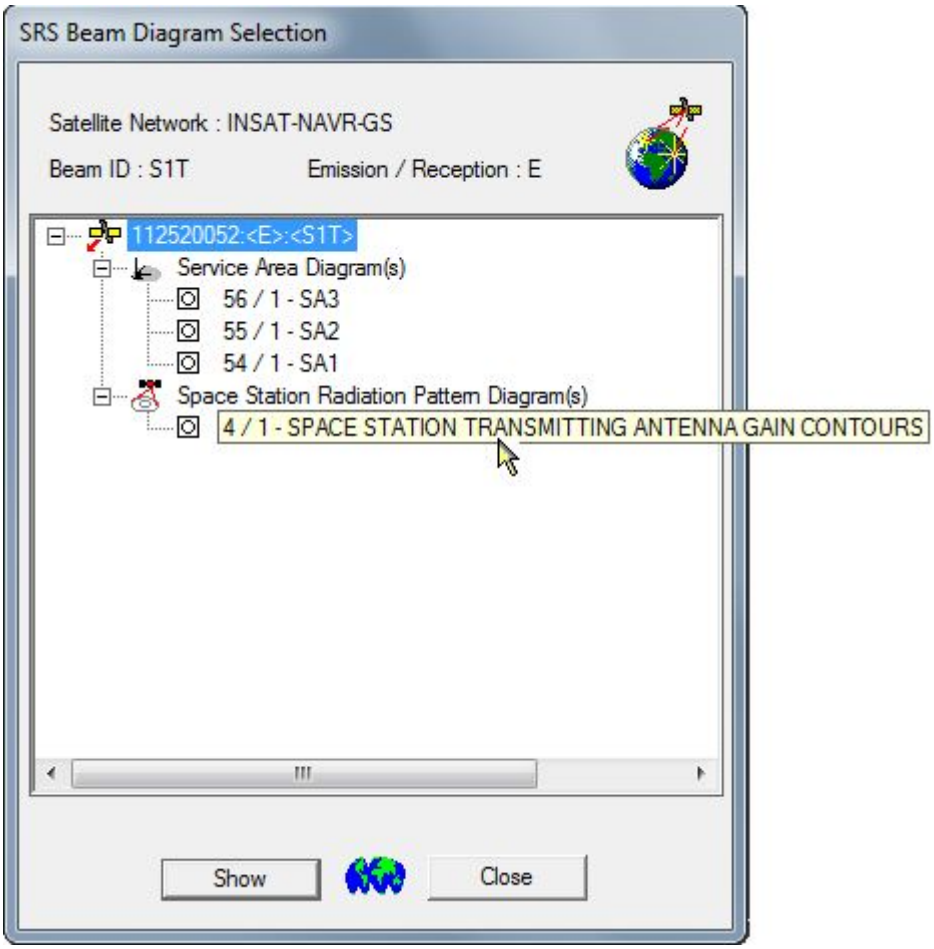


GIMS Diagrams for Non-Geostationary Satellites

Beginning with GIMS version 8, various diagrams for NGSO satellites could be captured, submitted and viewed via GIMS. As of SpaceQry version 7, these diagrams can now be viewed in SpaceQry through the GIMS interface routines. As with GSO diagrams, all NGSO diagrams can be selected and viewed by selecting the desired beam from the beam list located on the network detail window and clicking on the *Show GIMS diagrams* button directly to the left of the beam list. As with GSO diagrams, you may also pre-select a single type of diagram using the GIMS button context menu as shown below:



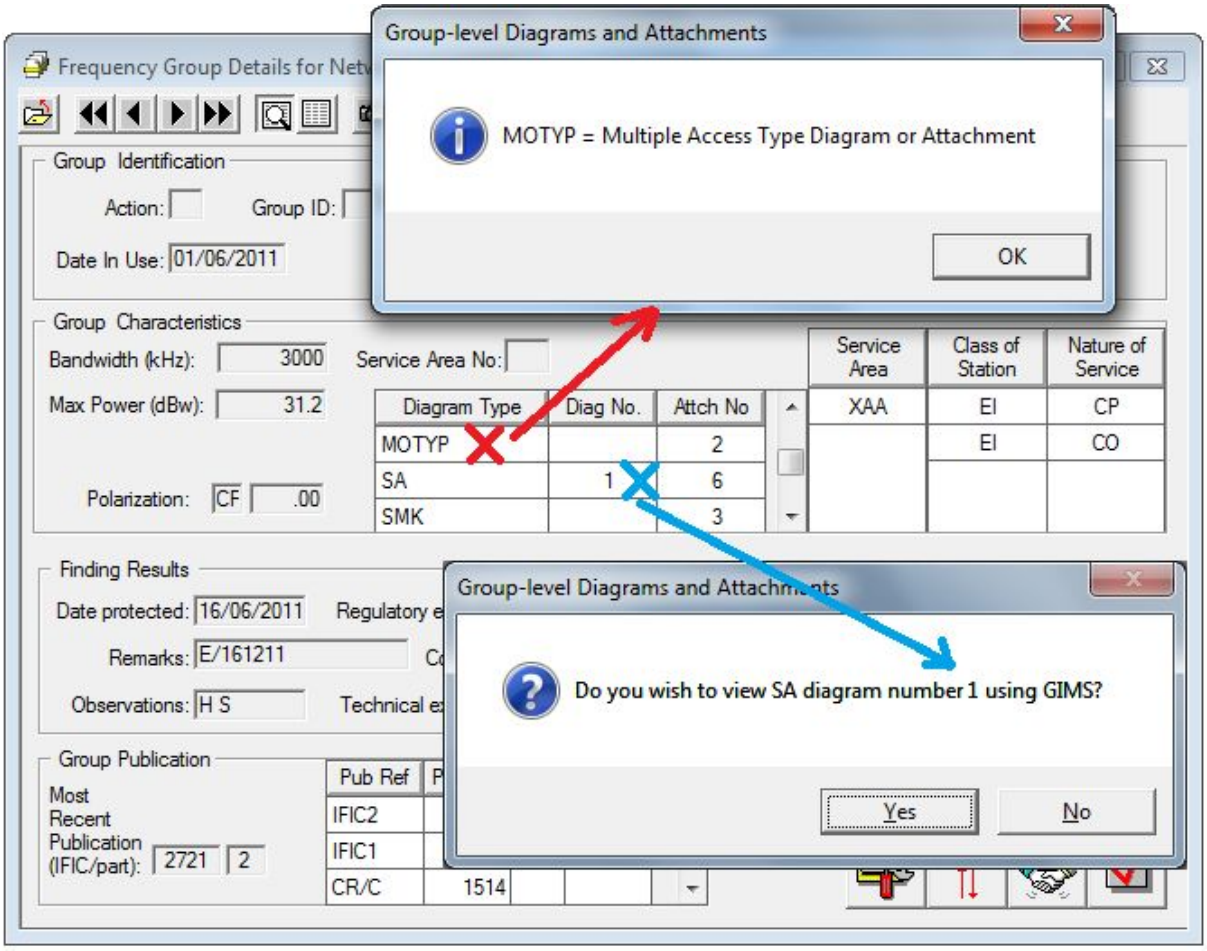
The NGSO diagram selection dialogue operates in exactly the same manner as for GSO diagrams.



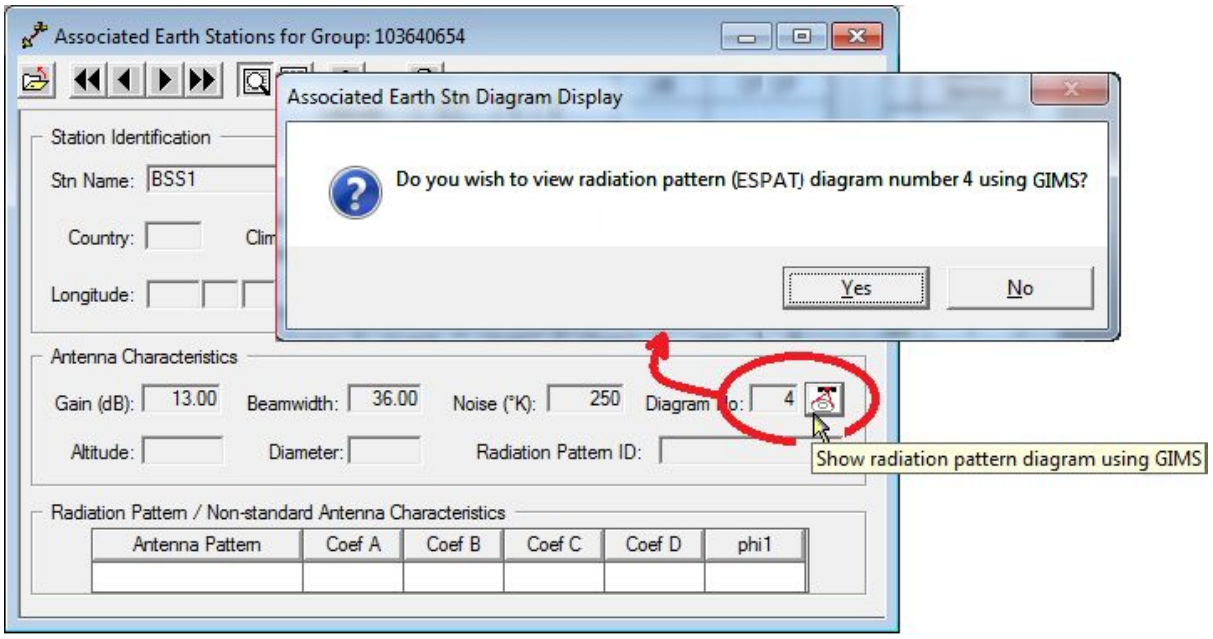
Showing GIMS Diagrams from other SpaceQry Windows

GIMS diagrams are associated with several data levels – network, beam, group, associated earth station, as well as others. As of SpaceQry version 7.0, these diagrams are not only selectable at the beam level (as before), but also at their relevant level(s). It should be noted, however, that all diagrams present for a given network are available from the beam-level dialogue.

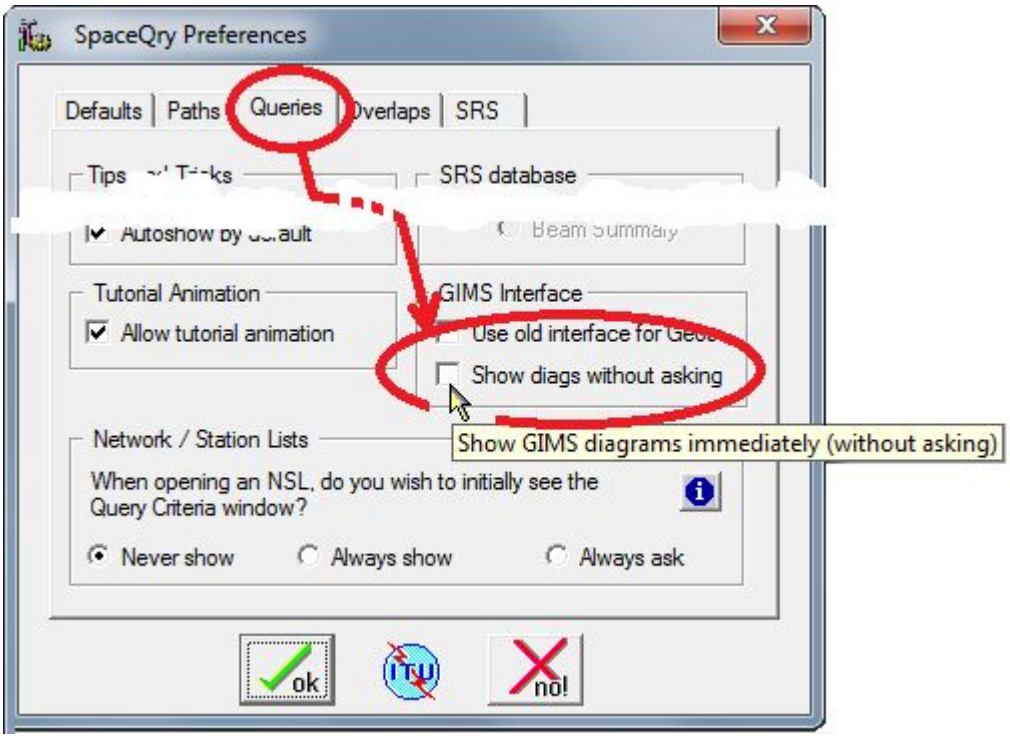
On the *Frequency Group Detail* window, all group-level diagrams and attachments are grouped together in a scrolling sub-window, or table, as shown in the illustration below. Clicking the cursor in a cell of the *Diagram Type* column will generate a pop-up window defining the diagram-type acronym (as shown in red). Clicking in a cell in the *Diagram No.* column, however, will produce a pop-up window allowing you view the associated GIMS diagram (shown in blue).



On the *Associated Earth Station Detail* window, the co-polar reference radiation pattern, or ESPAT, diagram (if it exists) can be viewed by clicking on the small GIMS button to the right of the *Diagram No* field.



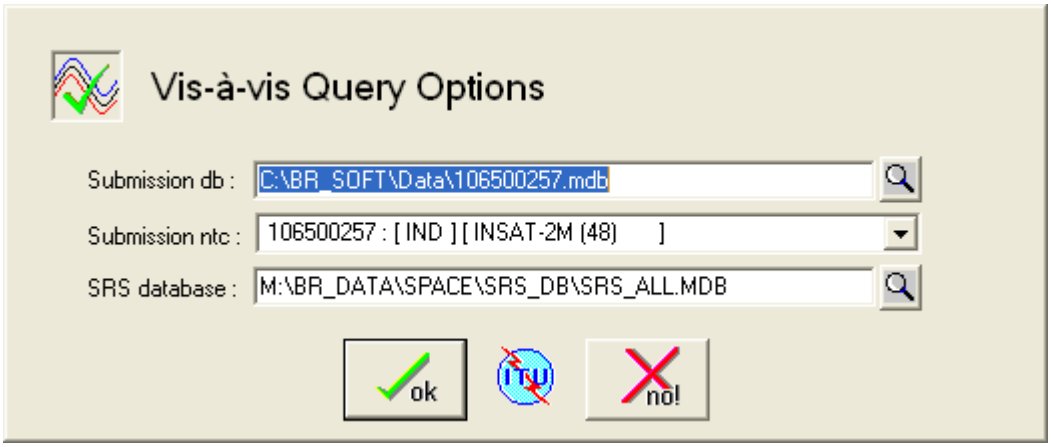
By default, your SpaceQry system will be set up to always ask before displaying GIMS diagrams at the frequency-group and associated-earth-station levels. Optionally, you may change this behavior by checking the *Show diagrams without asking* box on the *Queries* tab of the *SpaceQry Preferences* dialogue, as shown below.



Checking this box and saving the preference options, will cause the associated diagram to be immediately displayed upon clicking on the graphics request button or in the diagram-number cell.

General Enhancements in Version 6.4

Vis-à-vis Utility for BR Users



Specifically for BR internal SpaceQry users, and at the request of the SPR Division, a "vis-à-vis" query interface has been developed to simplify the procedure which allows a cross-reference check between a network's API frequency ranges and each frequency range submitted for coordination or notification. Separate documentation is available for this utility.

Problems Fixed in Version 6.4

1) A problem with the incorrect display of tr_provn data for Space Plans has been corrected. The problem which was caused by non-sequential sequence numbers (seq_no) has been avoided by programmatically ignoring the seq_no field since they are present only for primary key purposes and do not have relevance to the actual provision.

2) A very odd anomaly (only affecting *some* Windows-XP users) which caused an "earthquake" effect when maximizing the SpaceQry window has been *avoided* for most users (please report to the BR if, after installing this update, you still have the problem.)

General Enhancements in Version 6.3

Startup Wizard

For beginning SpaceQry users, there is now a *Startup Wizard* which guides you through some of the basic functions of the SpaceQry package, including:

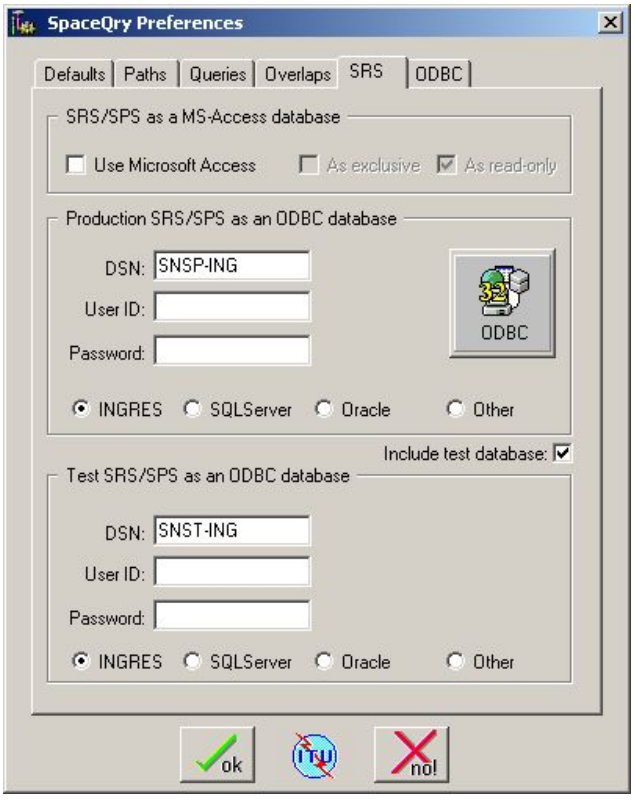
1. Opening any of the BR data sources for *Standard* or *Frequency Overlap* queries, as well as for *Quick Queries* and *Adhoc Queries*;
2. Downloading, unzipping, and opening an IFIC database from the BR website;
3. Viewing a *Validation Report* for a given network;
4. Converting old BR databases into the latest version database; and,
5. Changing your SpaceQry preferences.

Although, as mentioned, this wizard is primarily intended for new users, but if you are an experienced user, you may find some of the features useful, too. Specifically, and as an example, you can use the *Wizard* to easily access an IFIC database for an Adhoc query. By default, the *Startup Wizard* will automatically appear whenever SpaceQry is launched; this can be suppressed, however, by un-checking the *Always show this wizard* box. The *Wizard* is always available from the SpaceQry *Help* menu, or by typing **Ctrl+W**

A Third SRS Database Option

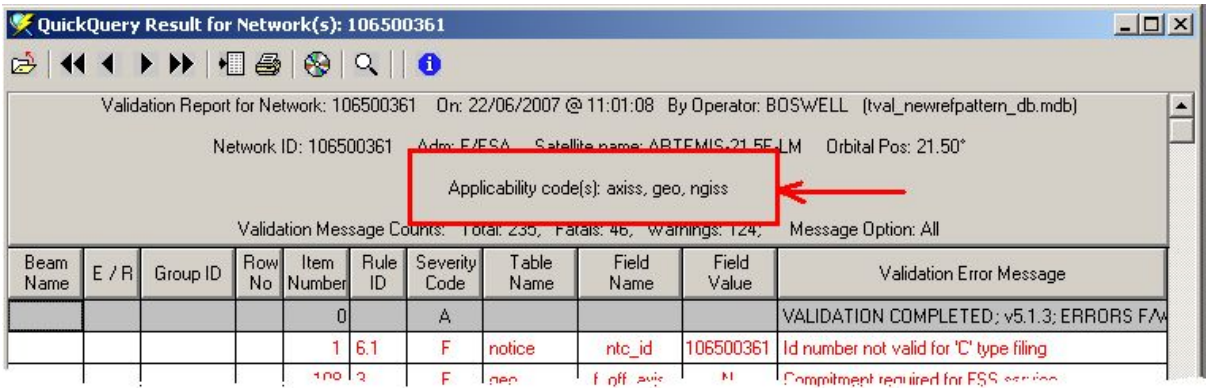
In addition to the existing MS-Access and primary ODBC data sources, you can now specify a secondary ODBC SRS database source. This can be used, as an example, for a test database.

Once the secondary SRS data source has been specified using the *Preferences* dialogue (see illustration on right), you can toggle through the data sources using the **F8** function key. This toggling changes the default data source for the next SRS query, and the current data source is displayed at the far right-hand side of the SpaceQry status bar.



Applicability Codes on Validation Report

Specifically for BR internal SpaceQry users, and at the request of the Space Publication and Registration Division, all "network type" flags (a.k.a., *Applicability Codes*) which apply to the validation of a given network have been added to the header area of the SpaceQry *Validation Report* as shown in the illustration below.



The explanation of these Applicability Codes can be found in the table entitled “Notice Codes” located in Appendix 1 of the *Space Validation Rules* documentation (VR6ApS42e.pdf or VR6PLANe.pdf).

Problems Fixed in Version 6.3

1) A problem with the “export to excel spreadsheet” option for associated earth stations window has been corrected.

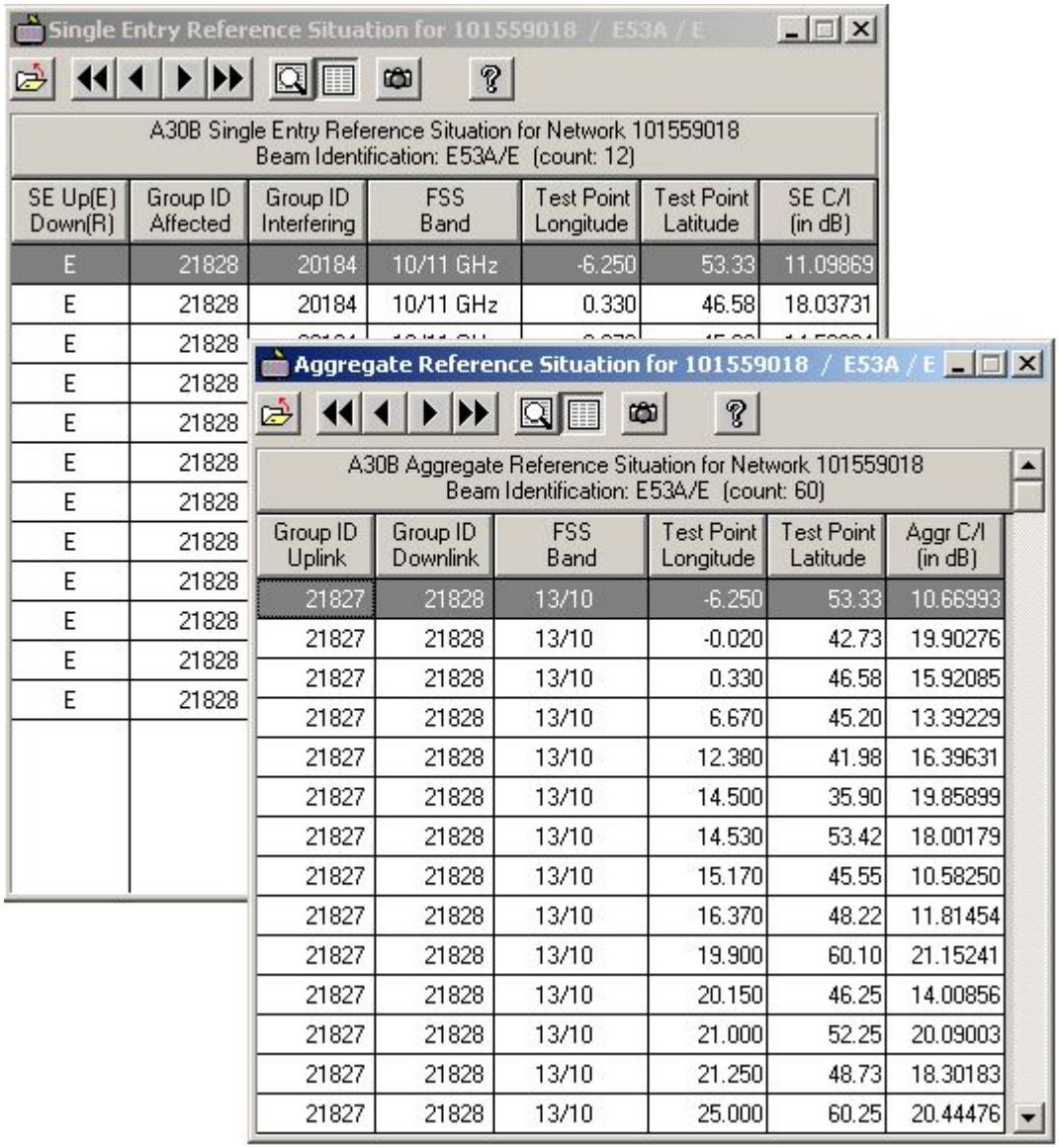
2) Problems with the hotkeys associated with the shell window right-click menu have been corrected.

3) In SpaceQry 6.3 beta releases, there was a problem involving the MS-Windows FileOpen dialogue when accessed from the Startup Wizard. This problem has been corrected.

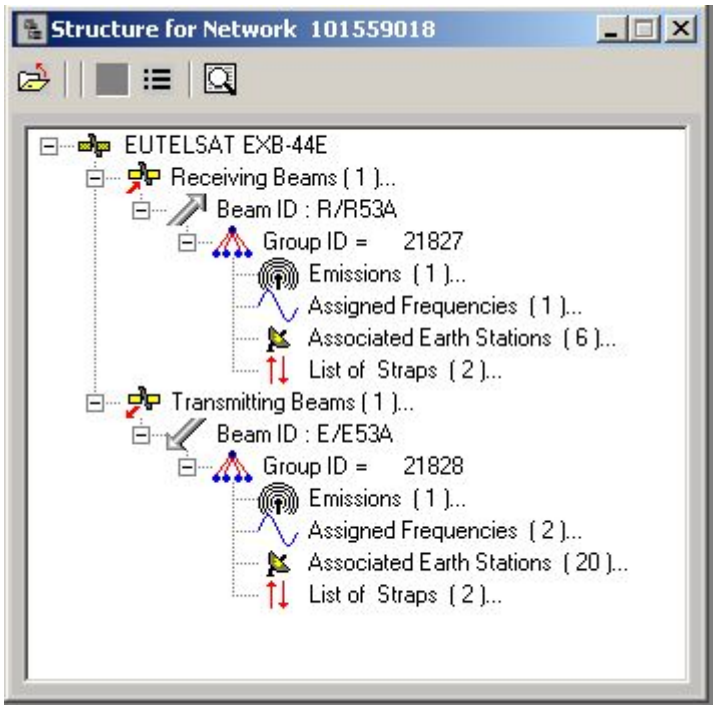
General Enhancements in Version 6.2

Additional Functionality for AP30B Plan Data

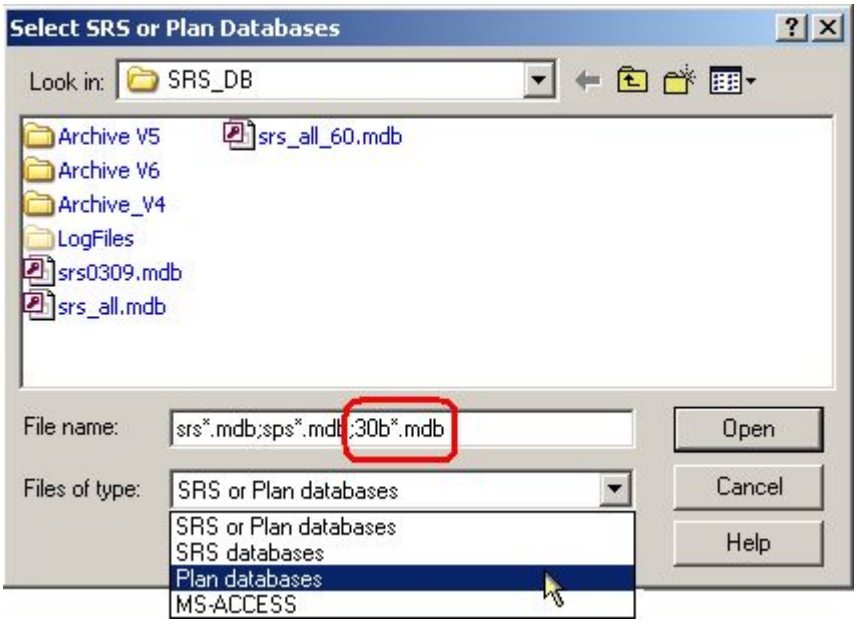
1) Reference Situation for Appendix 30B data has been redefined and reworked and is now shown in two windows – one for the aggregate C/I data and one for the single-entry C/I data:



2) Plan strapping data has been enhanced for AP30B, the plan strapping window has been amended accordingly, and references to the strapping data have been included in the Network Structure Diagrams:



3) The AP30B database-naming format (30b*.mdb) has been included into the mask for selecting Plan database files as shown in the illustration below:



4) The *RS49 Capture Query* for Plans has been adapted for the new AP30B system. Screen animation has been included as default for new users, but can be turned off from the *Queries Tab* of the *Preferences Dialogue*.

Database Conversion from version 5/6.0 to Version 6.1

The SRS Conversion utility, *SRSConvert*, has been modified to convert version 5 databases and "upgrade" version 6.0 databases to the new version 6.1 data format. NB, 6.0 databases will be converted automatically by SpaceQry the first time they are updated with a version 6.1 database; e.g. the first time you update your version 6.0 SRS database with a version 6.1 IFIC database, SpaceQry will automatically upgrade your SRS to the 6.1 format.

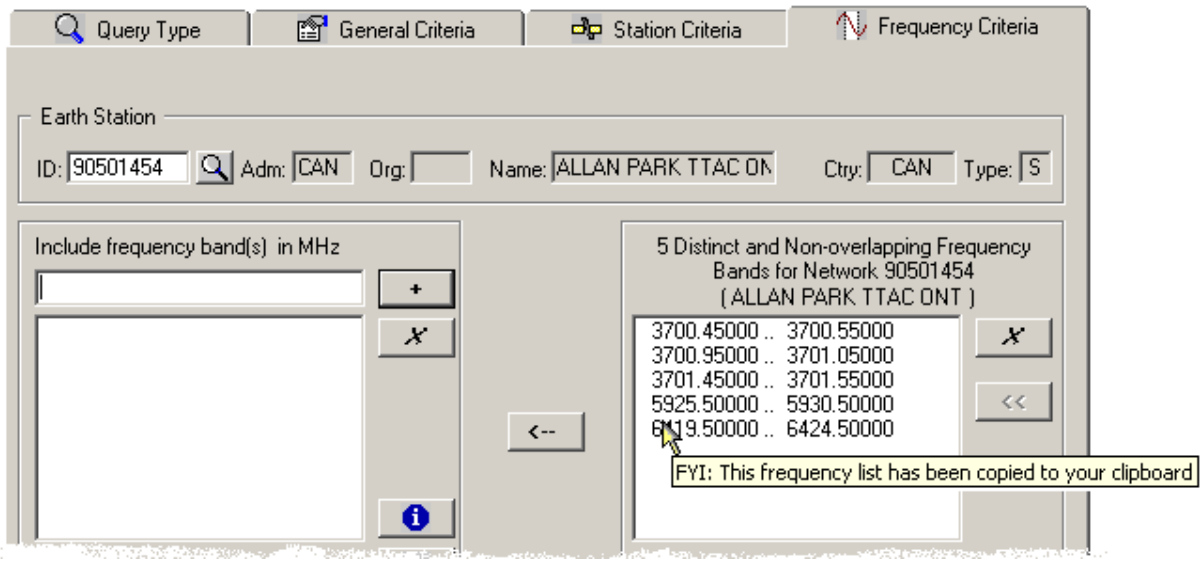
General Enhancements in Version 6.1

Additional Functionality for AP30B Plan Data

- Introduction of Reference Situation for Appendix 30B data;
- Modification of RS49 Capture Query to identify correctly AP30B data requiring RS49 filings;
- Re-instatement of the *ex_op_grp* table in conversion and update coding for AP30B data.

Generated Network Frequency List to Windows Clipboard

On the *Frequency Tab* of the SpaceQry *Criteria* window, if a target network is selected, SpaceQry will automatically produce a list of distinct and non-overlapping frequency ranges for that network and insert it into the selection box on the right of the tab. Several users have expressed an interest in having access to this frequency-range information, so henceforth, whenever this data is produced, it is also copied into the Windows Clipboard, allowing the user to paste the information into any external documentation.



Problems Fixed in Version 6.1

1) Previously, the *Validation Report* would abort when the machine operator ID was NIL; this has been changed to accept a NIL operator ID.

2) Changed the delay mechanism for screen animation. The existing method was aborting on some newer (super-fast) machines – the animation is now working properly on all machines.

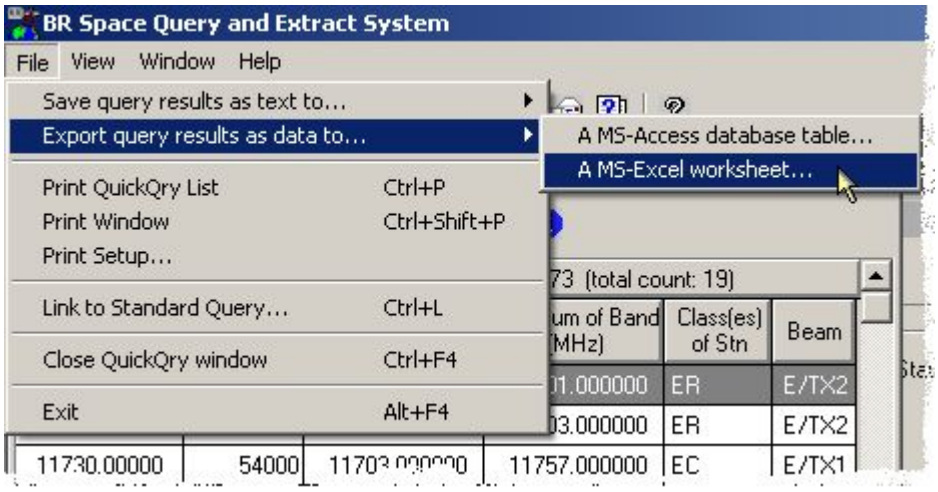
General Enhancements in Version 6.0

Version-6 Database Changes from WRC2007

The SRS database and software changes resulting from WRC2007 come into effect in June 2008. SpaceQry is now SRS-database version-6 compatible – you can view and query both version-5 and version-6 databases, as well as, convert databases from version-5 to version-6.

Query Results to MS-Excel Spreadsheet Document

The results of any special query (*Frequency Overlap, Quick, or AdHoc*) can now be saved as a MS-Excel worksheet within a spreadsheet document. From the *File* menu of query results display, select the *Export query results as: A MS-Excel worksheet* option, as shown in the illustration below. This will produce the results as a unique worksheet within a new or existing MS-Excel file. The name of the new worksheet will be of the format xxxxx_yyyymmdd_hhmmss, where xxxxx will be the type of query (*quick, adhoc,* etc.) and yyyymmdd and hhmmss will be the date and time of the query, respectively.



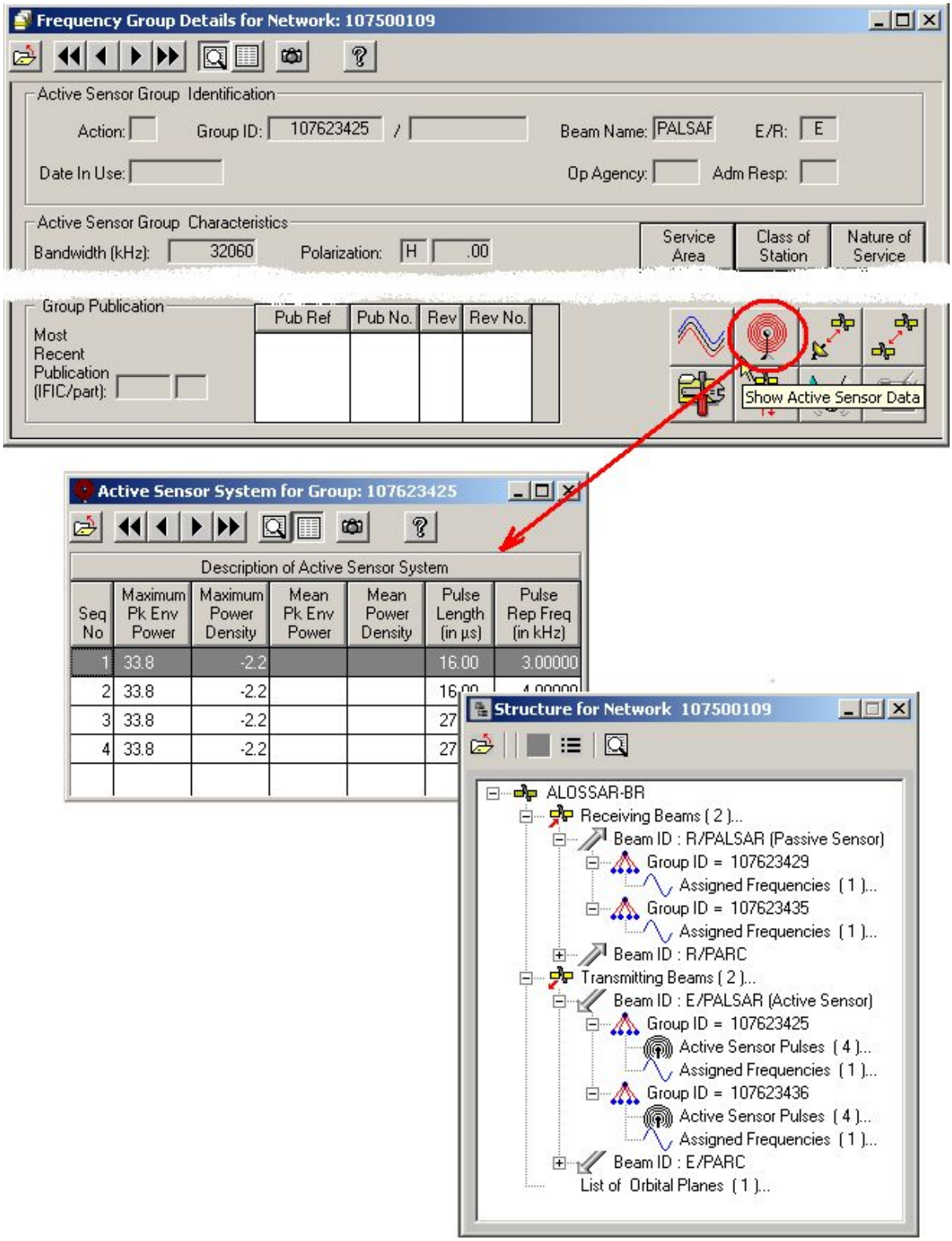
SpaceQry uses the ITU software package *IWRocket* to produce the MS-Excel file. This software can be installed from the SRS-on-DVDROM or downloaded from the SpaceQry website.

Findings Info and Regulatory Dates to Group Window

In all SpaceQry versions prior to version-6, it was necessary to navigate to the *Findings* window in order to view Findings data and Regulatory Date data. The *Frequency Group* window now contains this information, and it is no longer necessary to look elsewhere, however, if desired, you may still view the Findings data in a separate window.

Incorporation of Active/Passive Sensor Data

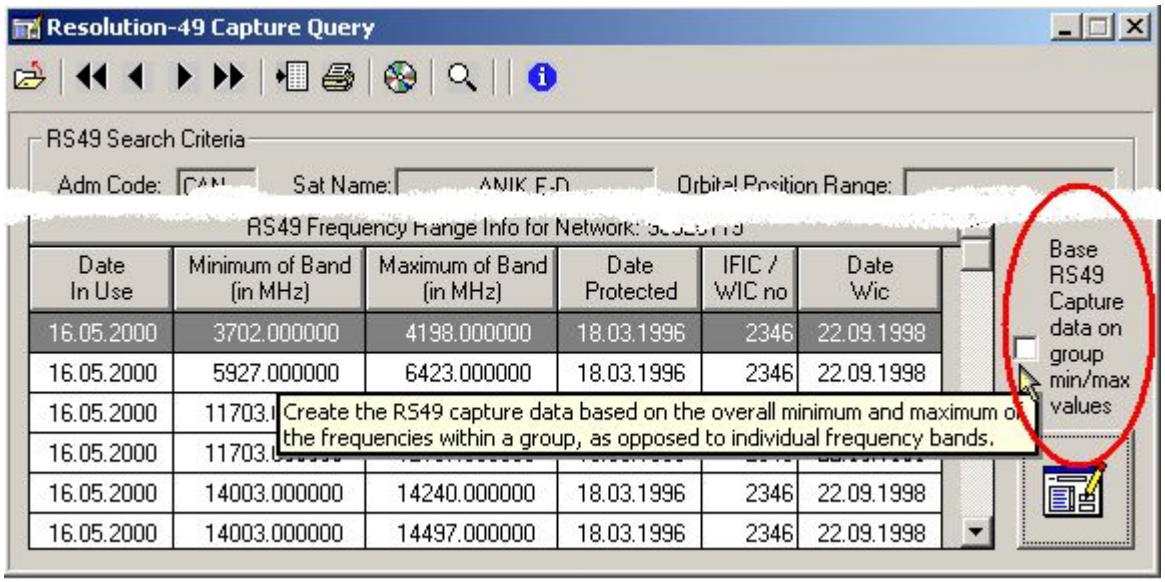
For new version-6 databases, SpaceQry now displays Active and Passive Sensor information for non-geostationary satellites.



Generalized or Detailed Frequency Data for Rs49 Capture Query

Prior to version 6.0 of SpaceQry, the results of the *Rs49 Capture Query* were based on the overall, absolute minimum / maximum of frequency ranges for a group; that is to say, the group was represented (for Rs49 purposes) by the minimum of the lowest frequency band in the group and the maximum of the highest frequency band in the group. In most cases this was, and is sufficient. However, some users in the administrations expressed concern about "gaps" or unused bands within this greater, *general* band. As an example, if the group contains two frequency bands 14000 to 14300 MHz and 14350 to 14500 Mhz, then the *group* min/max values would be 14000 to 14500 MHz, ignoring the fact that the 14300 to 14350 band is not being used by the group in question. Whether or not notifying due diligence on these frequency gaps is appropriate, is subjective and up to the notifying administration. As of SpaceQry 6.0, the user may choose between the two options.

Located immediately above the *Create Capture Database* button, there is now a checkbox with the caption: *Base Rs49 capture data on group min/max values.* This checkbox toggles the method used for producing the Rs49 frequency-range data supplied to SpaceCap in the resulting database.



When the checkbox is *ticked*, or selected, the Rs49 data produced will be based on the *global* minimum and maximum frequency for all ranges in each group, and will ignore the presence of any gaps, if they indeed exist.

When the checkbox is *unticked*, or not selected, the Rs49 data produced will be based on each *contiguous* frequency range found in the group, and consequently, gaps, if they exist will be (implicitly) excluded from the frequency range information – this is the default.

Problems Fixed in Version 6.0 (up to build 60009)

1) The initial release of version 6.0 had a menu problem which did not allow the selection of updating an SRS database from an IFIC database(!). This problem was corrected in the build 600002 release.

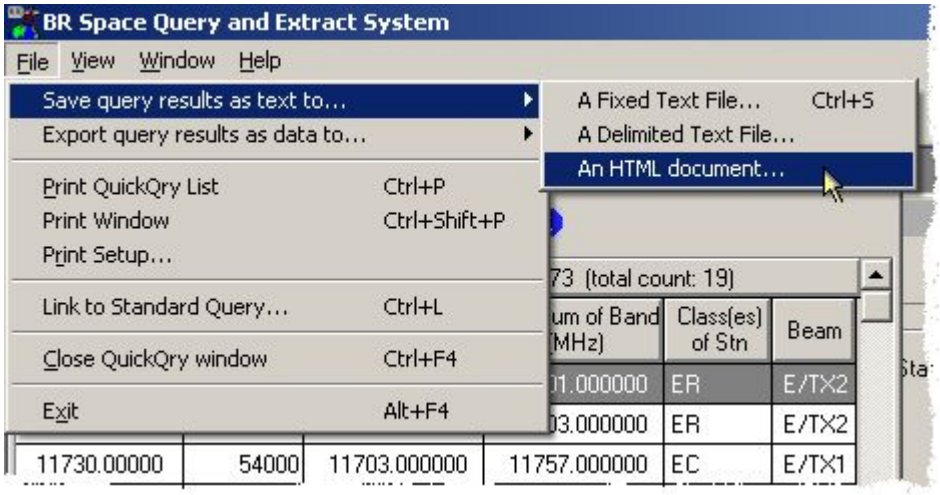
2) Corrections were made to the generated SQL for the *RS49: Satellites with Planned Bringing-into-Use Date* Quick Query. This query is now working properly.

3) Corrected problem with printing error when default or selected printer is invalid. Error is now trapped and user is requested to select a valid printer before continuing.

General Enhancements in Version 5.7 Interim Update 01

Query Results to HTML Document

The results of any special query (*Frequency Overlap, Quick, or AdHoc*) can now be saved as an HTML document. From the *File* menu of query results display, select the *Save query results as text to: An HTML document* option. This will produce the results in HTML format, save them under a specified document name, and (optionally) display them in your default Internet browser.



Automatic Network Selection for Quick Queries

When a database containing a single network is selected for a Quick Query (as in the case for a *Validation Query*), SpaceQry will automatically find the network/notice ID and insert it into the ID field – this saves the user a step when specifying Quick Query criteria. Obviously, if the database contains more than one network, then the user necessarily has to select the desired network to be the object of the query.

Problems Fixed in Version 5.7 Interim Update 01

1) Whenever a default path for selecting databases was set to a drive's root directory or folder (e.g., "d:\"), then during the database selection process, the initial directory/folder was set to "*drive:*\\", which is unrecognizable to the file selection dialogue. This problem has been corrected.

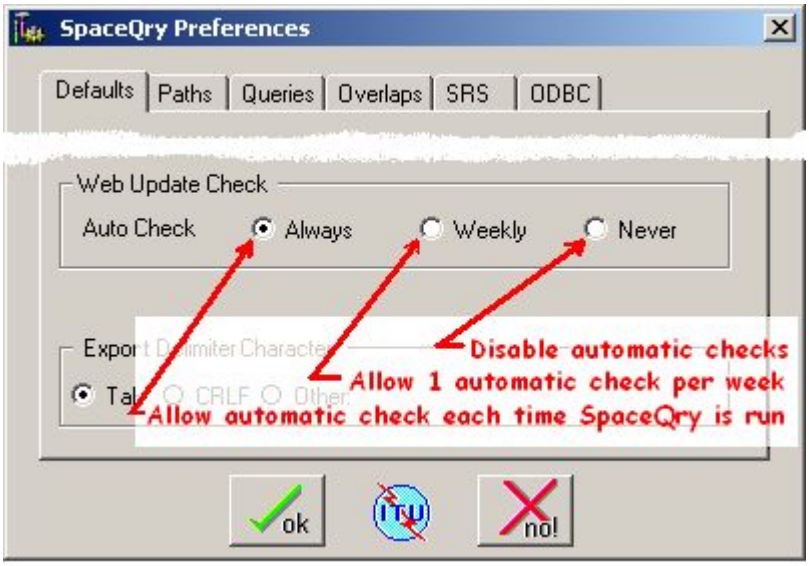
2) Some error and warning messages from SpaceVal exceeded the display size for the Validation Query display – the display, and subsequent print-out truncated these messages. This display size has been reset to 100 characters to accommodate the longer messages.

General Enhancements in Version 5.7

Web Update Wizard

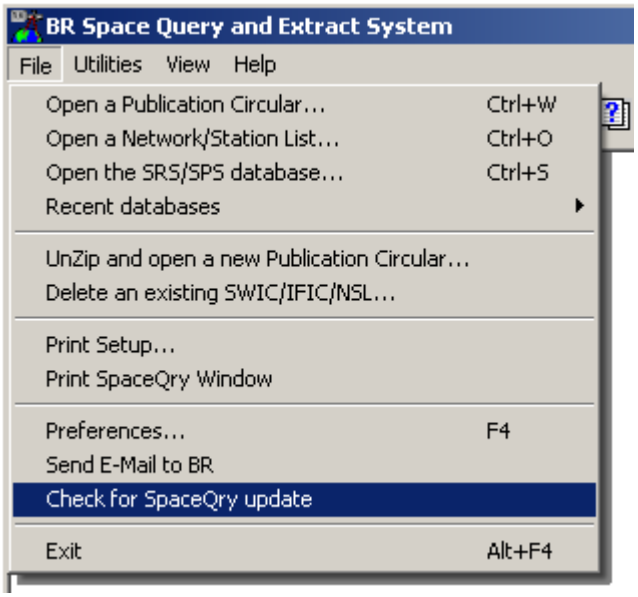
The SpaceQry Web Update Wizard is a utility which will automatically check the SpaceQry website for updates to its software. If an update is available, you are notified and given an option to download and install the new version of the software. Since the check is done as a background, asynchronous process, when no update is available, or if you are operating on a computer which has no Internet connection then you will be unaware of the Web Update Wizard's activity.

The installation default is to check every time SpaceQry is run, but this setting can be changed. You can optionally choose to have SpaceQry check once a week, or to disable the automatic checks altogether. These options are on the *Defaults* tab of the SpaceQry *Preferences* dialogue, as shown below.



The options for the web update check are to perform the check 1) always, 2) weekly, or 3) never. Selecting the *Always* radiobutton will tell SpaceQry to perform the check each time you launch the SpaceQry application. Selecting the *Weekly* radiobutton will tell SpaceQry to check for updates on a weekly basis. Lastly, selecting the *Never* radiobutton disables all automatic attempts to check for software updates.

Assuming you have chosen to disable the automatic checks, you can still run the Web Update Wizard manually upon request by selecting the *Check for SpaceQry update* option from the *File* menu as shown in the following illustration:



Once the Web Update Wizard is launched (by either method) if an update is available, you will see the following window which requests whether or not you wish to download and perform the update.

Continuing with the update procedure ("Yes") will cause all running SpaceQry sessions to be closed before the download and update installation begins. Once the installation has finished, the new version of SpaceQry will be automatically launched. Selecting "No" will return you to your current SpaceQry session.

General Enhancements in Version 5.6

Hotkey Extension of "Recent databases" Menu Item

In addition to keeping track of the last 10 databases accessed (see enhancements for 5.5.2), SpaceQry will now automatically open the last accessed database when the ***F2-key*** is pressed from the empty shell window state (i.e., when no other sub-windows are open).

Additional Plan Criteria and Data

1) Modulation characteristics are now shown in conjunction with the emission data.

2) The *pwr_ctrl* field (column C8i) is now displayed as part of the emission data.

3) The *Plan Criteria Tab* has been extended to include the specification of BSS Article-5 Notification, FSS Article-8 Notification, and Channel data. For a description of channel data as a criterion, please see page 33 of the latest version of the SpaceQry *Querying Guide*.

Problems Fixed in Version 5.6

1) On the *Frequency Tab* of the Criteria window, when more than one frequency was entered into the *Include frequency band* edit field, SpaceQry would "hang" when the *Add frequency* button [+] was pushed. The application would then have to be terminated using the Windows Task Manager. This problem has been corrected and you may now enter multiple ranges (comma separated) into this field.

2) There were some instances when print requests were not being produced according to the printing preferences (font, orientation, etc). The print setup facility for SpaceQry has been reworked, so that printing requests are consistently processed.

3) Users running Arabic versions of Windows, were sometimes having problems with the data returned by Quick and Adhoc Queries. SpaceQry was expecting the data to be returned in a certain order, and the ODBC engine was returning the data in columns in a right-to-left order – the result was the data being represented in the wrong columns (wrong headers and picture-clauses). SpaceQry has been changed to correctly receive and display this information, albeit, in a right-to-left order.

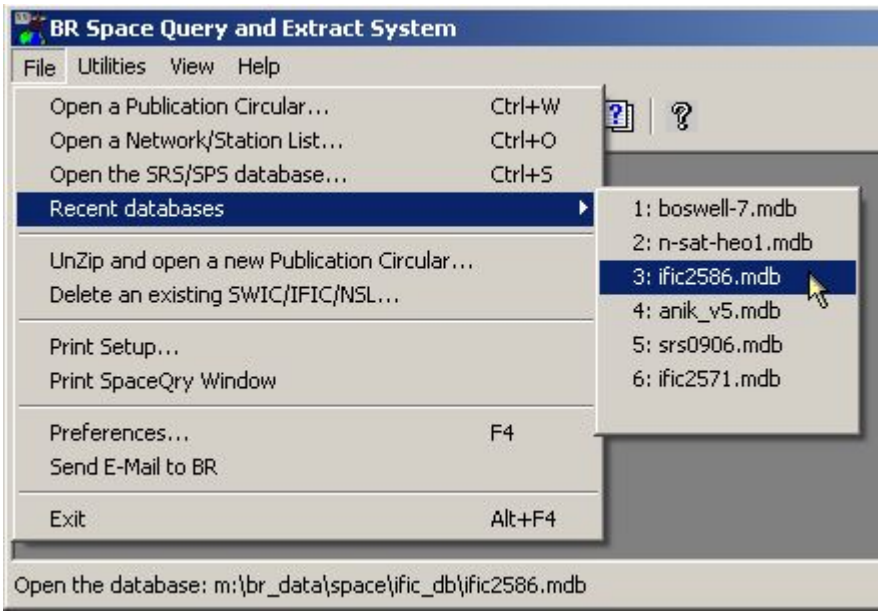
General Enhancements in Version 5.5 Interim Update 02

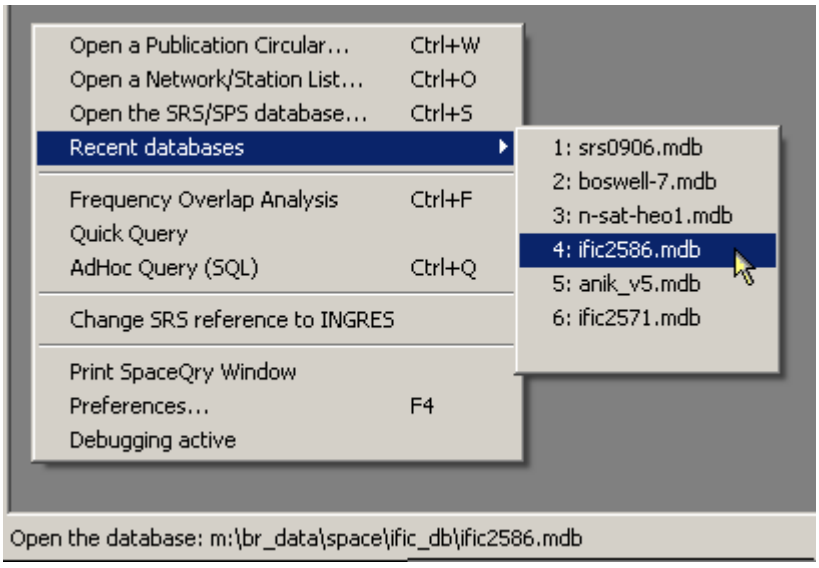
Addition of "Recent databases" Menu Item

SpaceQry now keeps track of the last 10 databases accessed. This information is included (and dynamically updated) in both the *Shell* menu and the *Shell* context menu.

Selecting a database from either of these menu lists, will cause the database to be immediately opened.

The actual menu item will only give the database name, but the fully-qualified database name and path are given at the bottom of the SpaceQry window as shown in the following illustrations:





Problems Fixed in Version 5.5 Interim Update 02

1) For certain combinations of circumstances, the printing of *Quick Query* results would cause an abort specifying "Data Type Error." This problem has been corrected.

2) There was some confusion in the wording of the menu items for requesting a network print and/or a network list print. Furthermore, once the item was selected in Spanish or French, the resulting print-selection dialogue was only displayed in English. The wording for the menu items has been changed to be unambiguous, and the dialogue box now appears in the correct, associated language.

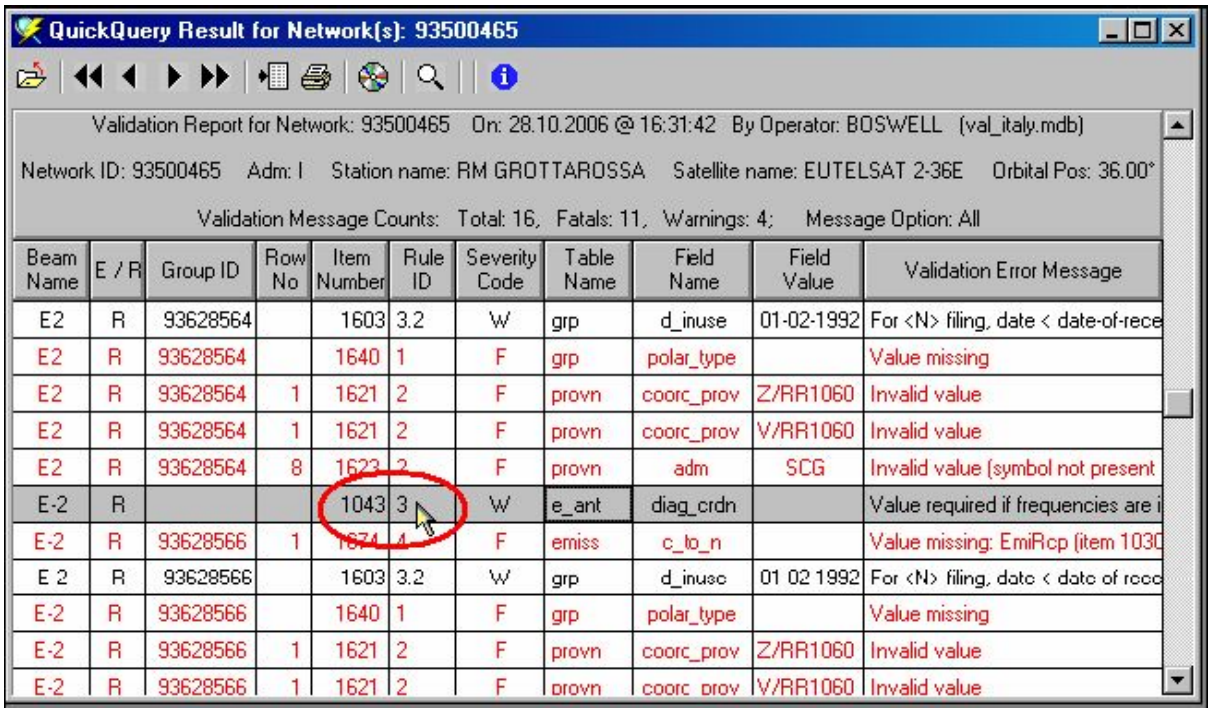
General Enhancements in Version 5.5 Interim Update 01

Improvements to the Validation Report Quick Query

Following the SpaceVal presentation and workshops held during the Radiocommunication Bureau's Geneva Seminar 2006, two excellent suggestions were made as improvements to the Validation Report Quick Query.

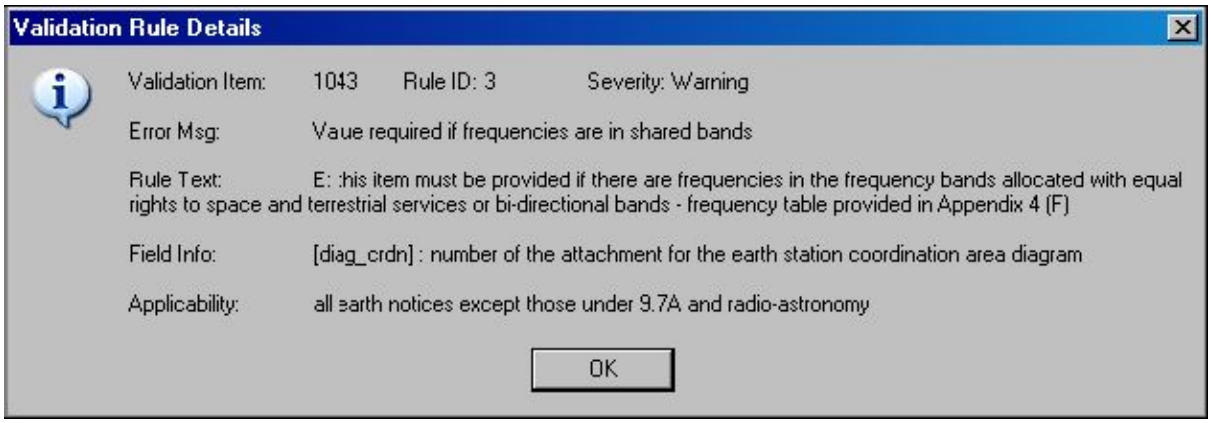
Validation Rule Display-on-Demand

The first suggestion was while viewing the Validation Report, to have the ability to see the actual validation rule for which the error message had been generated. In SpaceQry 5.5.1 this has been implemented so that if a user double-clicks on any row of the report (i.e., any error message entry), a pop-up information box will appear which gives additional information on the associated error (including the validation rule). An example is shown below:



Beam Name	E / R	Group ID	Row No	Item Number	Rule ID	Severity Code	Table Name	Field Name	Field Value	Validation Error Message
E2	R	93628564		1603	3.2	W	grp	d_inuse	01-02-1992	For <N> filing, date < date-of-rece
E2	R	93628564		1640	1	F	grp	polar_type		Value missing
E2	R	93628564	1	1621	2	F	provn	coorc_prov	Z/RR1060	Invalid value
E2	R	93628564	1	1621	2	F	provn	coorc_prov	V/RR1060	Invalid value
E2	R	93628564	8	1623	2	F	provn	adm	SCG	Invalid value (symbol not present
E-2	R			1043	3	W	e_ant	diag_crdn		Value required if frequencies are i
E-2	R	93628566	1	1674	4	F	emiss	c_to_n		Value missing: EmiRcp (item 1030
E 2	R	93628566		1603	3.2	W	grp	d_inusc	01 02 1992	For <N> filing, date < date of rccc
E-2	R	93628566		1640	1	F	grp	polar_type		Value missing
E-2	R	93628566	1	1621	2	F	provn	coorc_prov	Z/RR1060	Invalid value
E-2	R	93628566	1	1621	2	F	provn	coorc_prov	V/RR1060	Invalid value

In this scenario, if you double-click on the row shown above as item 1043 rule 3 (which relates to the attachment of an earth station coordination-area diagram), the following detail information is displayed:



In addition to the validation item, rule ID, severity, and error message, the full validation rule, a detailed description of the field, and the applicability of the rule are displayed.

Sort Validation Report by Validation Item and Rule ID

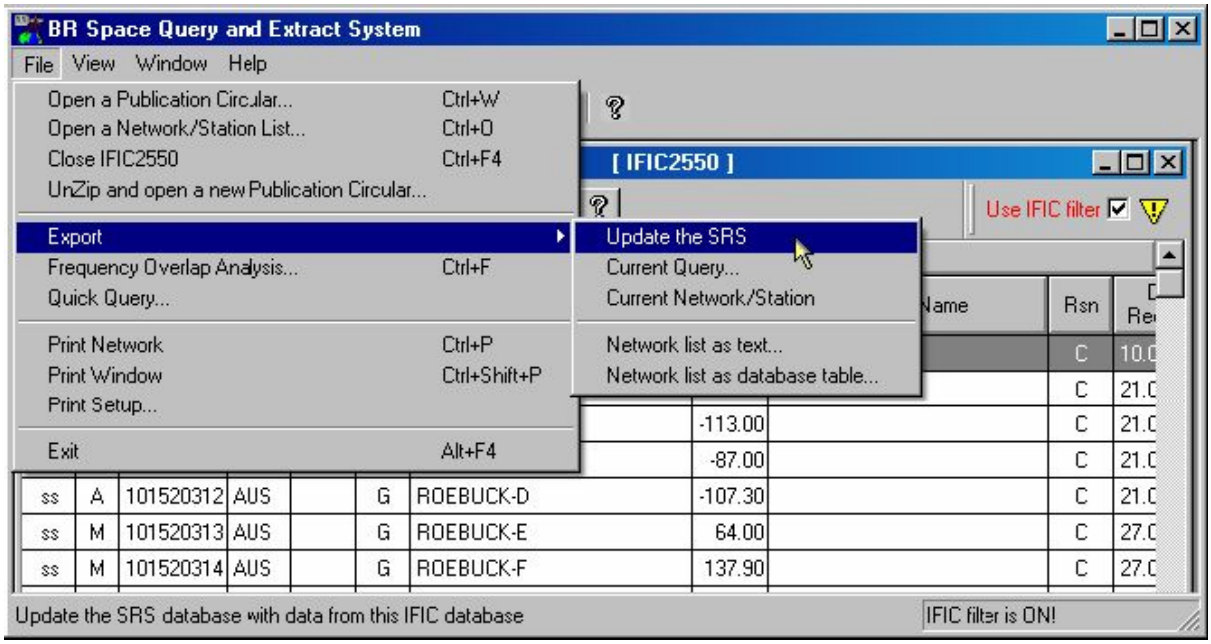
The second suggestion was to be able to optionally sort the Validation Report by validation item and rule ID, to thereby be able to view all similar errors together. This feature has been implemented so that by using the hotkey combination of **ALT+S** (**alt**ernate **s**ort), the report toggles between the original *beam-and-group* sort and the newly implemented *validation-item-and-rule-ID* sort. While viewing the Validation Report, each application of the **ALT+S** hotkey will resort the report and produce one the following pop-up info boxes:

The use of the **Alt-S** hotkey is a temporary solution to this requirement. Eventually, SpaceQry will be extended to have this sorting feature available from the Quick Queries results menu.

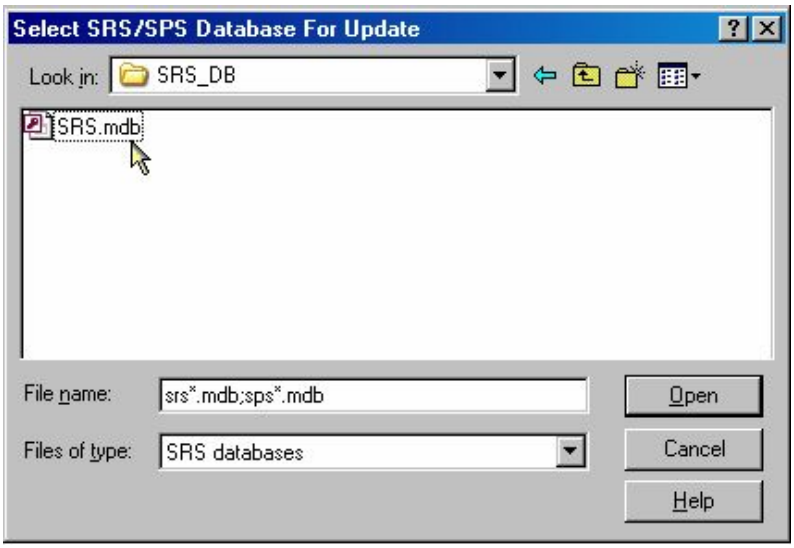
Simplification of the SRS-IFIC Update Procedure

Following the SpaceQry presentation and workshop held during the Radiocommunication Bureau's Geneva Seminar 2006, several people suggested that the process of updating the local copy of the SRS database with the bi-weekly IFIC databases be simplified. A new, simplified procedure has been developed, but you can also continue to update your SRS by the previous method, if you prefer.

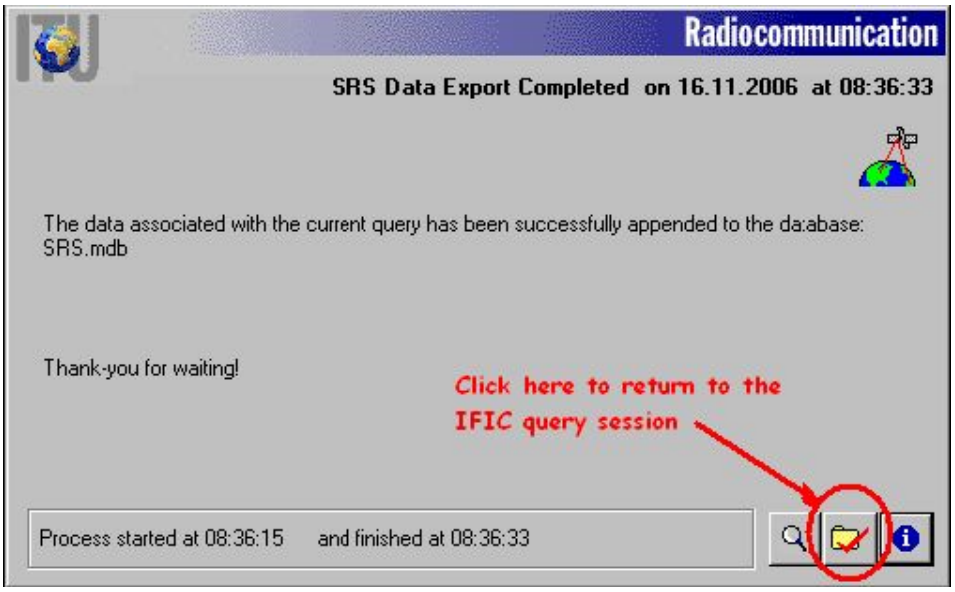
To use the new method to update your SRS, while perusing the IFIC database in question, select the *Update the SRS* item from the File:Export menu as shown below:



SpaceQry will then ask you to select your SRS database with a standard *File Open* dialogue:

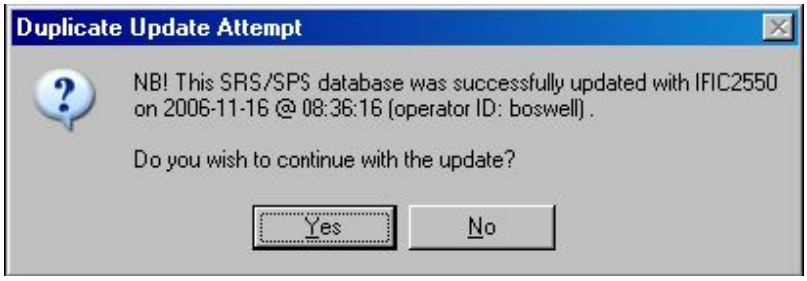


Once the SRS database has been selected, the familiar *download* dialogue will appear and the data exportation will commence. When all of the applicable data has been transferred to the selected SRS database, you will be notified that the export was successful.



To return to the SpaceQry IFIC query session, as before, click on the *checked folder* button.

Another addition to this new update procedure is the ability for SpaceQry to determine if your SRS database has already been updated with a particular IFIC database. As an example, if a second attempt is made to update the SRS shown above with data from IFIC2550, the following warning is generated:



Due to the method in which SpaceQry updates the SRS, there is *no inherent danger* in duplicating the update, however, the process can sometimes be lengthy, so you are always told that the update has already been done, and given the option to continue or cancel.

Problems Fixed in Version 5.5 Interim Update 01

1) SpaceQry has had an inconsistency in loading the BR Preface document. As of this release, when the Preface document is requested, SpaceQry will first try to load the file *preface.pdf* which should be located in the br_soft folder, and when that is not found, it will try to load the file *preface_e.pdf* , *preface_f.pdf, or preface_s.pdf,* depending on the SpaceQry language selection. This is to allow you to use SpaceQry in English, French, or Spanish, but view the preface document in Arabic, Chinese, or Russian, if you so desire. To do this, you need only copy the file *preface_a.pdf*, *preface_c.pdf*, or *preface_r.pdf* to the br_soft folder using the name preface.pdf.

2) At some point in the past, SpaceQry started rounding the display of numerics (especially frequencies) to two decimal places. This has been corrected, and the display of frequencies is now to five decimal places.

General Enhancements in Version 5.5

NB., SpaceQry 5.5 is essentially the same as version 5.4 Interim Update 03 – the version number has been changed only for purposes of including this latest version on the September issue of the SRS on DVD-ROM publication (ed.2006-2).

General Enhancements in Version 5.4 Interim Update 03

Animated Help for Resolution-49 Capture Queries

SpaceQry provides three different methods for selecting a network for the Res49 Capture Query; however, when this query is initiated directly by the *Resolution-49 Capture Wizard* of the SpaceCap software, the user should (normally) use only one of these methods –namely, supplying the network ID. Some users found this confusing, so in response to comments made by these users, an animated help feature has been added to the query when it is called by SpaceCap. Henceforth, when SpaceCap passes the request to SpaceQry, the user is presented with the following pop-up window:

Selecting the *OK* button will continue to allow the user to select criteria as before. Selecting the *Show Me* button on the other hand, will produce some animation guiding the user on how to do the query selecting a network ID from a list of satellites.

Problems Fixed in Version 5.4 Interim Update 03

1) Previously, the SRSConvert program did not properly treat the antenna-type conversion for the beam_tr table for plans. In some cases the incorrect pattern ID was being stored. This problem has been corrected, and the conversion works correctly for all beam_tr entries.

2) Amended the network (drop-down list) selection criteria for the plan-related Res49 capture query. An amended specification was supplied by BR/SSD/SNP.

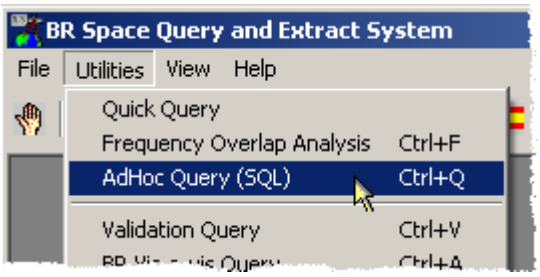
3) The above-mentioned selection criteria for the plan-related Res49 capture query was also added to the satellite drop-down list, so that the satellite list contains only satellites having networks which meet the criteria as specified in item 2).

4) Previous versions contained a bug that occasionally caused an abort while navigating through assignment-level provisions for plans. This has been fixed.

General Enhancements in Version 5.4 Interim Update 02

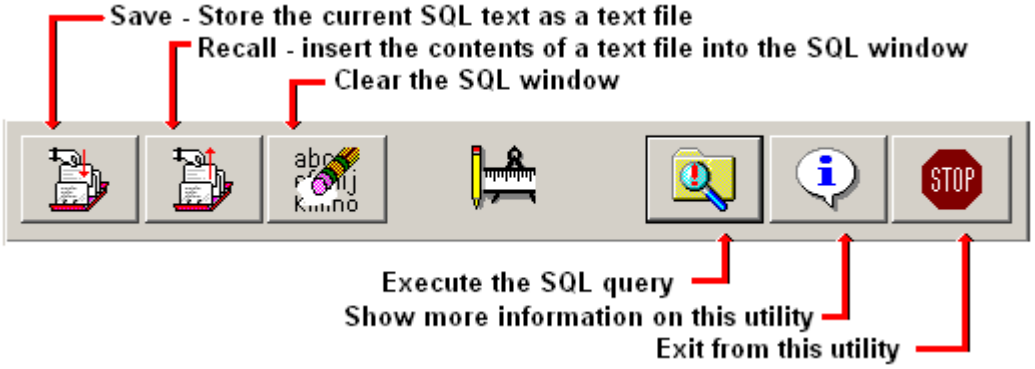
Improvement of the Non-SRS Adhoc Query Facility

The non-SRS Adhoc Query Facility (i.e., using the Adhoc Query Facility on databases *other* than the BR Space Radiocommunication Stations databases) has been improved to allow the user to save, recall and clear their SQL queries. There is also a new option to directly select a MS-Access database, as opposed to going through an ODBC DSN reference. To use this facility, select the *Utilities:AdHoc Queries* option from the SpaceQry Shell menu:



When this menu option is selected, you will be asked to select from the options SRS, MS-Access, or ODBC. Selecting SRS will invoke a normal *SRS AdHoc Query* session. Selecting *ODBC,* as before, will require you to select from a list of ODBC Data Source Names (DSNs). Selecting the MS-Access option will let you select any MS-Access database from a standard, file dialogue.

The utility operates as before with the addition of the following buttons located at the bottom of the Adhoc Query Utility window:



Saved SQL statements will be stored as text files with the extension "**.sql**"

Extension of the SRS Adhoc Query Facility

From time to time, and sometimes without design, a database table can contain unprintable and non-viewable characters such as tabs and line-feeds. As an example, this can easily happen when data is improperly imported into MS-Access from a spreadsheet format. The ability to locate (and correct) such data is not an easy task, even with tools like MS-Access. The SpaceQry Adhoc Query Facility has been extended to provide a mechanism to locate this kind of data by the use of two new character functions, **^chr()** and **^hex()**.

The **^chr()** function take as a parameter a numeric value between 1 and 255, and will return the ASCII character associated with that number; e.g., **^chr(8)** will return the tab character or **^chr(10)** will return a *soft* line-feed character, while **^chr(10) ^chr(13)** will return a *hard* line-feed (line-feed followed by a carriage-return).

The **^hex()** function is similar, but takes as a parameter any number of valid hexadecimal pairs and returns the associated string of character(s); e.g., **^hex(0A0D)** or **^hex(0A 0D)**, as above, will return a *hard* line-feed (line-feed followed by a carriage-return).

As an example of usage, suppose you have satellite names in the geo table which contain tab characters. To locate these records you would use the following SQL statement:

```
Select * from geo where sat_name like '%^chr(8)%'
```

or

```
Select * from geo where sat_name like '^hex(25 08 25)'
```

Problems Fixed in Version 5.4 Interim Update 02

1) Previously, the SRSConvert program did not properly treat the antenna-type conversion for associated earth stations for AP30B. In some cases the incorrect pattern ID was being stored. This problem has been corrected, and the conversion works correctly for all associated earth stations.

2) Corrected the network (drop-down list) selection criteria for the plan-related Res49 capture query. Previously, a *reversed* "not" condition was supplying a list of networks which did not need Resolution 49 treatment >>>oops!<<<.

3) When the plans' *Reference Situation* dialogue/query was added to SpaceQry, the original specification did not provide for assignments having non-standard center frequencies (i.e., for those frequencies not included in the channels table). The querying method has been changed to find the proper channel number for all frequencies (standard and non-).

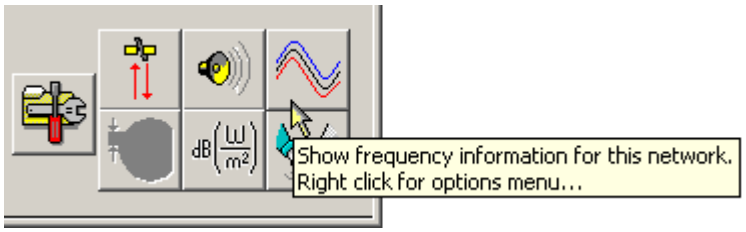
4) Re-established the assignment level provision (tr_provn) display for plans, which had previously been removed for non-plan data.

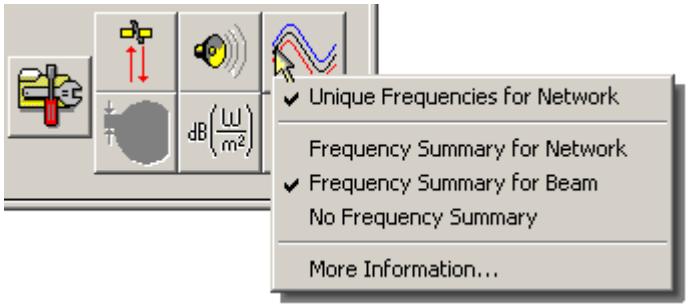
General Enhancements in Version 5.4 Interim Update 01

Viewing Network-level Frequency Information

The main enhancement for this interim version is the ability to view frequency information from the network-level perspective during a *Standard Query* (perusal). This ability has been present in SpaceQry for several years, but only available separately as two *Quick Queries*.

The button array at the bottom of the *Network Detail* window now has a frequency button as shown in the illustration to the right. Clicking on this button will produce frequency information for the network as specified by your options.



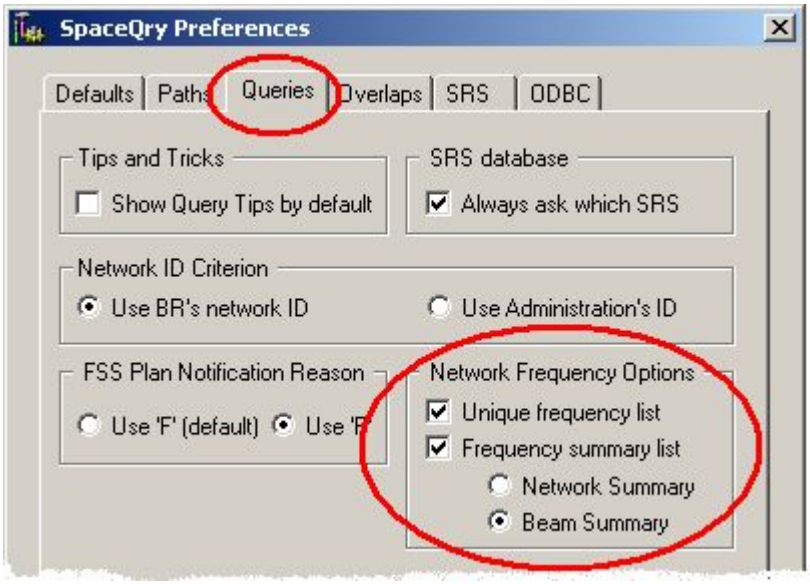


Right-clicking the pointing device on the *Frequency Button* will invoke a drop-down, context menu which shows your current frequency display options. Selecting the *More Information...* menu item will display a pop-up box which shows the following explanation of the frequency display options:

There are two possible ways of viewing frequency information at the network level. The result(s) of clicking on the frequency button will depend on which items are selected (or checked) in the frequency button menu. The options are as follows:

1) the Unique Frequency List shows a list of all unique frequency bands followed by all associated classes-of-station and the beams in which they appear.
2) the Frequency Summary List shows all frequency bands which are unique within their beam and class-of-station. There is a further option to show this information for the entire network, or only for the beam which is currently selected in the beam list window. If the beam option is chosen, then the frequency data is automatically updated as different beams are selected

NB: the default values for these options can be set on the *Queries* Tab of the SpaceQry *Preferences* Dialogue.

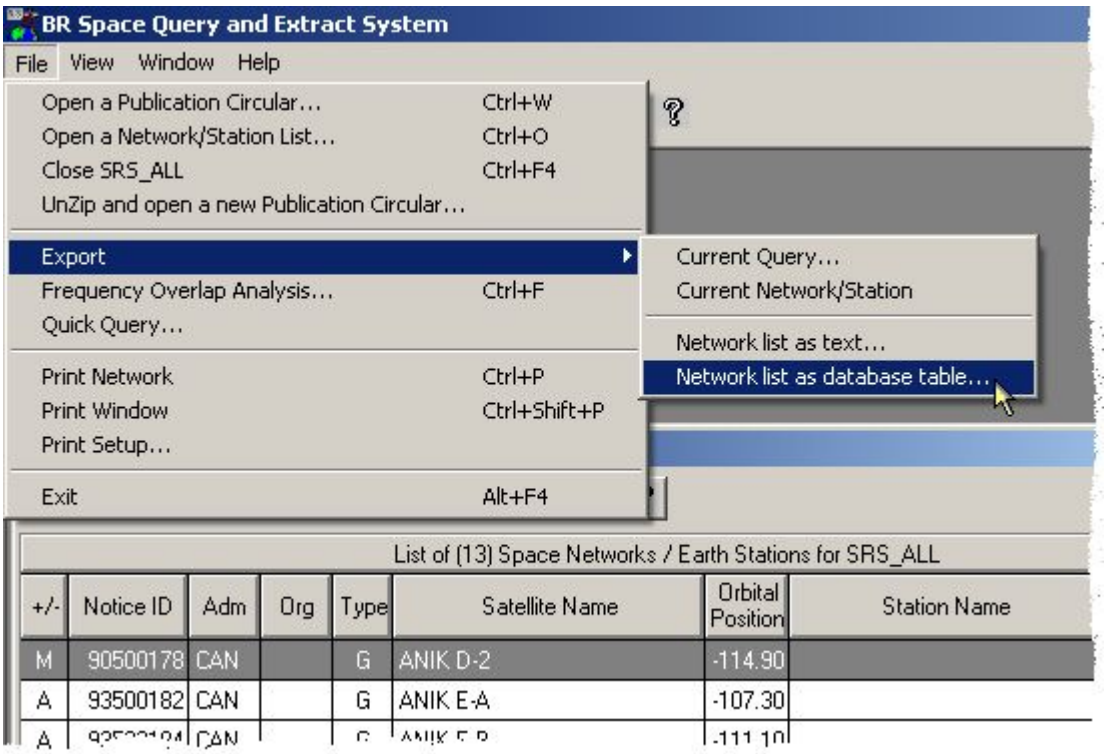


General Enhancements in Version 5.4

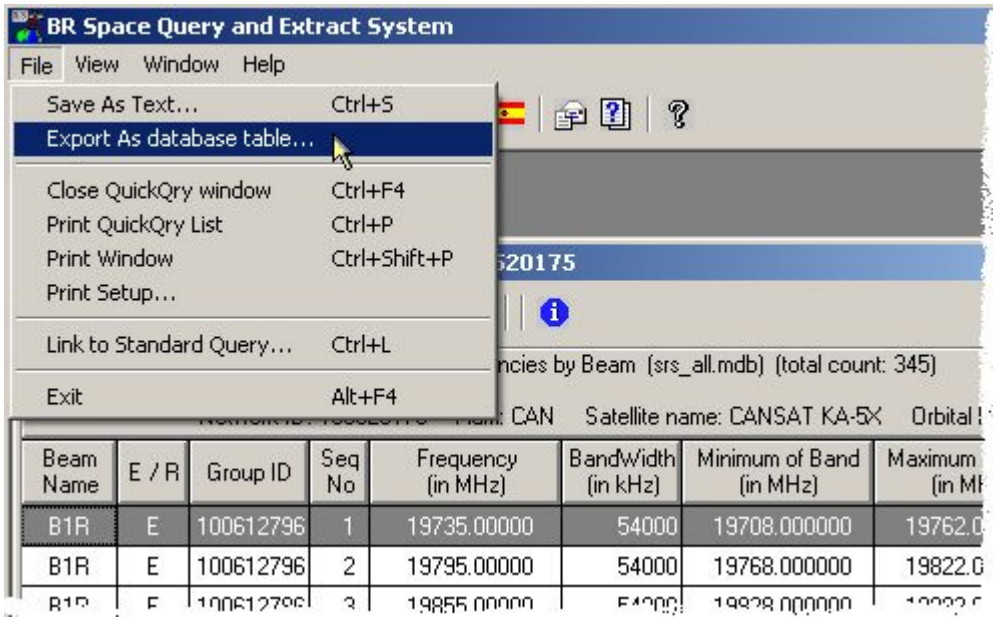
Exporting Query Results To A Database Table

Enhancements for this version have added the ability to export the contents of a browser list to a database table in a selected database. So now, in addition to exporting to fixed and delimited text, you can also export the "list" information to another database table.

The following illustration shows how to export a browser list from a *Standard Query* window:



The following illustration shows how to export a browser list from a *Quick Query* window:



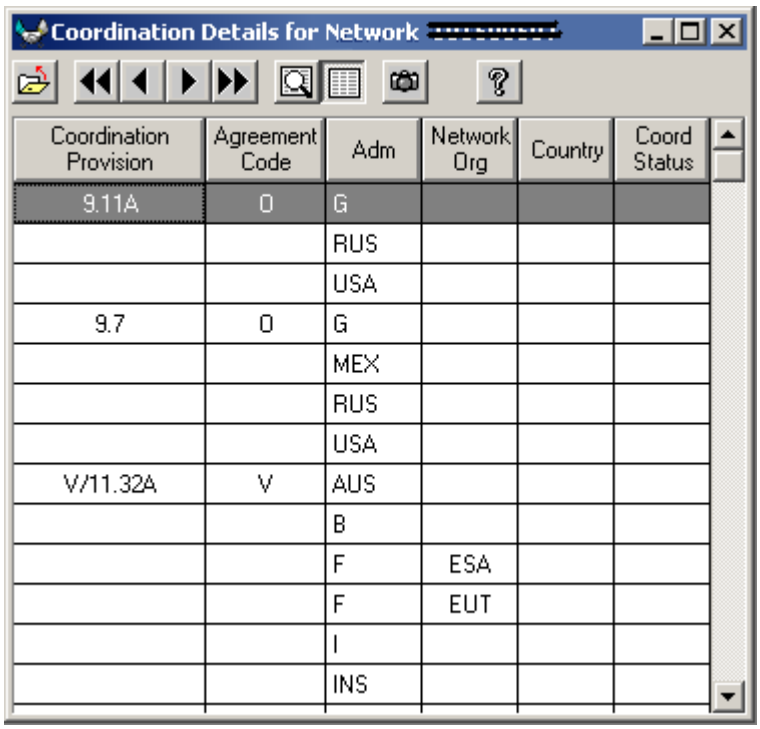
NB: the above illustration shows the same mechanism for exporting a browser list from an AdHoc

Query window.

In all cases, SpaceQry will respond by asking you to select a target database; if the database does not exist, it will be created for you, and if it does exist, you will be asked to verify your request. The new table name will be in the format: *xxxxx_yyyymmdd_hhmmss*, where xxxxx is either the query type (Overlap, Quick or Adhoc) or the source table mnemonic in the case of a *Standard Query* (Network, Group, etc.). Examples would be *Network_20060315_102213* (for the former illustration) and *Quick_20060315_112804* (for the latter illustration).

Coordination Details For Entire Network

Enhancements for this version also include the ability to see an overall picture of coordination information for a given notice. This is done by combining the existing coordination information for all frequency groups within a notice into a single, unique list. This information can be viewed during a *Standard Query* by clicking on the  *Show coordination info* button located in the lower right-hand corner of the Network Details window. The following illustration shows an example of this information:



Problems Fixed in Version 5.4

1) Previously, if any of the provision records were incorrectly sequenced, the SpaceQry display of the provisions for the associated group was incorrect. The display of the provision records has been redesigned so that the sequence numbers are no longer important.

2) There was also an occasional problem when navigating through a list of groups with the provision window open. Given the right circumstances, SpaceQry would abort when attempting to automatically navigate the provision window. This problem has been corrected.

3) There was an erroneous display of navigation buttons when viewing an Art-2A plan notice. This has been corrected and the display of strap, noise and reference situation buttons work properly now.

4) Previously, if a request was sent to SpacePub to print a Plan notice, SpaceQry did not properly communicate a “plan indicator flag” to SpacePub, and the resulting report was not in the proper format. This has been corrected and Plan-related reports are properly issued.

General Enhancements in Version 5.3.1

New Quick Queries and the Quick Query Tab

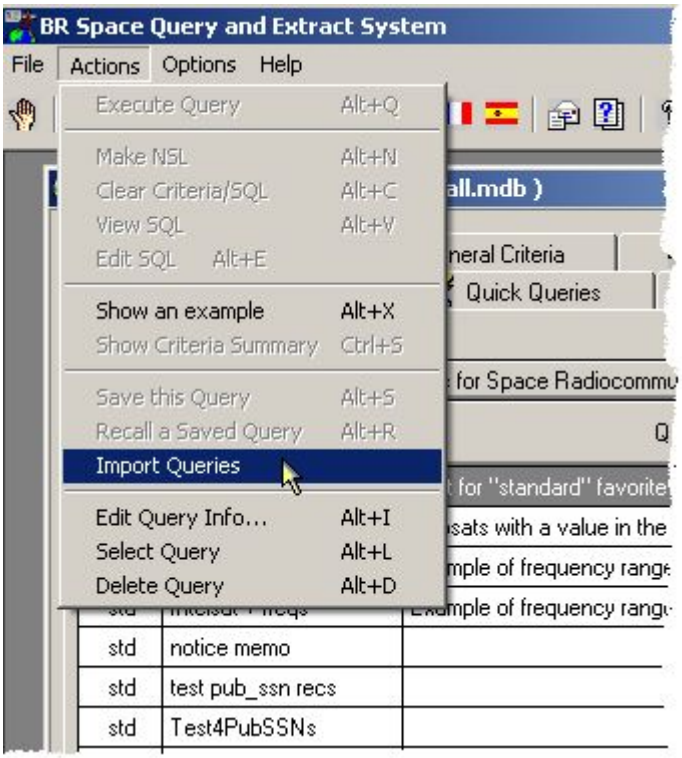
The main enhancements for this interim release of SpaceQry concern the *Quick Query* facility. Two new queries have been added, and the overall presentation of the Quick Queries (QQ’s) has changed. Previously, the display of the QQ’s was based on the chronological order in which the QQ was introduced, and the display of the QQ’s was based on *pages* regulated by a page sliding control. Henceforth, the QQ’s are organized to a certain extent by the subject of the results obtained. For this release there are three pages of QQ’s, located on sub-tabs labeled as *Frequencies, Rs49 / API,* and *Special.* For a comprehensive discussion of the new queries and the sub-tab display please see the *Quick Query Tab* section of the newly updated *Query Specification Guide* (SQryGuide.pdf) which has been installed with this SpaceQry update

General Enhancements in Version 5.3

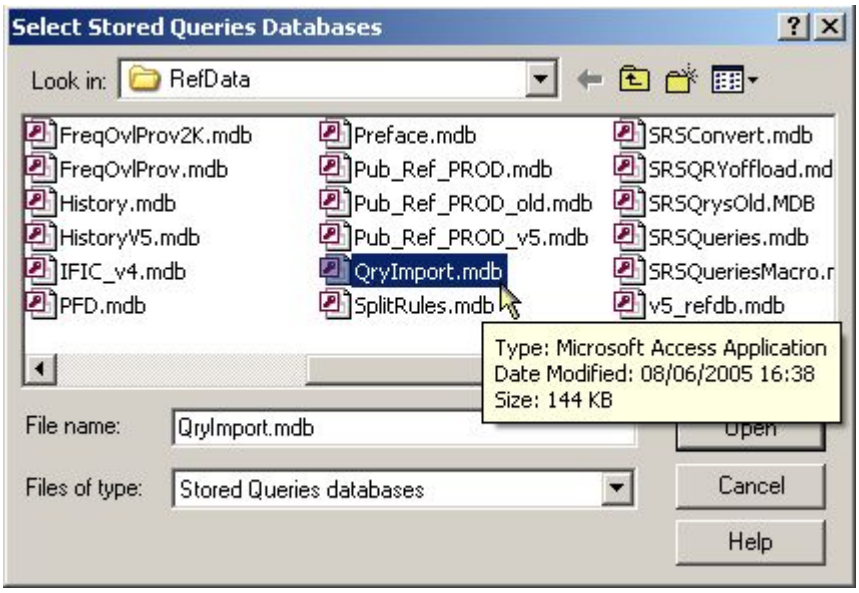
Importing Saved Query Specifications

In SpaceQry, when you "Save" a query specification, the individual criteria-field values and the generated SQL statement are actually stored in a database file which is maintained by the SpaceQry software. Additional queries can be imported into this query-specification database by the following procedure:

Step 1) After opening *any* query session, from the *Saved Queries* tab of the *Query Criteria w*indow, select the *Actions:Import Queries* Menu item, as shown here:



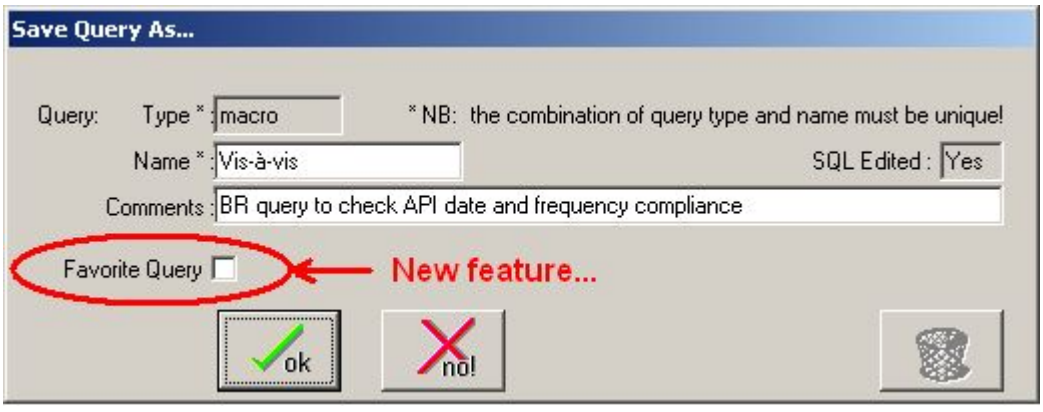
Step 2) After selecting the *Actions:Import Queries* Menu item, SpaceQry will ask you to select the Stored Queries database from which it should do the importing. This can be any *SpaceQry-Criteria-formatted* database (*caution!*), but normally when the BR distributes query specifications, they are distributed as a file named *QryImport.mdb* and will be installed into your ...br_soft\RefData folder. Select the desired file by double-clicking on the file name or clicking on it once and then clicking on the *Open* button:



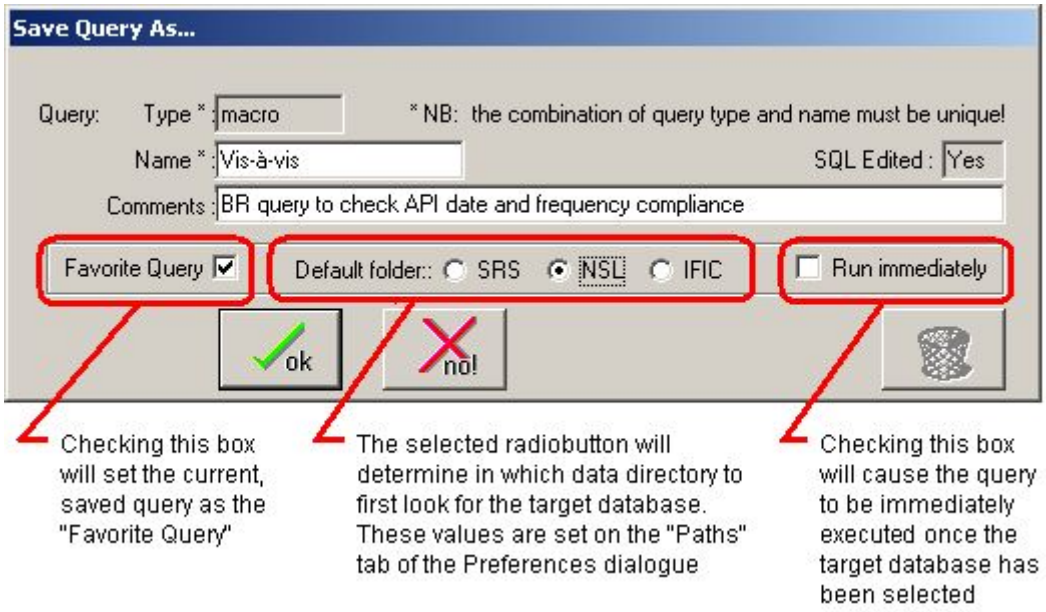
If the selected file has the proper database structure, the query information will be imported and merged with your saved queries information, and the imported queries will be immediately visible in the list of queries on the *Saved Queries* tab.

My Favorite Query

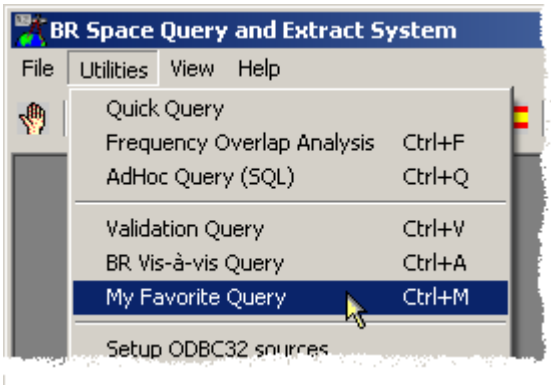
When saving an *AdHoc* or *Macro Query*, or saving specific querying values for a *Quick Query*, on the "*Save Query As…*" window you will notice a new checkbox entitled "*Favorite Query*" located just above the "OK" button as shown immediately below:



Clicking on this checkbox will toggle 1) the designation of the associated *Saved Query* as your favorite query and 2) the display of a group of radiobuttons and another checkbox. When *Favorite Query* is selected, you are then asked for two additional bits of info: the first is to specify where to look for the targeted database. The values SRS, NSL, and IFIC relate to the directories/folders associated with the same values which are set on the "Paths" tab of the SpaceQry preferences dialogue. The second item is to specify whether or not to immediately execute the query. See the illustration directly following for further explanation.



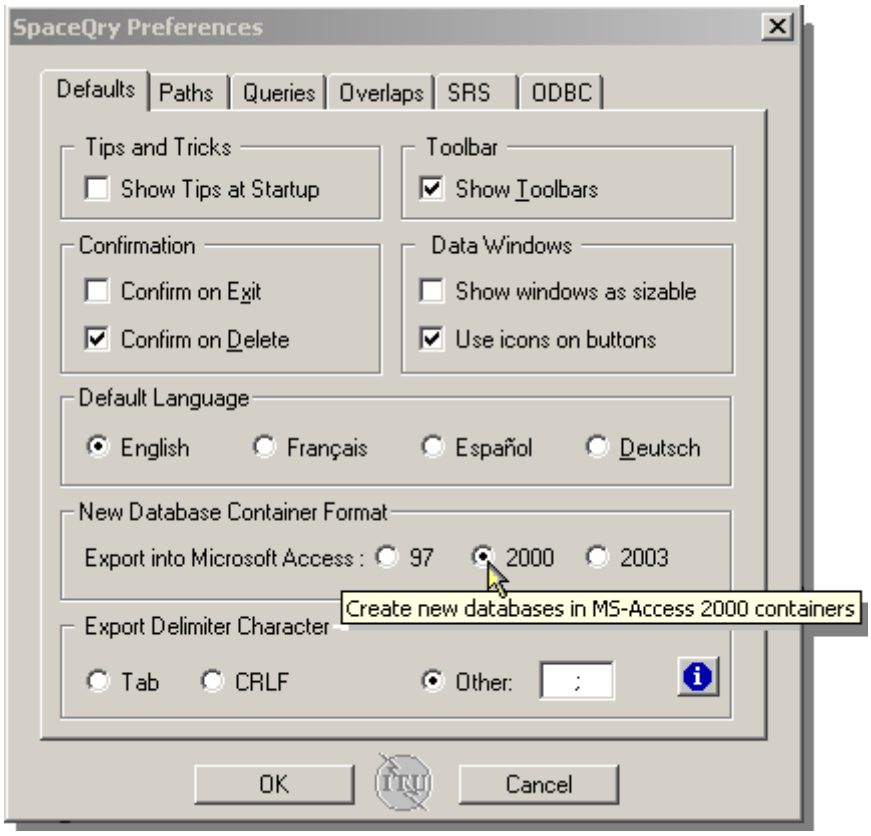
If the *Favorite Query* box is checked, when the OK button is selected, then SpaceQry will save the information and allow you to later recall and run this query directly by selecting the *My Favorite Query* option from the *Utilities* menu of the SpaceQry shell window as shown below.



Specifying Which MS-Access Format

For the past several years, when you export(ed) SRS data into a new database, or when you create(d) a new space network filing with the *Space Capture System (SpaceCap)*, the resulting database will have been in a Microsoft Access-97 container. This action has been continued primarily because MS-Access-97 has a more efficient compaction algorithm. The down-side to this is obvious, since in order to work with the databases directly in a later version of MS-Access you must then convert the database container to the new version. Since *SpaceQry* and all other components of the *BR Space Software Suite* process these databases through ODBC, the MS-Access version of the container is irrelevant.

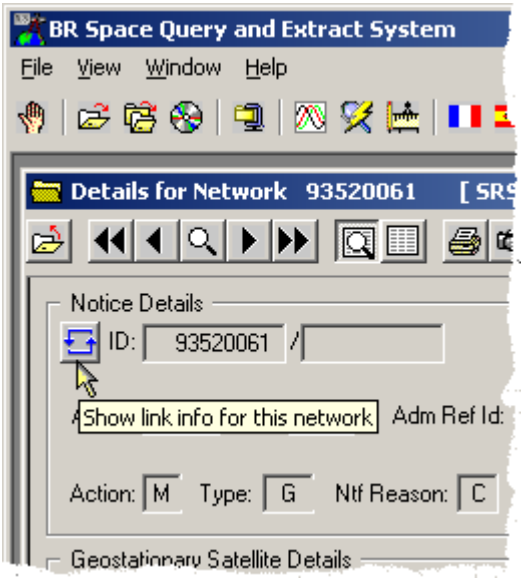
With SpaceQry version 5.3, you can now select which MS-Access container version into which you wish to have your new databases stored. By default, the BR software packages will still create new databases in MS-Access 97; however, if you wish to change this to either MS-Access 2000 or MS-Access 2003 (a.k.a. MS-Access XP), then you may do so at any time by selecting the associated radio button on the *Defaults* tab of the *SpaceQry Preferences* dialogue as show below. To save your preference changes click on the Ok button.



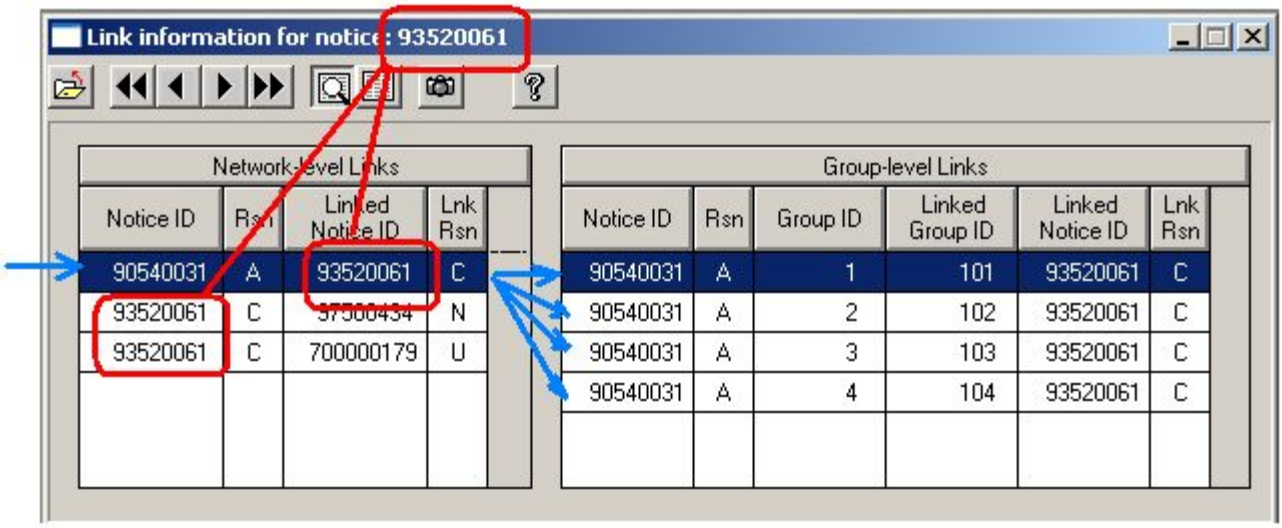
All new databases created thereafter will be in the new MS-Access format.

Display of Network/Group Link Information

Starting with use of the version-5 SRS database, the BR has the ability to maintain links between various stages in the life of a Network (e.g., API – Coordination – RS49 – Notification). These links are maintained at both the network and frequency-group levels. To view the link information for a given network, click on the *Show Links* button located immediately to the left of the network ID field on the *Network Details* window as shown below:



The following is an example of the Link window for the network 93520061 which is generated by clicking on the links button as seen above:

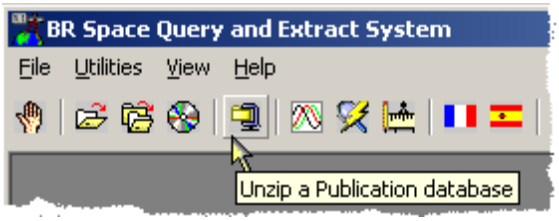


As shown in this illustration, at the network-level all links corresponding to the current network (both linked-from and linked-to) are shown. The Group-level links, however, correspond to the currently-selected network-link pair. In the example above, the group links shown are *only* those which have a notice ID corresponding to the notice ID of the network-link (90540031), and a linked-notice ID corresponding to the linked-notice ID of the network link (93520061). As you navigate through the network-link table, the values in the group-link table will change accordingly.

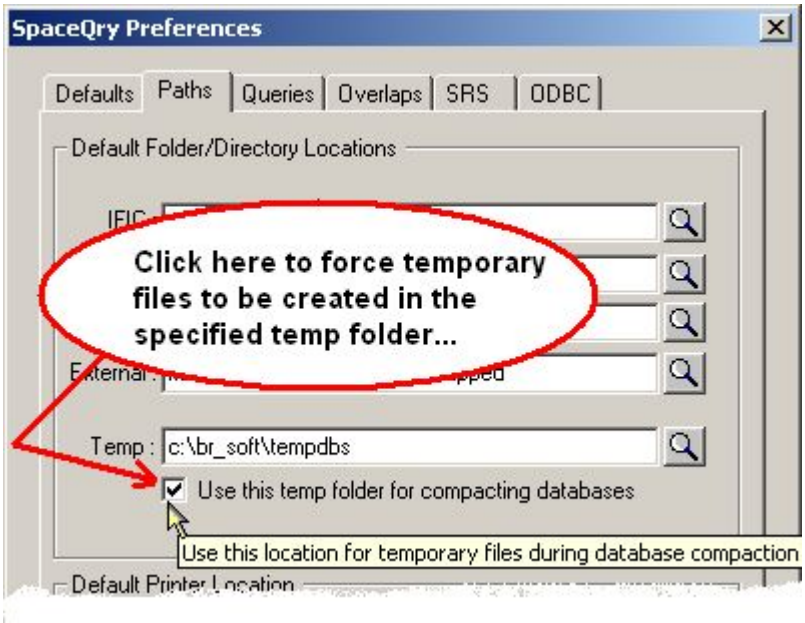
General Enhancements in Version 5.2

1) Some comments were made during the 2004 BR Seminar regarding the confusion surrounding "importing" and "exporting" from one SRS-formatted database to another. The SpaceQry concept of updating a local copy of the SRS database with the data from IFIC database publications has always been a concept of "export" rather than "import." This evolved from the fact that normally the IFIC databases and the SRS located on the CD-ROM are read-only files, and *exporting from these databases while perusing them* always made more sense than opening an NSL and importing from the IFIC databases (as an example). To complicate matters, SpaceQry has hitherto always had a *File Menu* item and associated toolbar button named *Import an IFIC* - this was a legacy term used in the days of distributing IFIC (or WIC, at the time) databases on floppy disks, and is now actually a misnomer for what the function actually does.

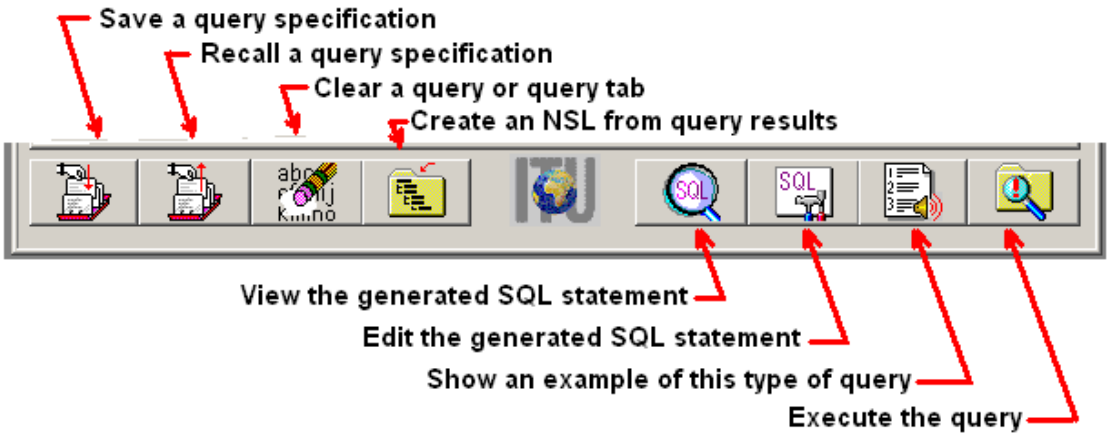
Henceforth, the menu item has been changed to read *Unzip and open a new publication circular...* and the associated toolbar icon is a PKZip image as shown below.



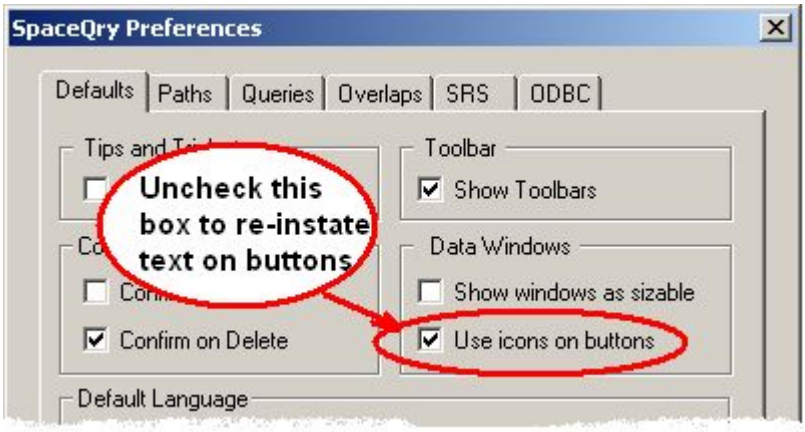
2) Also as a result of discussions during the BR Seminar, SpaceQry has been modified to allow the user to specify the directory (and drive) in which all temporary files are created. Although there has never been a drive restriction where SpaceQry is to be installed, SpaceQry has always used Windows defaults for temporary file areas (when it needs to dynamically create a file, as in compacting a database from the SpaceQry *Utilities* menu). This (oddly) has caused a problem for a few users who, for security reasons, have been allowed very limited access to their c:drives. To specify where these temporary files are to be located, you can amend your options on the *Paths* tab of the SpaceQry *Preferences* dialogue to the following:



3) The Criteria dialogue has been changed to display action buttons with icons. The icons and their meanings are shown immediately below (NB, no functionality has changed).



For those users who prefer their buttons with text, these icons can be suppressed by unchecking the *Use icons on buttons* box on the *Defaults* tab of the *Preferences* dialogue:



Problems Fixed in Version 5.2

Following the release of version 5.1 and its feature to produce a Resolution 49 filing database for SpaceCap, two amendments have been made to the associated Quick Queries:

1) The wording for both Res-49 filing queries has been changed. Formerly, a date range was a required criterion, but this has been changed, and the associated wording has been changed to match.

2) The database file resulting from these Res-49 queries is created using the satellite name as part of the file name. When the satellite name included certain characters, specifically an asterisk (*) or a slash (/), windows would not allow the creation of the file. SpaceQry has been modified to remove these special characters from the satellite-name string before creating the file.

3) There were some problems with the generated SQL from the *Publication List* Quick Query due to the naming differences between v4 and v5 of the group-level publication tables. This problem has been corrected and the query is running properly for both database versions.

SpaceQry version 5.1 Interim Update 01 - What's New?

Changes for SpaceQry 5.0 and 5.1 primarily address the new version 5 SRS database structure resulting from decisions made during the WRC-2003 conferences. Although this version of SpaceQry can still view most version 4 SRS databases, it *should* be used exclusively with version 5 SRS databases. It is recommended to convert your version 4 databases to version 5 using the new SRSConvert program which has been supplied with this installation. NB, you will notice that the version numbering of SpaceQry jumped from 3.2.2 to 5.0, skipping a version "4". As with other SRS software, this was done to align the software and database version numbers.

If at any time during the execution of the SpaceQry program, you wish to view this document, you can select the *What's New in Version 5.1* option from the *Help* menu, or click on the *What's New in Version 5.1* toolbar button.

Problems Fixed in Version 5.1 Interim Update: 01

Two relatively serious problems were discovered in the display of beam and publication data when executing a Standard Query. The correction of these two problems was important enough to warrant an interim release...

1) When running any *Standard (perusal) Query*, the publication information, both at the network and group levels, was not being displayed properly. This problem has been corrected.

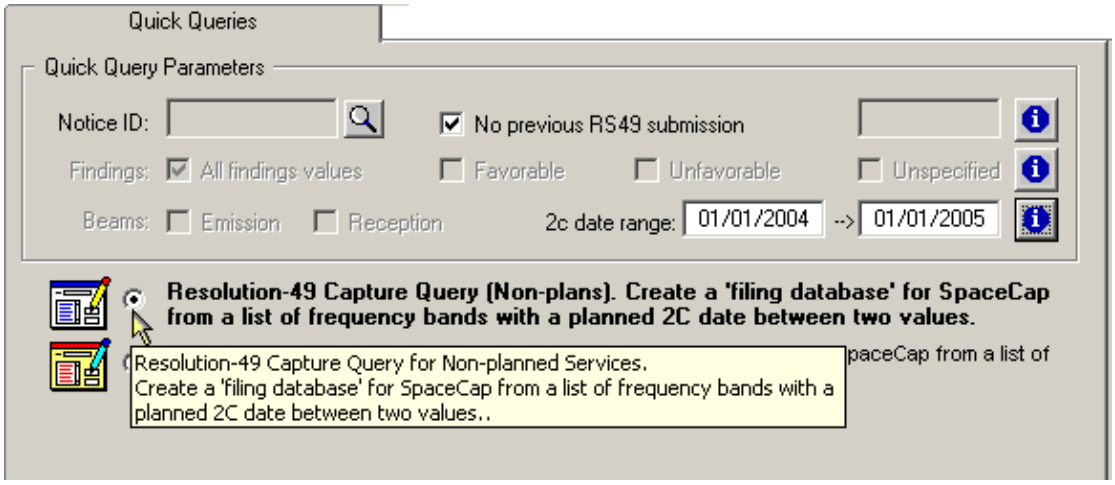
2) When running a *Standard (perusal) Query* on an IFIC database with the *IFIC filter* turned on (default), navigating to a geostationary or non-geostationary network would generate an SQL error, and subsequently, not display any beams. This has been corrected.

3) For internal BR users, there was another (and extremely annoying) display problem when viewing beam details. When running a *Standard (perusal) Query* in the default, non-maximized state (800x600 pixels), and then requesting beams details by double-clicking on a beam row, SpaceQry would produce the beam detail window and display it as centered. This is not a problem for external users, nor for BR internal users who have their "BR user" setting turned off. However, for most BR internal users, the resulting beam detail window (which also includes the *BR data* portion) would be displayed with the associated caption bar and menu above the accessible area of the SpaceQry window. The resulting window could neither by moved nor closed by normal means. The centering option has been removed, and the window is now properly placed in the SpaceQry window.

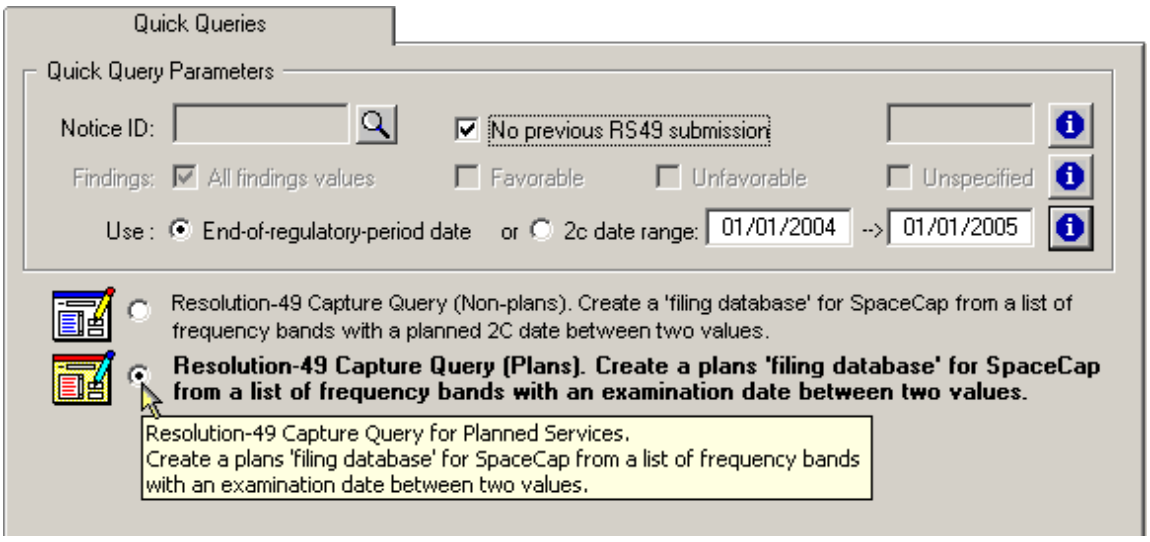
General Enhancements in Version 5.1

As mentioned above (as well as in the section on version 5.0), the basic changes for this release further address the new version-5 SRS database structure. Other enhancements which are new for this release are as follows:

1) Two additional *Quick Queries* have been added which are referred to as *Resolution 49 Capture Queries*. These queries allow you to first query for networks which contain Resolution-49-sensitive frequency bands, and then allow you to create a database which can be used by the *RS49 Wizard* facility of the *SpaceCap* component to build a Resolution-49 filing database. The first of these queries is for use with non-planned services, and will use the *date of bringing into use* (2c-date) as the basis for the query:

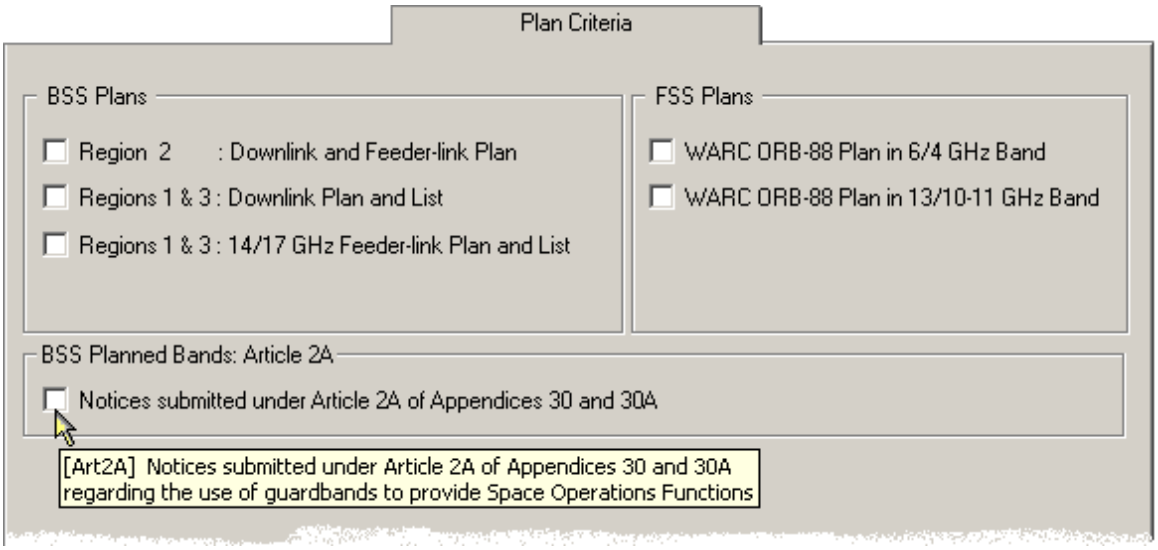


The second of the Resolution-49 Capture queries is for use with planned services, and can use either the 2c-date or the *end of regulatory period* (examination) date as the basis for the query:



Both of these queries appear on page 3 of the Quick Queries tab. For more information, please read the associated description in the SpaceQry *Querying Guide.*

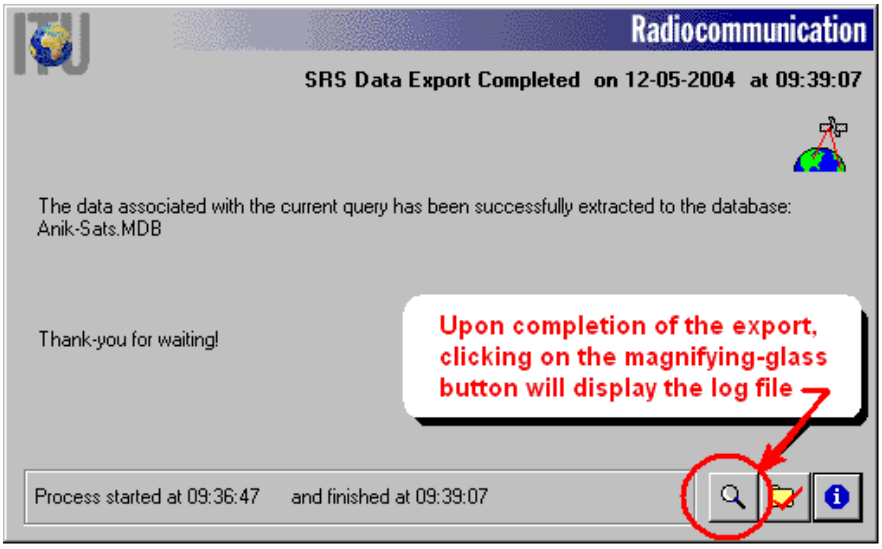
2) An additional query criteria item has been added to the *Plan Criteria* tab which will allow you to identify notices which have been submitted under Article-2A of Appendices 30/30A which relate to the use of guardbands to provide Space Operation Functions



General Enhancements in Version 5.0

As mentioned above, the basic changes for this release primarily address the new version-5 SRS database structure which has resulted from the WRC-2003 conferences. These changes, however are not so noticeable to the SpaceQry user, other than some new data fields here and there, and some existing data which will have moved from one window to another. You are invited to peruse the Acrobat Adobe document "srs_dbv5.pdf" which describes these database changes in detail. The other enhancements which are new for this release are as follows:

1) The presentation of the *Network Download* dialogue has been changed to show simpler progress and results data. While some users found the record count statistics useful, most did not. As a result this information is no longer displayed on in the dialogue box. It is, however, recorded *in full* in an export log file. The log file will be written into the same directory/folder as the target (data-receiving) database, and it will have the same root name as the target but with a ".log" extension. As an example, if you update your ***c:\srs-db\srs.mdb*** database with ***IFIC2357.mdb*** data, the log information will be written (appended) to the file ***c:\srs-db\srs.log.*** This file is not erased by the exporting procedure, so, as in the case of a bi-weekly IFIC update to your SRS database, the log file will keep a running record of the update activity. An example of the new dialogue window and the export log follow:




```
============================================================
 SRS Database update on 12-05-2004  @ 11:33:20
------------------------------------------------
DB  = C:\BR_SOFT\Data\Anik-Sats.mdb
SQL = select * from com_el where ((ntf_rsn='N' ) and (adm='CAN' ) and
(ntc_type='G' )) order by adm, sat_name, stn_name, ntf_rsn, ntc_id
fnx = Copying

  - com_el      :      4    completed @11:33:20
  - com_el      :      4    completed @11:33:20
  - notice      :      4    completed @11:33:20
  - e_stn       :      0    completed @11:33:20
  - e_ant       :      0    completed @11:33:20
  - hor_elev    :      0    completed @11:33:21
  - e_ant_elev  :      0    completed @11:33:21
  - geo         :      4    completed @11:33:21
  - strap       :    176    completed @11:33:23
  - ngma        :    132    completed @11:33:24
  - pl_strap    :      0    completed @11:33:24
  - non_geo     :      0    completed @11:33:24
  - orbit       :      0    completed @11:33:24
  - phase       :      0    completed @11:33:24
  - sat_oper    :      0    completed @11:33:24
  - s_beam      :     18    completed @11:33:25
```

General Enhancements in Version 3.2 Interim Update: 02

The basic enhancements for this release will primarily affect users interested in using SpaceQry in conjunction with the **SpaceVal** software. This interim update description includes all items covered in the version 3.2 Interim Update 01 which was an internal release to BR users. The enhancements which are available for this release are as follows:

1) All "fatal error" entries in the *Validation Quick Query* result are **displayed in red**.

2) If the *Validation Quick Query Report* is printed on a color printer, all "fatal error" rows are **printed in red**; otherwise, the "fatal error" rows are **printed in bold**.

3) The report header information contains an accurate tally of total, fatal, and warning messages, regardless of the message display option which was selected. This option is also included as header info; and example of this header line is as follows:

Validation Message Counts: Total: 4887, Fatals: 1877, Warnings: 3000; Message Option: Fatal Only

4) SpaceVal has been changed to write an *Information* message (code= I) upon the completion of validation. As a result, if and when no errors or warnings are produced, SpaceQry can still produce a validation report which will show a “no validation errors” message.

Problems Fixed in Version 3.2 Interim Update: 02

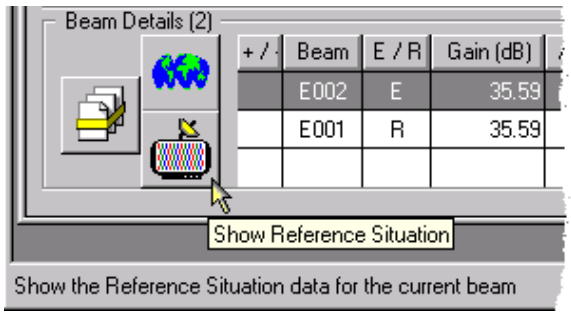
1) The report header information for the *Validation Report Query* has been corrected to give proper results. In the last release, totals were given for all messages in database (oops!). This correction will give totals for the current network.

2) When running the *Validation Report Query* certain combinations of empty fields in a validation message row could cause “Invalid data type” aborts in the previous release of SpaceQry. This has been corrected, and should no longer happen.

General Enhancements in Version 3.2

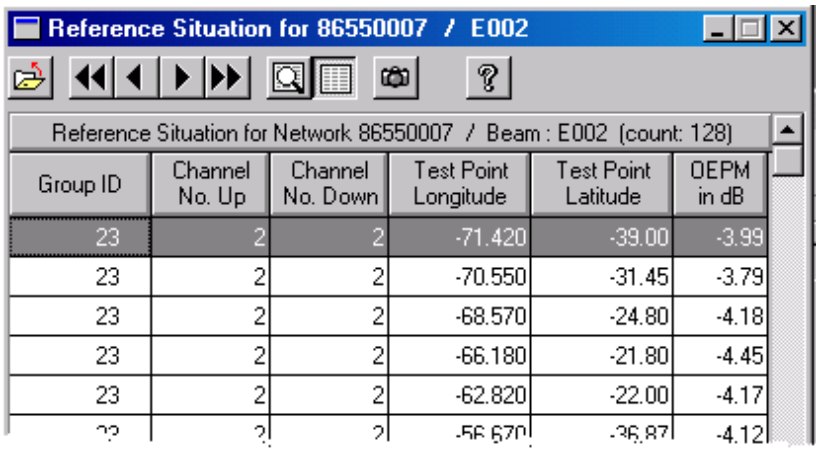
The basic enhancements for this release will primarily affect users interested in querying the Space Plans System (SPS) Databases. The second stage of adapting and extending the SpaceQry package to the Space Plans System has begun (and is continuing). The enhancements which are available for this release are as follows:

1) The BSS plan ***reference situation*** **data** for a given network and beam can be viewed by clicking on the *Show Reference Situation* button located in the lower left of the *Network Detail* window.



This action will typically produce the following data lists depending on the region of the satellite:

Reference Situation Data Region 2 Example

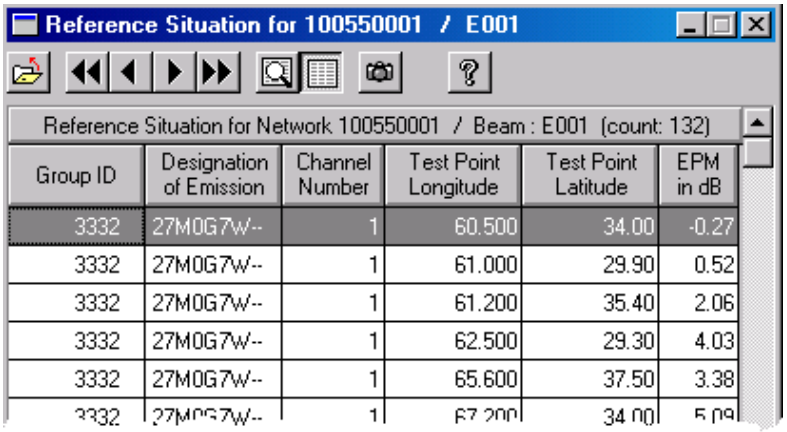


Reference Situation for 86550007 / E002

Reference Situation for Network 86550007 / Beam : E002 (count: 128)

Group ID	Channel No. Up	Channel No. Down	Test Point Longitude	Test Point Latitude	OEPM in dB
23	2	2	-71.420	-39.00	-3.99
23	2	2	-70.550	-31.45	-3.79
23	2	2	-68.570	-24.80	-4.18
23	2	2	-66.180	-21.80	-4.45
23	2	2	-62.820	-22.00	-4.17
23	2	2	-56.670	-36.87	-4.12

Reference Situation Data Regions 1 & 3 Example



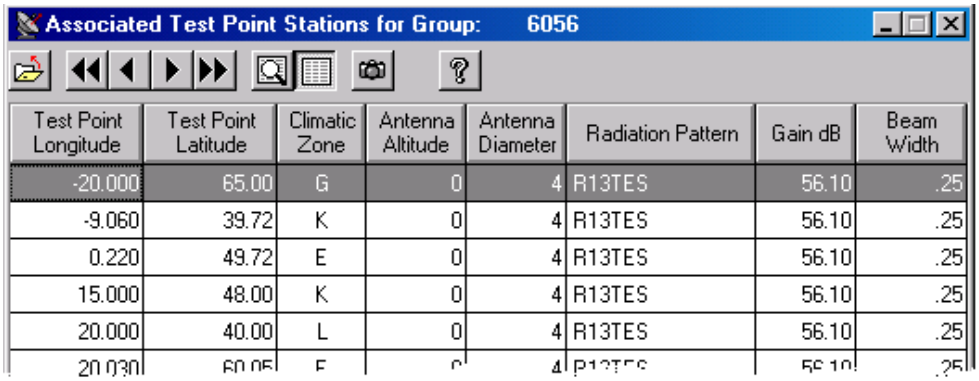
Reference Situation for 100550001 / E001

Reference Situation for Network 100550001 / Beam : E001 (count: 132)

Group ID	Designation of Emission	Channel Number	Test Point Longitude	Test Point Latitude	EPM in dB
3332	27M0G7W--	1	60.500	34.00	-0.27
3332	27M0G7W--	1	61.000	29.90	0.52
3332	27M0G7W--	1	61.200	35.40	2.06
3332	27M0G7W--	1	62.500	29.30	4.03
3332	27M0G7W--	1	65.600	37.50	3.38
3332	27M0G7W--	1	67.200	34.00	5.09

2) The BSS plan *test point* data for a given frequency group can be viewed by clicking on the *Show Test Point data* button located in the lower right of the *Group Detail* window:

This action will produce a list of *Associated Test Point Stations* for the current group.



Test Point Longitude	Test Point Latitude	Climatic Zone	Antenna Altitude	Antenna Diameter	Radiation Pattern	Gain dB	Beam Width
-20.000	65.00	G	0	4	R13TES	56.10	.25
-9.060	39.72	K	0	4	R13TES	56.10	.25
0.220	49.72	E	0	4	R13TES	56.10	.25
15.000	48.00	K	0	4	R13TES	56.10	.25
20.000	40.00	L	0	4	R13TES	56.10	.25
20.030	60.05	F	0	4	R13TES	56.10	.25

For information concerning SpaceQry software releases prior to version 3.2, please see the *What's New* page of the SpaceQry website:

http://www.itu.int/ITU-R/software/space/spaceqry/whatsnew/index.html

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