

SatXmlEditor User Guide

The program SatXmlEditor from version 2.3.1 can edit xml files of four different types of broadcasts. atsc.xml, cables.xml, satellites.xml and terrestrial.xml. It is written for Windows OS, but there is no need to install it (portable version). The program creates its database in the RAM memory, into which it loads the data from the specified xml files. It now only works with this database, so the user cannot accidentally overwrite the source file. **But it may forget to save the changes made.**



Fig. 1 – Appearance of the program after launch

The program can work with all types of files simultaneously. It creates separate tables for atsc, cables, satellites and terrestrial in its database. At the same time, they create separate tables for their transponders. You can quickly switch between the main broadcast type and transponders table by double-clicking on the current table entry.

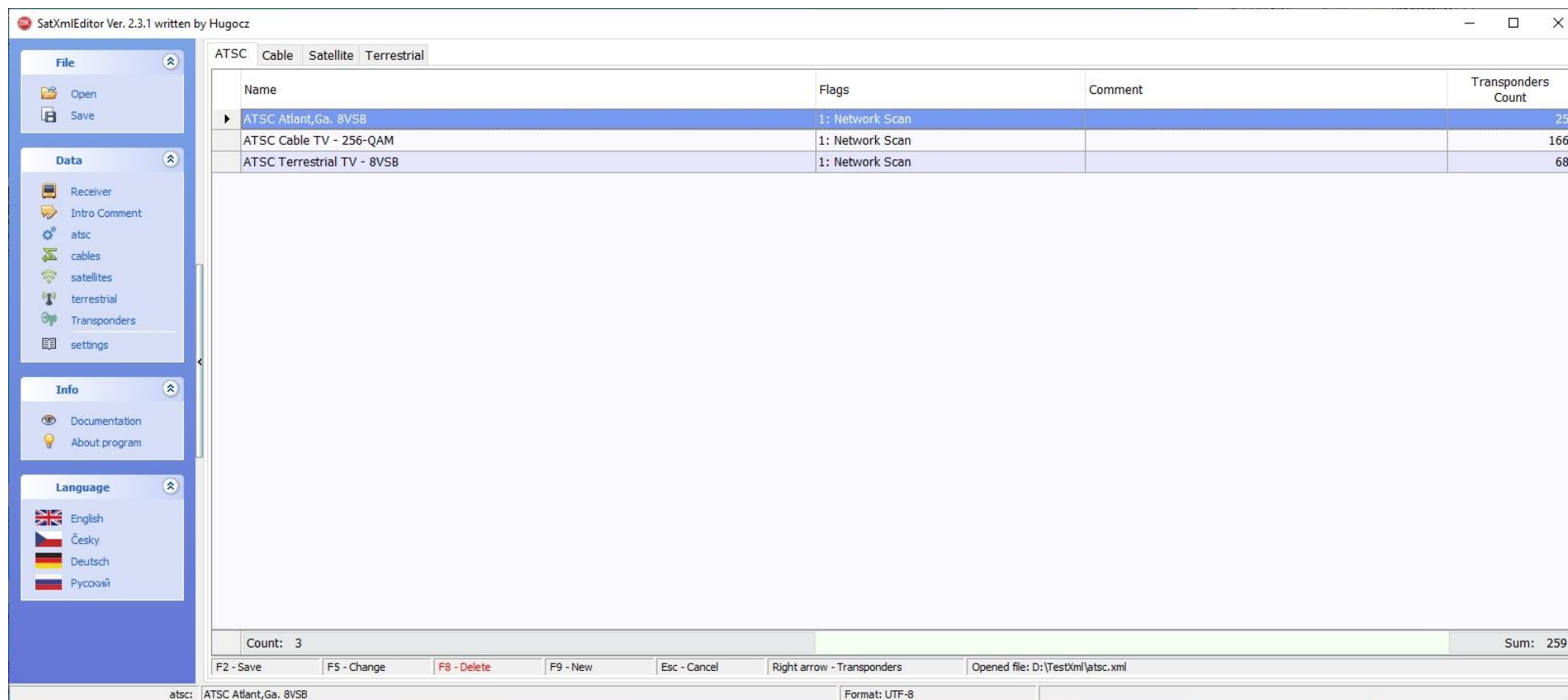


Fig. 2a – The main page with the atsc.xml file loaded

When editing data items, parameters are used, the meaning of which is stored in the file Explanation.xml. After starting, the program uploads these data to the relevant tables of its database and uses them for data editing via drop-down boxes. It is therefore possible to add new values of

existing parameters to this file, which will be introduced in the future. The program will thus learn to use them. It is also possible to correct the descriptions of individual parameters according to your own habits.

After starting the program, we have the option to open xml files from the computer disk or download them directly from the receiver with Enigma. In both cases, the program copies the data to its database and does not continue to work with the source file.

The option to open a file from the computer disk is in the "File - Open" menu on the left side of the program. Depending on the Windows settings, it is also possible to browse the local network and search network drives. When opening a file from disk, there is no need to distinguish what type of broadcast it is. The program automatically recognizes the content of the file, uploads the data and switches to the main page of the detected broadcast type.

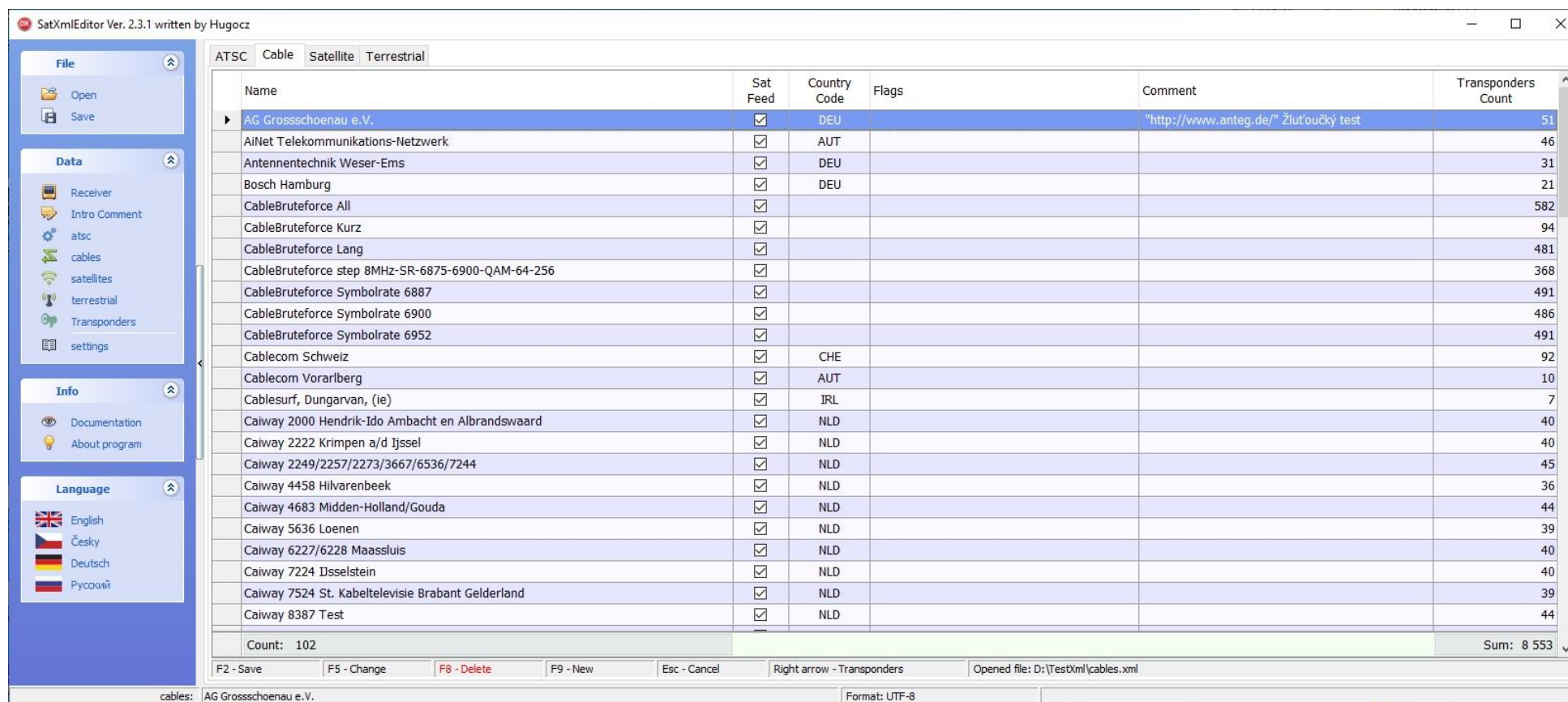


Fig. 2b – The main page with the cables.xml file loaded

The option to download a file from the receiver is in the "Data - Receiver" menu. This page appears automatically after starting the program. The file is downloaded via the ftp protocol. First we need to set the correct connection details to the receiver and the correct path to the xml file, usually "/etc/tuxbox/". In this case, we must already select the type of file we want to download from the receiver. After a successful connection, the communication data is saved in the file SatXmlEditor.ini. At the next start, the program automatically loads them, so it is not necessary to constantly copy the communication data. With the "Save password in SatXmlEditor.ini" check box, we decide whether the password is also saved in readable form (security risk) in this file, or not saved at all. Details of the ongoing connection are displayed in the "Connection log" window. The contents of the log window can be cleared or saved to a file on disk.

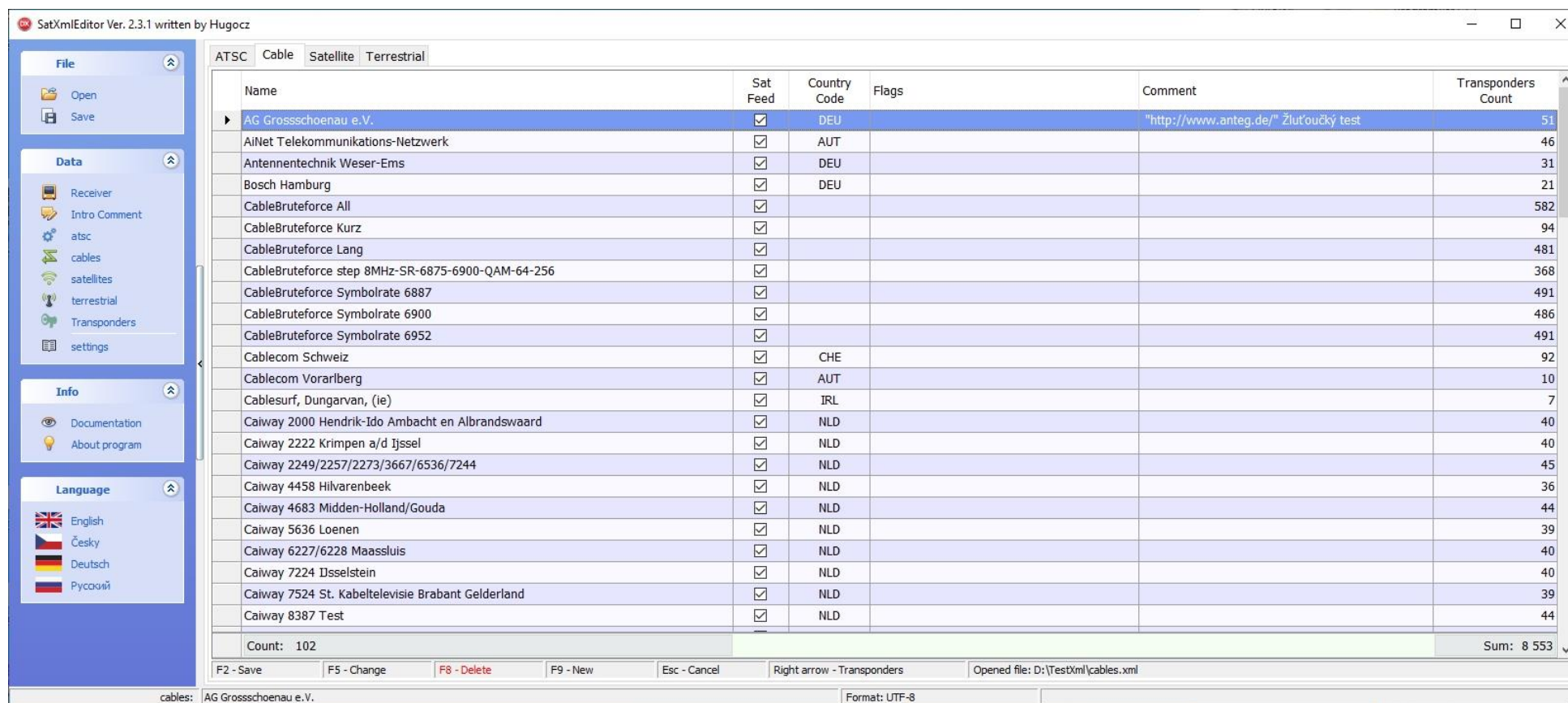


Fig. 2c – The main page with the satellites.xml file loaded

The settings file will be downloaded at the same time as the selected xml file. The correct path is usually "/etc/enigma2/". Among other things, this file also stores the settings of the receiver's individual tuners, which must correspond to the xml file. This file cannot be edited or saved. However, the text in the program window can be selected, copied and pasted into any text editor. When saving to a file, the same text encoding as the xml file must be used.

After loading the data, the program automatically switches to the main page with the appropriate type of broadcast. You can switch between broadcast types using the menu on the left side of the program, or using the tabs at the top of the window with the table. On the bottom status line of the program it is written what type of broadcast we have selected, what data item we currently have selected and what is the encoding of the text in the loaded file.

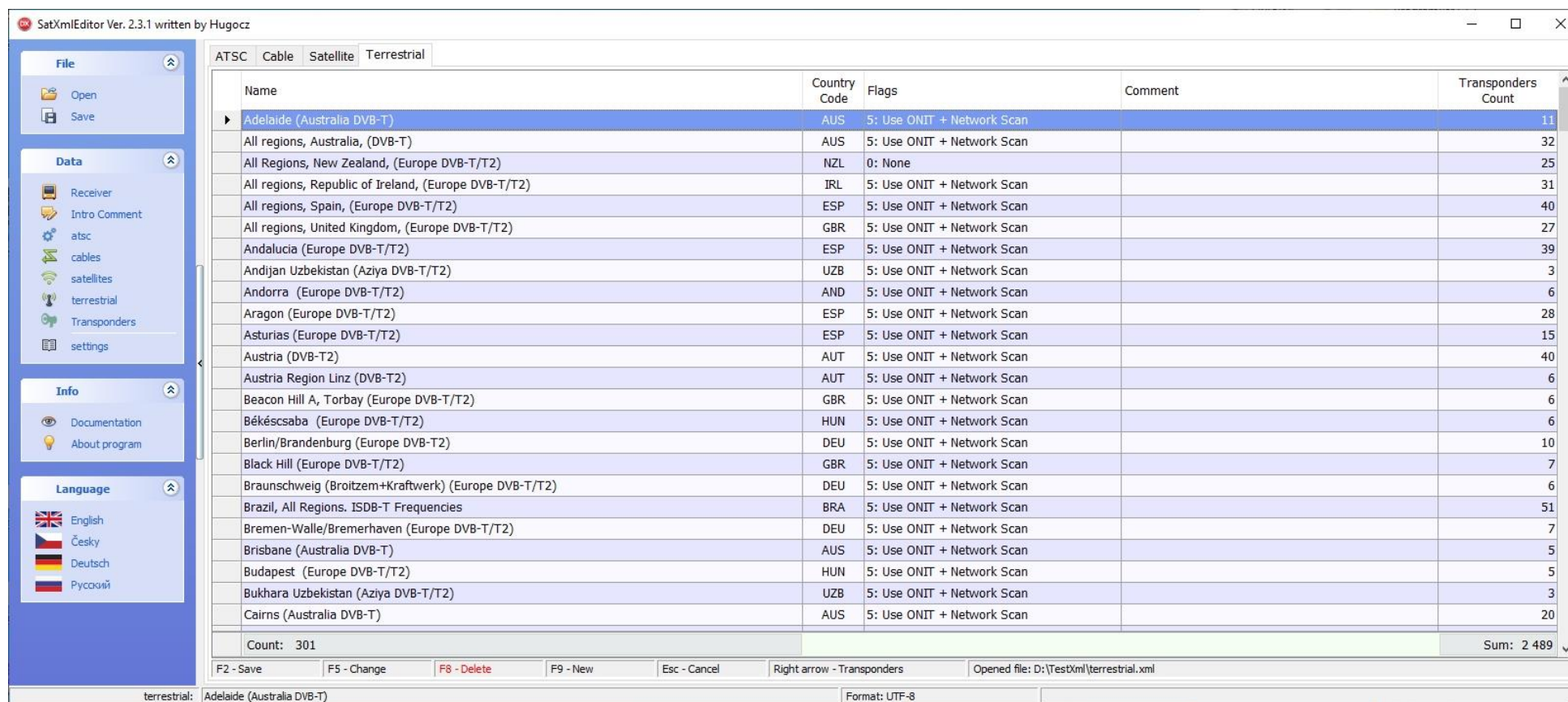


Fig. 2d – The main page with the terrestrial.xml file loaded

On the bottom status line of the window with the table, in addition to the keyboard shortcut help, the path to the loaded file is also written. If we make any changes to the data, the path to the file will be colored red. When you try to load new data of the same broadcast type or end the program, you will be asked if you want to save the changed data first. The main windows with the table of other types of broadcasting are handled in the same way. At the end of the program, we can be warned up to 4 times about the need to save data in the relevant xml file.

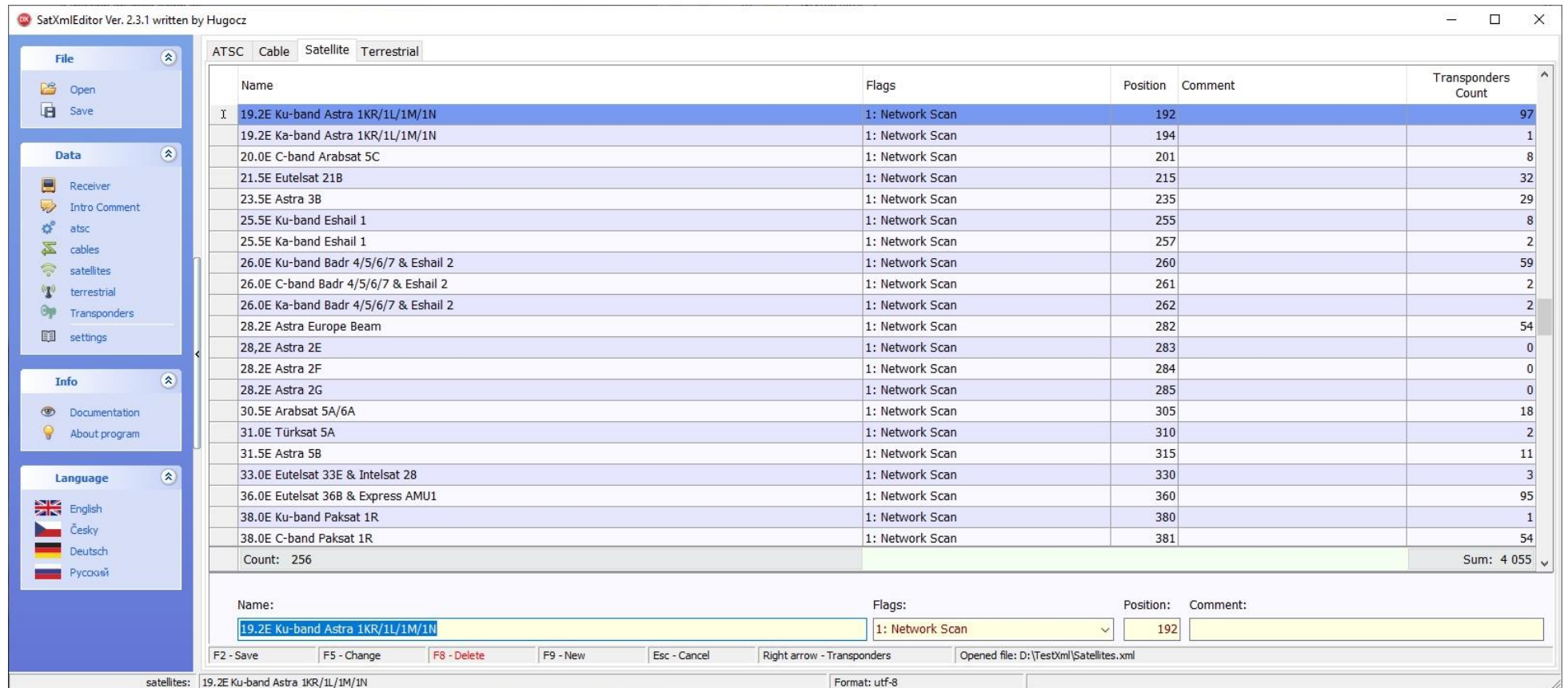


Fig. 3 - An open editing window

Multiselect is not enabled for broadcast type tables, so only one item can be selected. You can continue to work with the selected item using the menu on the bottom bar of the window. The following options are available:

- F2 - Save: Saves the changed or new sentence in the database
- F5 - Change: Opens a window allowing you to change the current item
- F8 - Delete: Deletes the selected sentence **with all its transponders**
- F9 - New: Opens a window allowing you to create a new item
- Esc - Cancel: Allows you to cancel the started editing of the current / new item
- Right arrow: Switching to the transponder table of the selected broadcast type

Offers can be activated by clicking the mouse on the bottom bar of the window or by pressing the appropriate key. After choosing "F5 - Change" or "F9 - New", an editing window opens where you can enter the relevant changes. Individual items are colored in light yellow. This indicates a state where the value of the item has not yet been changed. As soon as any item is edited, its edit field turns dark yellow. This alerts you that you need to update the data in the database using the "F2 - Save" menu.

During editing, use the Enter or Tab key to move to the next item. This is how we go back to the first item from the last item. Until we finish editing the item by choosing "F2 - Save" or "Esc - Cancel", **all other functions of the program are blocked**.

Worth noting is the Position value for satellite broadcasts. Positive numbers are ten times the positions of satellites located in the East direction. Negative numbers are ten times the positions of satellites located in the West direction, or their subtraction from the value of 360.0°. Importantly, there **MUST NOT** be two entries with the same position in the satellites.xml file. This condition is not checked by the program and the Position value is completely under the control of the user.

If multiple entries with the same position are needed (for example, a separate entry for Ku-band and a separate entry for C-band of the same satellite), it is necessary to increase or decrease the value of Position by 1 for one item. This creates a virtual position that differs from the real one by 0,1°. This value must also be correctly specified in the settings file for the corresponding tuner settings record.

All tables can be sorted by clicking on the appropriate column header. Clicking on this column header again will sort the items in reverse order. Canceling this forced sorting is done by clicking on the column header while holding down the Ctrl key. But this is only a visual sorting in the table on the screen, so that the data can be searched better. This does not change the order of sentences in the database.

After selecting an item in the main broadcast type window, we switch to the transponders window. This can be done by double-clicking on the current item, using the right arrow key, clicking on the status bar of the window in the place marked Transponders, or using the Transponders menu on the left side of the program. The program automatically selects transponders for the appropriate type of broadcast.

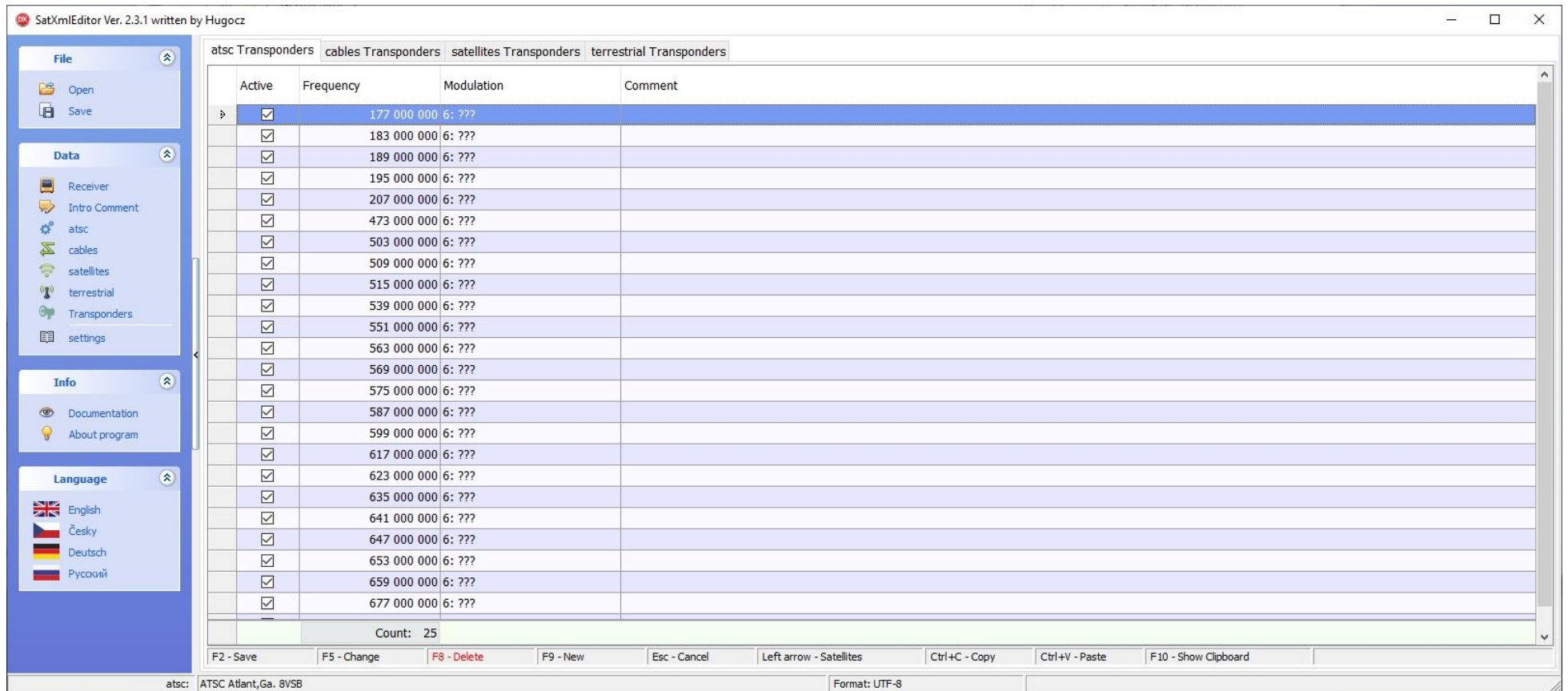


Fig. 4a – atsc transponders page

In the window with the table of transponders, you can switch between atsc, cables, satellites or terrestrial transponders using the tabs on the top. This way we can easily get to the data of another type of broadcast. The bottom status line of the program displays information about which main item the selected transponders relate to. On the bottom bar of the transponders window, it is again possible to work with items in the same way as in the case of the table in the main window. By double-clicking anywhere on the transponder table, we switch back to the main window of the relevant broadcast type.

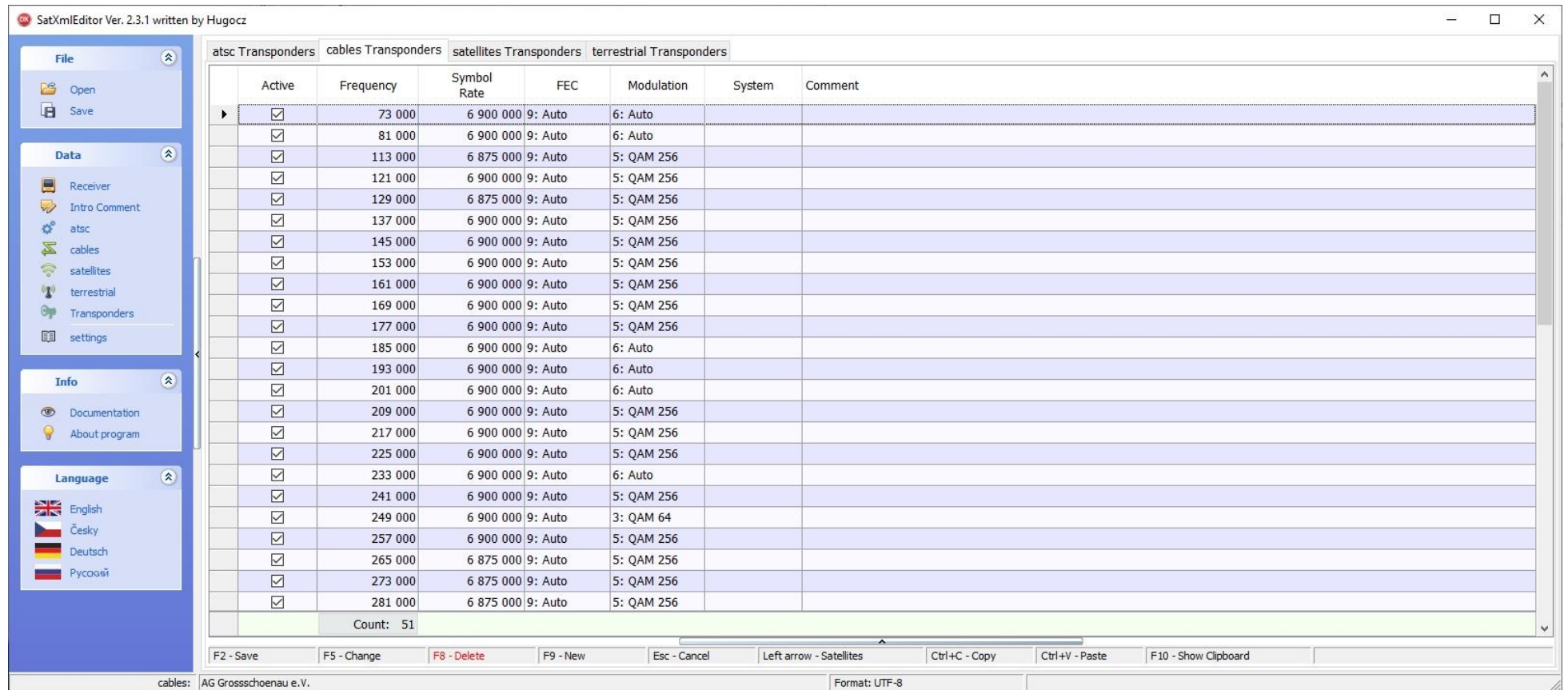


Fig. 4b – cables transponders page

The first column of the table labeled Active allows you to turn on / off the respective transponder. If this box is unchecked, the entire transponder is saved as a comment. The satellite receiver then ignores such a transponder. But the data is still stored in the xml file, and if necessary, the entire transponder can be activated again by checking the appropriate box.

Any comment with notes about the transponder can be entered in the last column. These comments are always saved in the xml file as a comment at the end of the line after the transponder. This comment must not contain the string <transponder , as this keyword is used by the program to identify a disabled transponder item. However, the word transponder can be used in the comment.

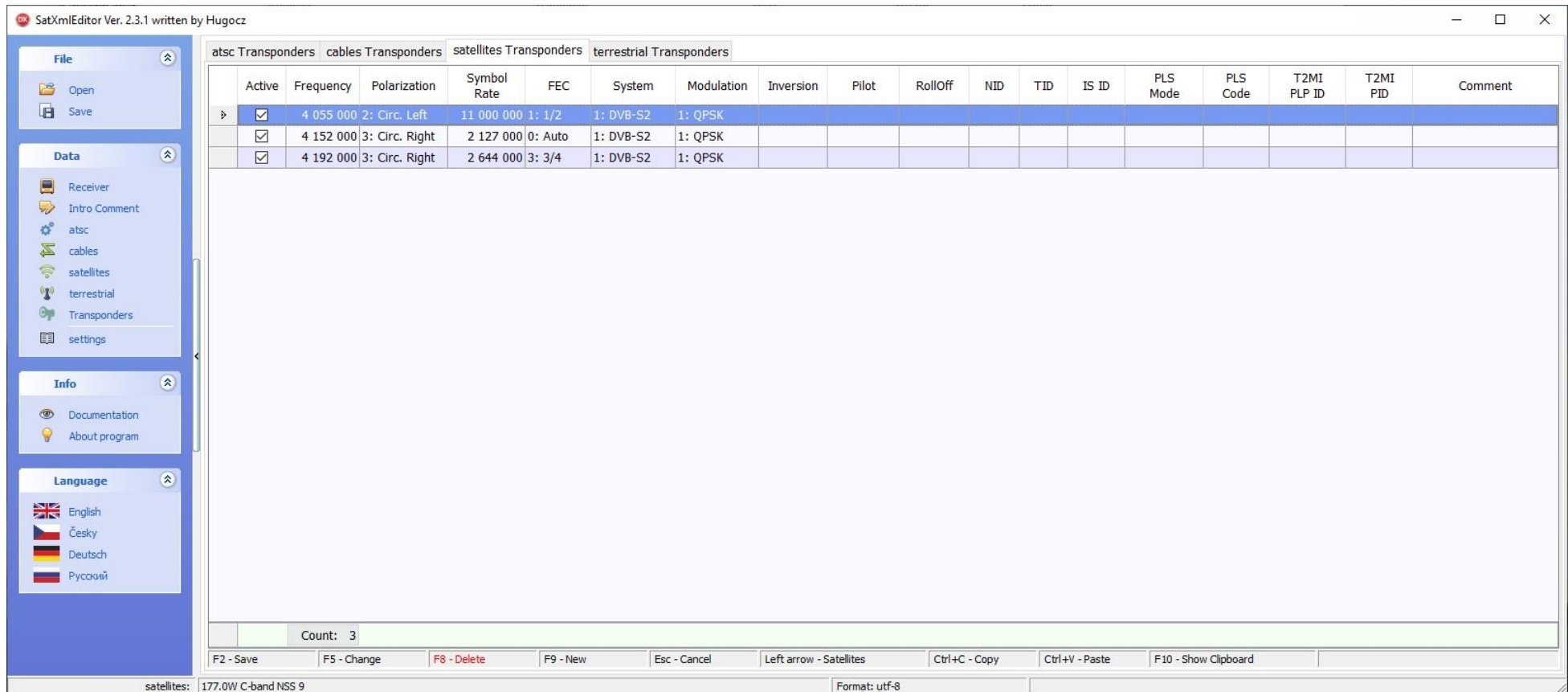


Fig. 4c – satellites transponders page

Multiselect is enabled for the transponder table. This means that we can select several rows at the same time. We achieve this using standard procedures known from windows. By clicking the mouse on a line with the Ctrl key pressed at the same time, we select / deselect one item. By clicking the mouse on a row with the Shift key pressed at the same time, we select / cancel the range of items. Press Ctrl + A to select all items. This can be advantageously used for mass deletion of transponders. On the contrary, it is not yet possible to edit several records at the same time.

SatXmlEditor Ver. 2.3.1 written by Hugocz

File: Open, Save

Data: Receiver, Intro Comment, atsc, cables, satellites, terrestrial, Transponders, settings

Info: Documentation, About program

Language: English, Český, Deutsch, Русский

Active	Frequency	Bandwidth	System	Constellation	Code Rate hp	Code Rate lp	Guard Interval	Transmission mode	Hierarchy Information	Inversion	Comment
<input checked="" type="checkbox"/>	177 500 000	1: 7 MHz	0: DVB-T	3: Auto							SAS6 @ Crafers
<input checked="" type="checkbox"/>	184 500 000	1: 7 MHz	0: DVB-T	3: Auto							SBS7 @ Crafers
<input checked="" type="checkbox"/>	191 500 000	1: 7 MHz	0: DVB-T	3: Auto							NWS8 @ Crafers
<input checked="" type="checkbox"/>	219 500 000	1: 7 MHz	0: DVB-T	3: Auto							ADS11 @ Crafers
<input checked="" type="checkbox"/>	226 500 000	1: 7 MHz	0: DVB-T	3: Auto							ABC12 @ Crafers
<input checked="" type="checkbox"/>	564 500 000	1: 7 MHz	0: DVB-T	3: Auto							CTS33 @ Crafers
<input checked="" type="checkbox"/>	571 500 000	1: 7 MHz	0: DVB-T	3: Auto							SBS34 @ Adelaide, Elizabeth Downs, Newland Hill
<input checked="" type="checkbox"/>	578 500 000	1: 7 MHz	0: DVB-T	3: Auto							SAS35 @ Adelaide, Elizabeth Downs, Newland Hill
<input checked="" type="checkbox"/>	585 500 000	1: 7 MHz	0: DVB-T	3: Auto							NWS36 @ Adelaide, Elizabeth Downs, Newland Hill
<input checked="" type="checkbox"/>	592 500 000	1: 7 MHz	0: DVB-T	3: Auto							ADS37 @ Adelaide, Elizabeth Downs, Newland Hill
<input checked="" type="checkbox"/>	606 500 000	1: 7 MHz	0: DVB-T	3: Auto							ABC39 @ Adelaide, Elizabeth Downs, Newland Hill

Count: 11

F2 - Save F5 - Change F8 - Delete F9 - New Esc - Cancel Left arrow - Satellites Ctrl+C - Copy Ctrl+V - Paste F10 - Show Clipboard

terrestrial: Adelaide (Australia DVB-T) Format: UTF-8

Fig. 4d – terrestrial transponders page

Another function of the program is the use of the windows clipboard. Using the familiar Ctrl + C key combination, all selected transponders are copied as text to the clipboard. After copying, the contents of the clipboard will be displayed in a separate program window. If there are copied transponders in the clipboard, they can be inserted into the database along with other transponders using another well-known key combination Ctrl + V. Using the F10 key, we can display the contents of the clipboard in a separate window of the program at any time. Editing can be done in the window with the contents of the clipboard. When closing the window, its current content is overwritten to the clipboard.

Since the text format of the windows clipboard is used, this method can also be used to import / export transponders from / to any xml files of the same broadcast type opened in text editors. So we can create compilations from files of different authors.

The screenshot displays the SatXmlEditor interface. On the left is a sidebar with 'File', 'Data', 'Info', and 'Language' sections. The main window shows a table of transponders under the 'terrestrial Transponders' tab. A 'Clipboard' window is open, showing XML code for transponders. The status bar at the bottom indicates 'satellites: 19.2E Ku-band Astra 1KR/1L/1M/1N' and 'Format: utf-8'.

Active	Frequency	Polarization	Symbol Rate	FEC	System	Modulation	Inversion	Pilot	RollOff	NID	TID	IS ID	PLS Mode	PLS Code	T2MI PLP ID	T2MI PID	Comment
<input checked="" type="checkbox"/>	10 729 000	1: Vertical	22 000 000	2: 2/3	1: DVB-S2	2: 8PSK											
<input checked="" type="checkbox"/>	10 758 000	1: Vertical	22 000 000	4: 5/6	0: DVB-S	1: QPSK											
<input checked="" type="checkbox"/>	10 773 000	0: Horizontal	22 000 000	3: 3/4	1: DVB-S2	2: 8PSK											
<input checked="" type="checkbox"/>	10 788 000	1: Vertical	22 000 000	4: 5/6	0: DVB-S	1: QPSK											
<input checked="" type="checkbox"/>	10 803 000	0: Horizontal	22 000 000	3: 3/4	1: DVB-S2	2: 8PSK											
<input checked="" type="checkbox"/>	10 818 000	1: Vertical	22 000 000	2: 2/3	1: DVB-S2	2: 8PSK											
<input checked="" type="checkbox"/>	10 832 000	0: Horizontal	22 000 000	2: 2/3	1: DVB-S2	2: 8PSK											
<input checked="" type="checkbox"/>	10 847 000	1: Vertical	22 000 000	4: 5/6	0: DVB-S	1: QPSK											
<input checked="" type="checkbox"/>	10 876 000	1: Vertical	22 000 000	4: 5/6	0: DVB-S	1: QPSK											
<input checked="" type="checkbox"/>	10 891 000	0: Horizontal	22 000 000	2: 2/3	1: DVB-S2	2: 8PSK											
<input checked="" type="checkbox"/>	10 906 000	1: Vertical	22 000 000	2: 2/3	1: DVB-S2	2: 8PSK											
<input checked="" type="checkbox"/>	10 921 000	0: Horizontal	22 000 000	5: 7/8	0: DVB-S	1: QPSK											
<input checked="" type="checkbox"/>	10 936 000	1: Vertical	22 000 000	2: 2/3	1: DVB-S2	2: 8PSK											
<input checked="" type="checkbox"/>	10 964 000	0: Horizontal	22 000 000														
<input checked="" type="checkbox"/>	10 979 000	1: Vertical	22 000 000														
<input checked="" type="checkbox"/>	10 994 000	0: Horizontal	22 000 000														
<input checked="" type="checkbox"/>	11 023 000	0: Horizontal	23 500 000														
<input checked="" type="checkbox"/>	11 038 000	1: Vertical	22 000 000														
<input checked="" type="checkbox"/>	11 053 000	0: Horizontal	22 000 000														
<input checked="" type="checkbox"/>	11 068 000	1: Vertical	22 000 000														
<input checked="" type="checkbox"/>	11 082 000	0: Horizontal	22 000 000														
<input checked="" type="checkbox"/>	11 097 000	1: Vertical	22 000 000														
<input checked="" type="checkbox"/>	11 112 000	0: Horizontal	22 000 000														
<input checked="" type="checkbox"/>	11 127 000	1: Vertical	22 000 000	2: 2/3	1: DVB-S2	2: 8PSK											

```

<transponder frequency="10803000" symbol_rate="22000000" polarization="0" fec_inner="3" system="1" modulation="2"/>
<transponder frequency="10818000" symbol_rate="22000000" polarization="1" fec_inner="2" system="1" modulation="2"/>
<transponder frequency="10847000" symbol_rate="22000000" polarization="1" fec_inner="4" system="0" modulation="1"/>
<transponder frequency="10876000" symbol_rate="22000000" polarization="1" fec_inner="4" system="0" modulation="1"/>
<transponder frequency="10891000" symbol_rate="22000000" polarization="0" fec_inner="2" system="1" modulation="2"/>
<transponder frequency="10921000" symbol_rate="22000000" polarization="0" fec_inner="5" system="0" modulation="1"/>

```

Count: 97

satellites: 19.2E Ku-band Astra 1KR/1L/1M/1N Format: utf-8

Fig. 5 – Windows Clipboard

The point of using the clipboard is to copy transponders from one main item and paste them to another main item. In doing so, duplications may arise. **The program does not check for duplicates in transponders. Copied transponders can be inserted repeatedly even in the same place. How these duplicates are handled is entirely up to the user.**

The windows clipboard cannot yet be used in the main window for atsc, cables, satellites or terrestrial items. It is intended exclusively for work with their transponders.

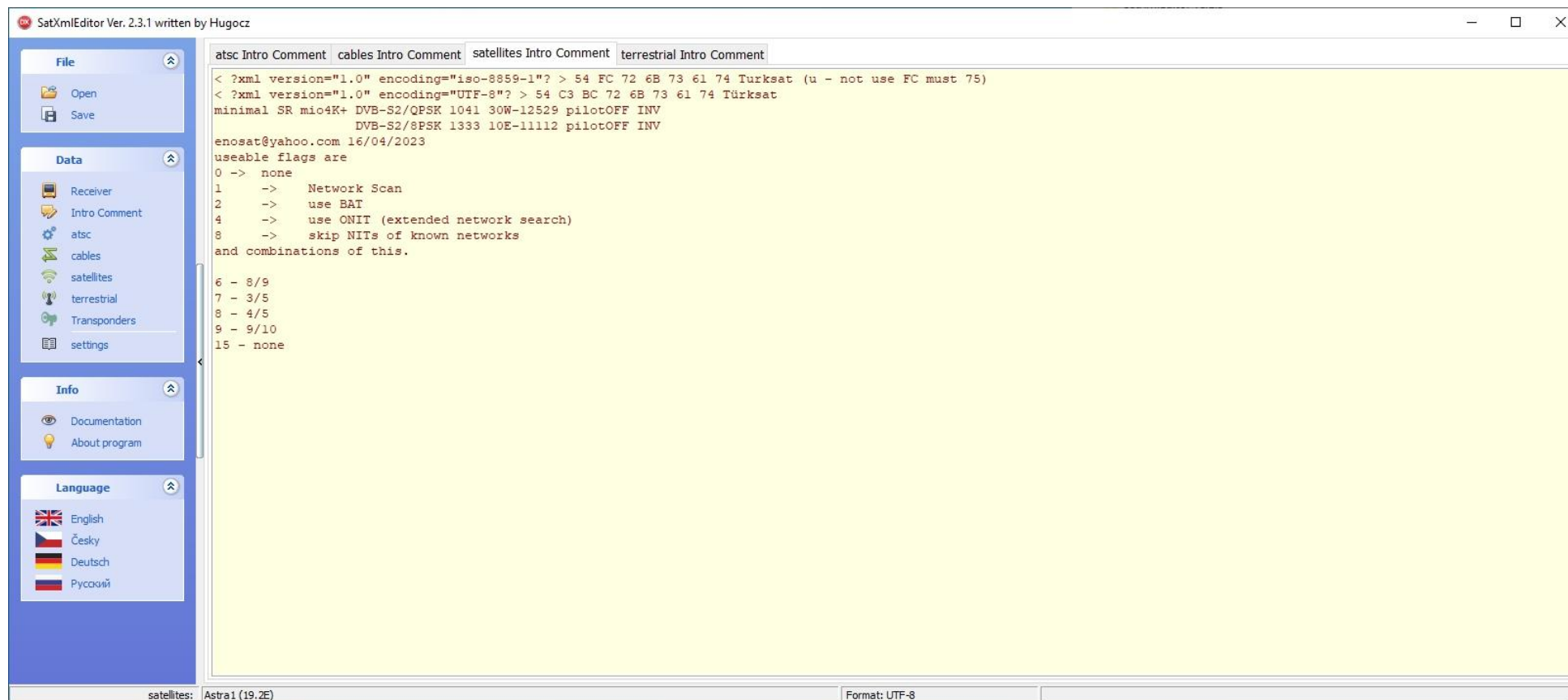


Fig. 6 – An introductory comment page

Each xml file can contain a single comment of any length at the beginning. Using the "Data - Opening Comment" menu, we switch to the program page where this opening comment is written. As with transponders, each broadcast type has its own introductory comment window. Using the tabs at the top of the window, you can easily switch between the opening comments of all types of broadcasts. Figure 6 shows an example of the opening comment of the satellites.xml file. This comment can be edited. Any initial and final empty lines will be deleted by the program when saving.



Fig. 7 – Page with a listing of the settings file

In the "Data - settings" menu, we switch to the window where the contents of the settings file are displayed. This listing is only one and is for informational purposes only. Therefore, it cannot be edited or sent back to the receiver. In the file we can find, among other things, data on the settings of the receiver's input tuners. For easier orientation, such lines are colored blue. Nims0 is the designation of the first tuner, Nims1 of the second, etc. In the item config.Nims.x.dvbs.advanced.sat, the positions of the satellites for tuning the satellite tuner are given. This data must correspond to the position in the Satellites.xml file.

After finishing editing the database, we have to save the changes to a file on disk using the "File - Save" menu, or to a file in the receiver with Enigma using the "Data - Receiver" menu with the "Upload" button. In both cases, the file type is automatically created according to the currently edited data. Note that the "Data - Receiver" page also automatically sets the correct file type, so you no longer need to select it manually.

Uploading data to the receiver takes place in the following way. First, the correctness of the communication settings is verified. The enigma is turned off with the telnet protocol (init 4), the original xml file is overwritten with a new file with the ftp protocol, and then the entire receiver is restarted with the telnet protocol (init 6). The progress of these activities is written in the "Connection log" window. The contents of the log window can be cleared or saved to a file on disk.

The inscription on the bottom line of the window of the relevant broadcast type informs about the need to permanently save changes to a file on disk or in a satellite receiver. If we do not save the changes made in this way, they will be irretrievably lost after the end of the program.

User manuals in pdf format are located in the Doc subdirectory. These can of course be used independently with any viewer of these files. However, the menu "Info - Documentation" is available in the program menu, which displays the relevant file without the need for an external browser. The condition is that the manual file is located in the Doc subdirectory and its name has not been changed. The language of the manual is selected automatically according to the selected language of the entire program.

The program is translated into four languages. Information about the current language is stored in the SatXmlEditor.ini file. After starting the program, the last used language is automatically selected. All text strings for all languages are stored in the Languages.xml file. If the required phrase is not found in the file, the program will use its own text in English. The program does not assume the existence of other translations. Therefore, it is not enough to just add a new language to the Languages.xml file. If you are interested in adding other languages, please contact me by email at hugocz@jevicko.org or write to the discussion on the website <https://www.jevicko.org/laminas/index.php/en/software/satxmleditor>.

In the "Info - About the program" menu, a page with basic data will appear. There is only the program version, email address and website. I offer the program completely free of charge, so you won't find any account numbers for financial support or links to sponsors or advertising. If you use the program, you like it and you would still like to support it in some way, write me feedback. Either by e-mail or in the discussion on the program website. I will consider all comments, suggestions or discovered errors of the program and, if possible, release a new version. Social response will make me happy. Thank you.

They wish you a pleasant use of the program. Hope it makes your job easier.