

**PROGIRA®**

Release notes PROGIRA® plan 6.1

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## 1 General/Introduction

This document present updates in PROGIRA® plan version 6.1. Changes as well as new features and bug fixes are presented. If you should need further information regarding any of the modifications, please contact [support@progira.com](mailto:support@progira.com).

PROGIRA® plan version 6.1 is a major upgrade with many new features and improvements, for example:

- Broadcast aeronautical compatibility calculations according to ITU-R recommendation SM.1009-1
- Major upgrades in the ATSC 3.0 Network planning module and in the frequency planning support according to the US FCC rules.

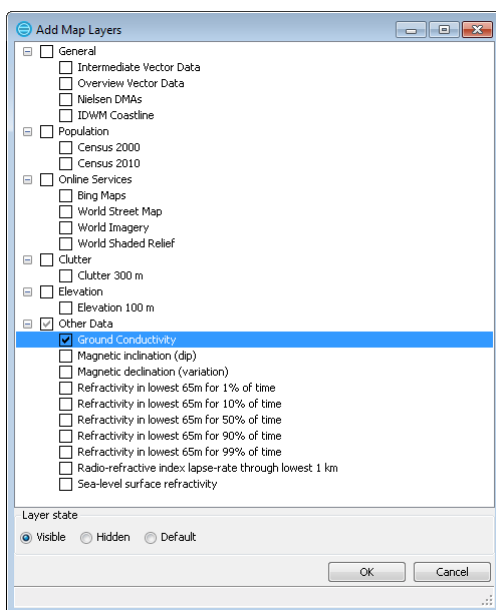
A selection of other new features and updates:

- Major upgrade of the AM module
- Detailed coverage using the Anatel 1546 propagation model
- Gapfiller (On-channel repeater) transmitters can temporary be made synchronous in a System dependent summation
- Rescale Fs can be performed using Tx Power, Combiner loss, Feeder loss as well as Antenna gain

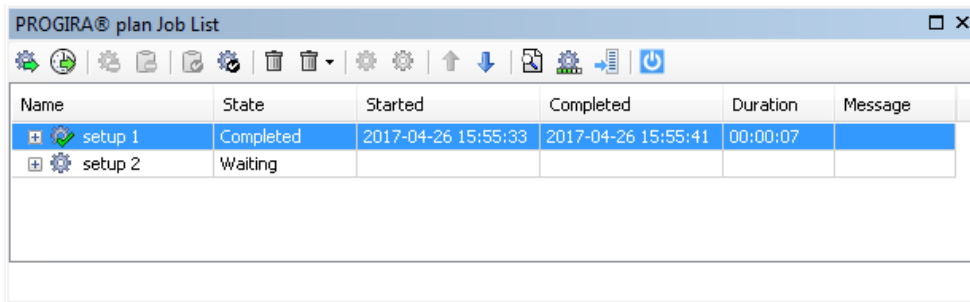
## 2 Base Module

### 2.1 General

**NEW:** AM ground conductivity map added for user information.

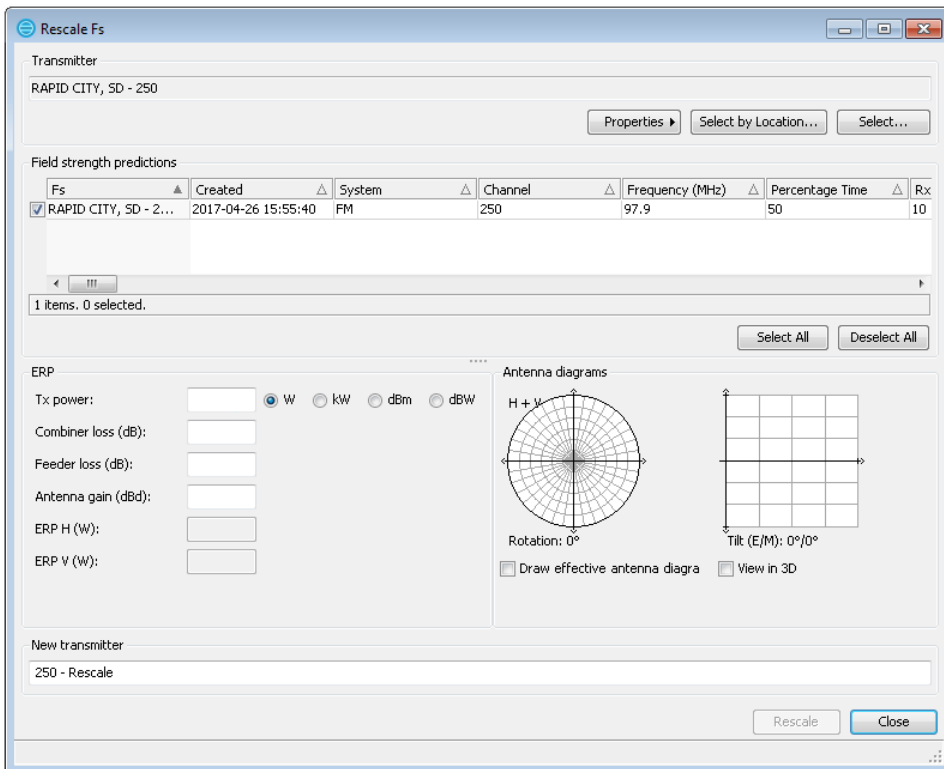


**NEW:** The job order in Job List is now saved within the project.



Name	State	Started	Completed	Duration	Message
setup 1	Completed	2017-04-26 15:55:33	2017-04-26 15:55:41	00:00:07	
setup 2	Waiting				

**NEW:** In "Rescale Fs" it is now possible to set new Tx power, Combiner loss, Feeder loss and Antenna gain.



Transmitter  
RAPID CITY, SD - 250

Field strength predictions

Fs	Created	System	Channel	Frequency (MHz)	Percentage Time	Rx
✓ RAPID CITY, SD - 2...	2017-04-26 15:55:40	FM	250	97.9	50	10

ERP

Tx power:  W  kW  dBm  dBW

Combiner loss (dB):

Feeder loss (dB):

Antenna gain (dBd):

ERP H (W):

ERP V (W):

Antenna diagrams

Rotation: 0°

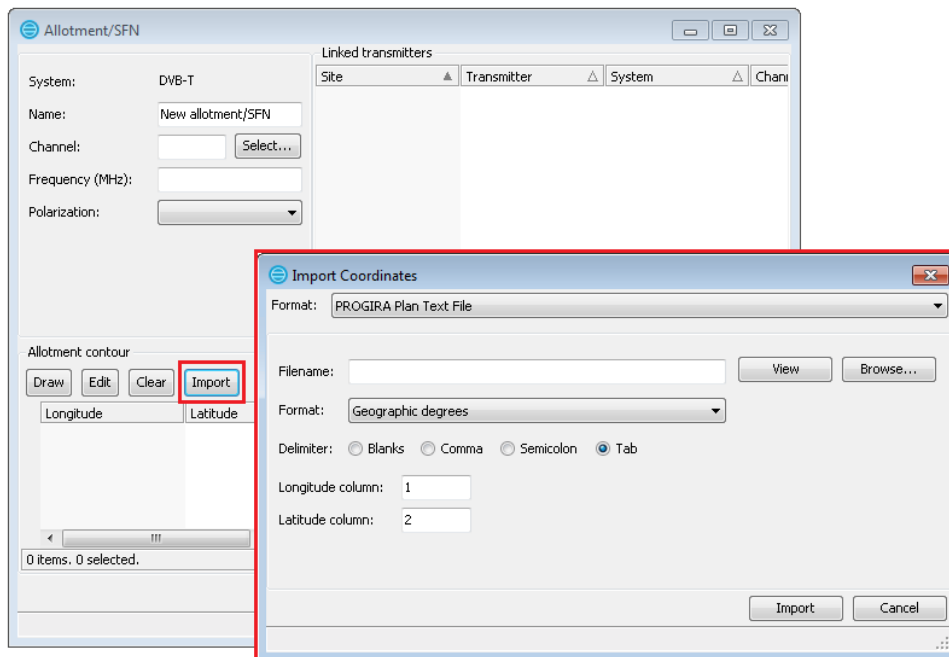
Tilt (E/M): 0°/0°

Draw effective antenna diagram  View in 3D

New transmitter  
250 - Rescale

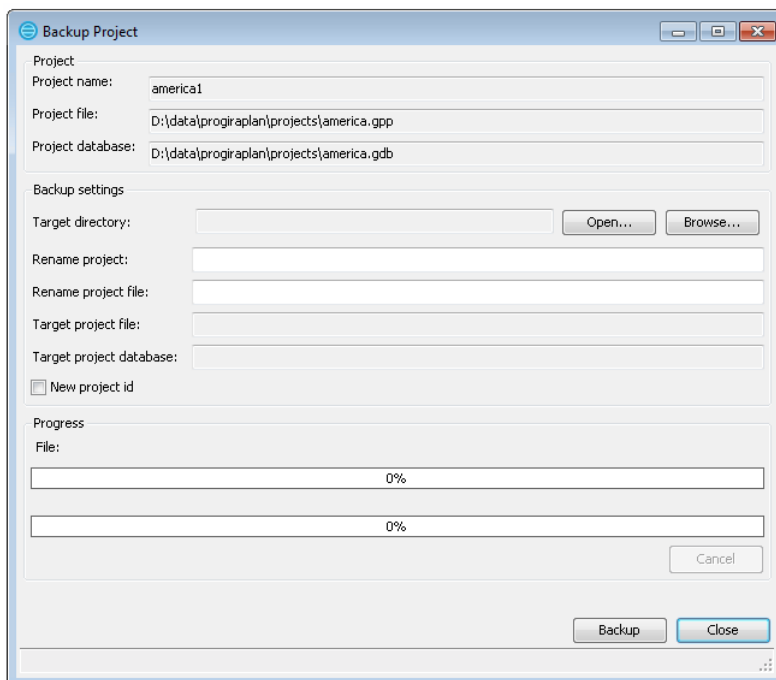
Rescale Close

**NEW:** In Allotment editor it is now possible to import polygon points from a text file.

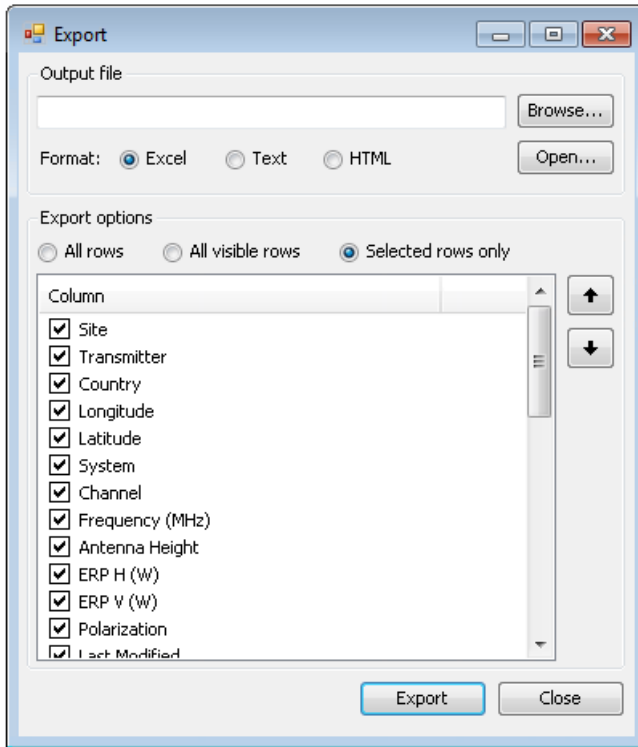


**NEW:** Press "Ctrl + Shift + C" to copy data from selected table column to Windows Clipboard.

**NEW:** More options added in "Backup Project".



**NEW:** Export to HTML format added in table export.



**FIXED:** ArcMap was misbehaving when started via PROGIRA® plan icon until loading map document.

**FIXED:** When closing a window ArcMap lost focus and got behind other application window when another application was previously focused.

**FIXED:** Controls in some forms were disordered when using display scaling (DPI settings).

**FIXED:** AM transmitters were not available in linked projects.

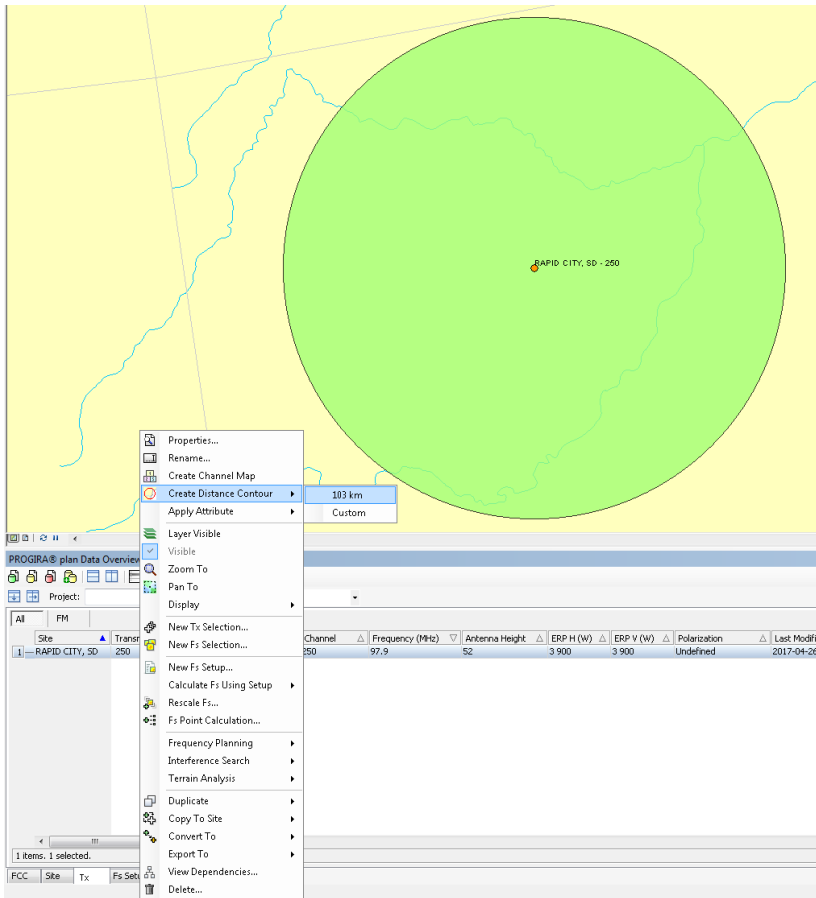
**FIXED:** Search in multiple data sources at the same time was broken.

## 2.2 Transmitter (Tx)

**NEW:** New Aero transmitter type for aeronautical ground transmitters.

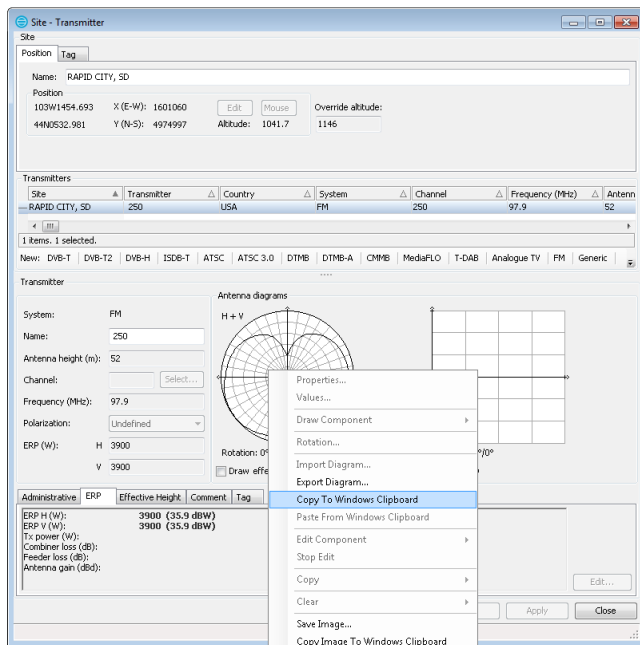
**NEW:** Noise zones system parameter added to AM transmitters (A, B, C according to GE75 Agreement). It will be imported from BRIFIC and determined automatically for new transmitters as well as used in calculations.

**NEW:** "Create Distance Contour" added to transmitter.

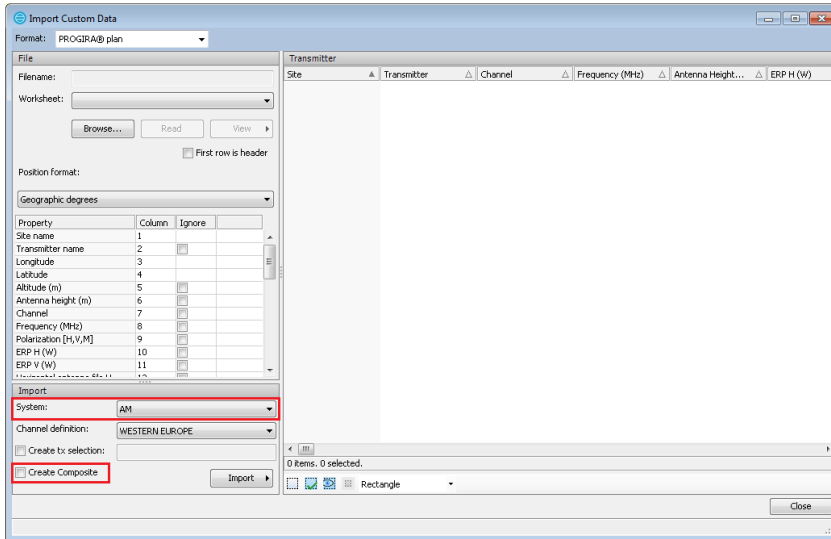


**NEW:** Effective antenna heights can be calculated at other than 10 degree steps as well.

**NEW:** Copy/paste antenna diagrams to Windows Clipboard.



**NEW:** In "PROGIRA® plan" format in "Import Custom Data", it is now possible to create a composite transmitter if the selected system is AM or DRM. One will be set to "Daytime" and the other one will be set to "Night-time".



**NEW:** Average effective antenna height now displayed.

System	Administrative	ERP	Network	Gapfiller	Effective Height	Comment	Tag
	Azimuth (deg) ▲	Effective Antenna Height (m) ▲					Average (m):
	0	123					123
	10	127					
	20	115					
	30	114					
	40	118					
	50	117					
	60	118					
	70	121					
	80	135					
	90	124					
	100	124					

**NEW:** Longitude and latitude columns are now presented in all tables.

**NEW:** The following parameters have been added to transmitter's "Administrative data" and will be used during import from FCC data and when exporting to TV Study 2.0.

- Call sign
- State/Province
- City
- Status

**FIXED:** Transmitter tables did not show ERP values when polarization was undefined.

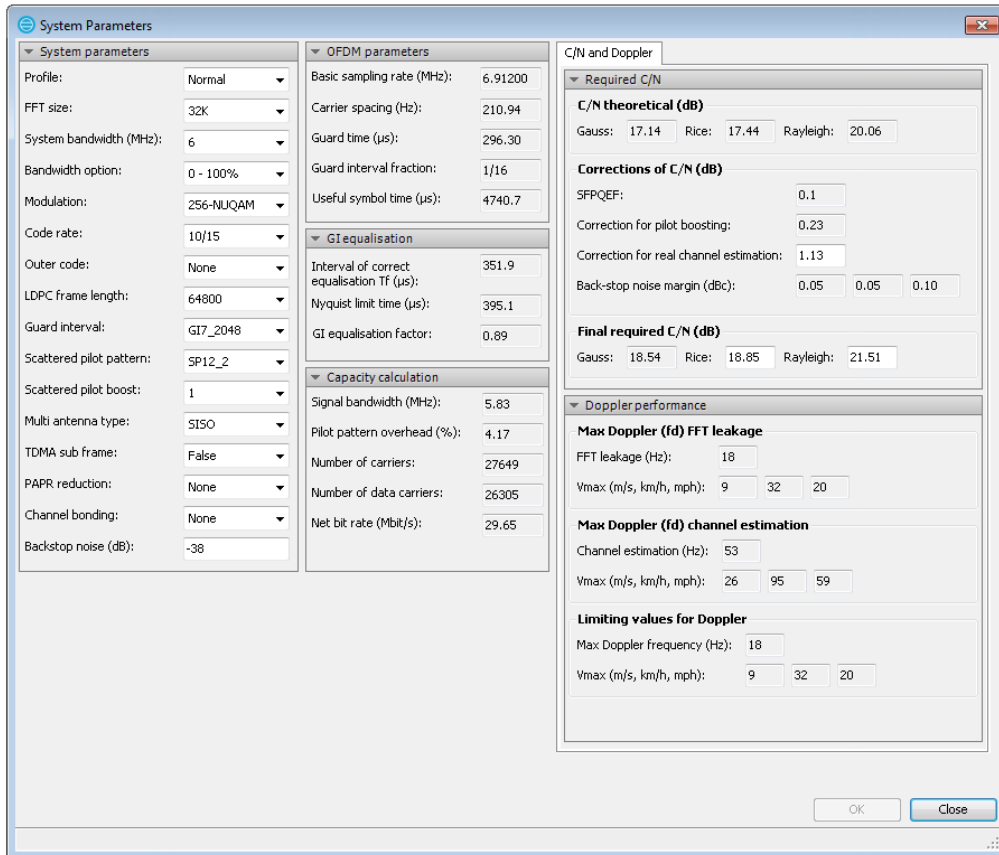
Polarization	ERP H (W)	ERP V (W)
Undefined		
Undefined		



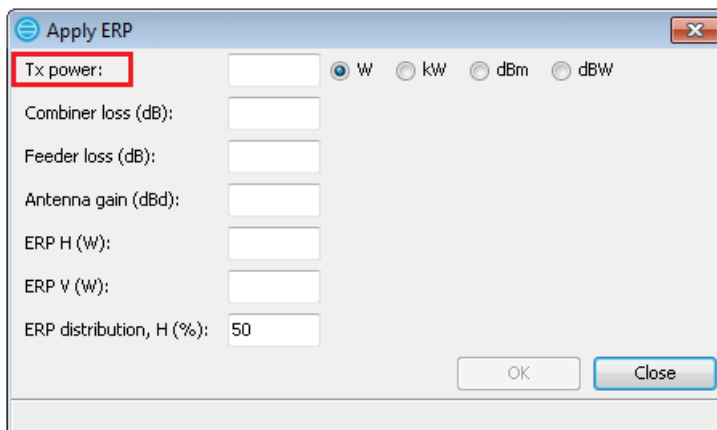
**FIXED:** In "Apply ERP" power, combiner loss, feeder loss and antenna gain were not stored to the database.

**FIXED:** Adjacent channel protection ratio system parameter added to AM transmitters and will actually be imported from BRIFIC and used in calculations.

**CHANGED:** "Correction for Real Channel Estimation" now editable in ATSC 3.0 transmitter and summation.



**CHANGED:** "Power" renamed to "Tx power" in ERP page.



## 2.3 FCC Data

**NEW:** ASRN (Antenna structure registration number) is now shown in FCC data query results.

Application ID	Facility ID	ASRN	Antenna ID
659 591	73 970	1 043 271	59 298
662 083	93 423	1 238 081	59 299
661 595	55 421		59 300
658 425	158 780	1 048 502	59 305
662 289	91 176	1 238 219	59 308

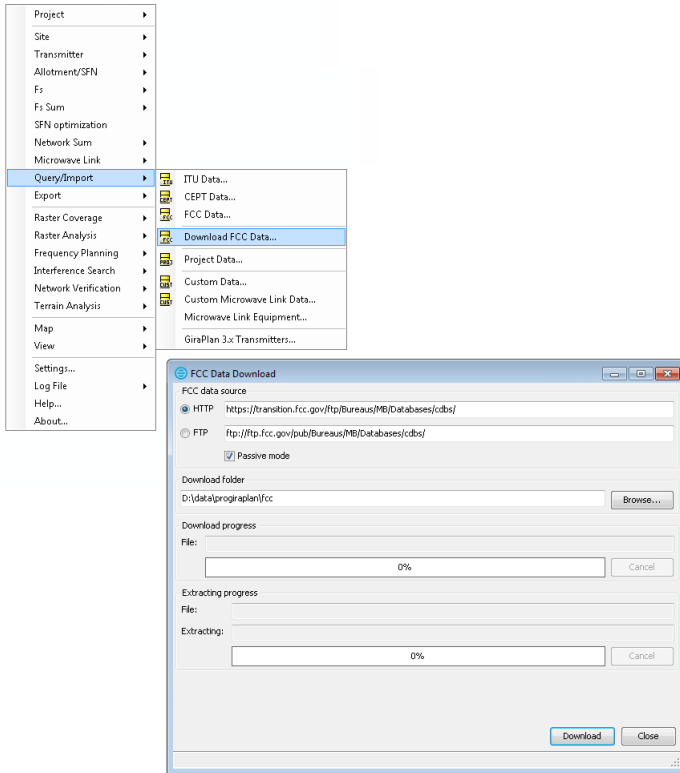
**NEW:** When importing from FCC data, antenna id will be indicated within antenna comment.

The screenshot shows the 'FCC FM Query' window with a table of data. The 'Antenna ID' column is highlighted with a red box. Below the table, the 'Antenna Diagrams' window is open, showing a radiation pattern plot and a grid. The 'Antenna ID: 59305' is highlighted in a red box in the window's comment field.

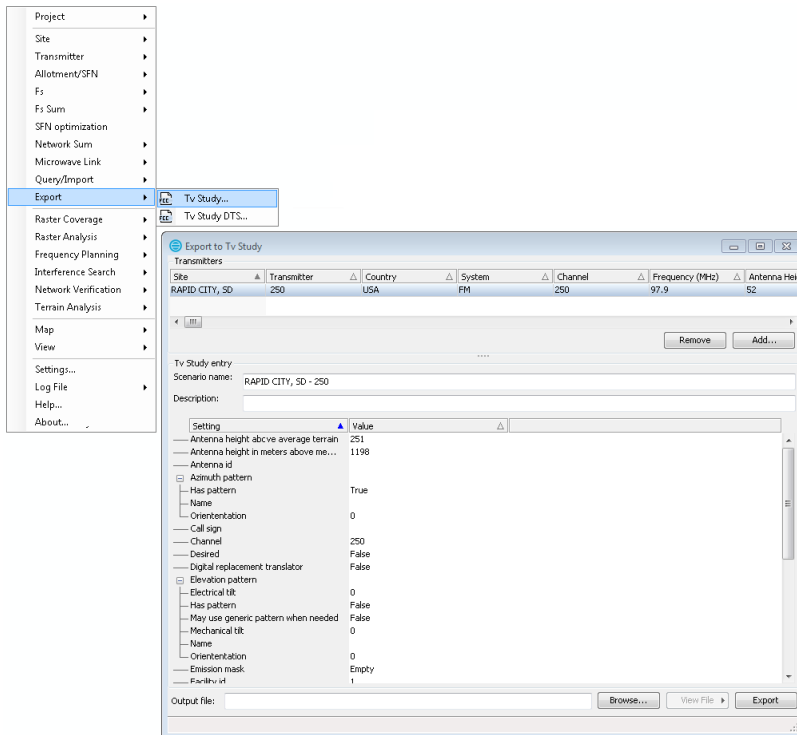
**NEW:** FM data import from FCC database.

The screenshot shows the 'Query FCC Data' dialog box. The 'Data type' section has radio buttons for 'TV' and 'FM'. The 'FM' radio button is selected. There are 'Execute' and 'Close' buttons at the bottom.

**NEW:** Download of FCC database to local disk for fast data access.

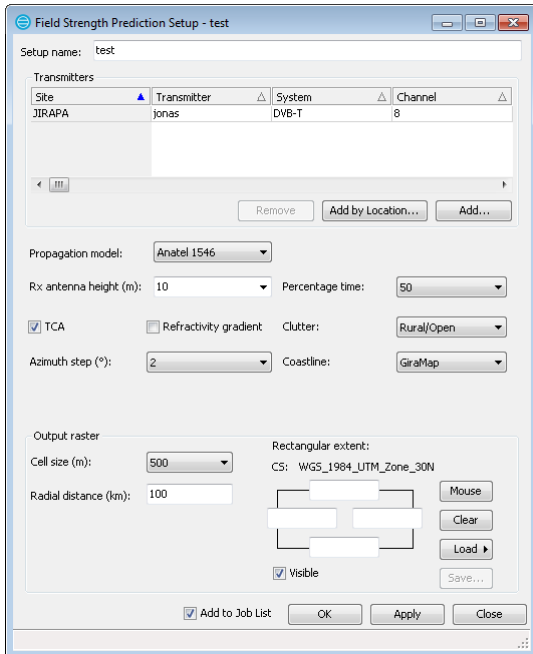


**NEW:** Export to FCC TV Study 2.0 format.



## 2.4 Field strength prediction

**NEW:** Anatel 1546 propagation model added to "Field Strength Prediction Setup".

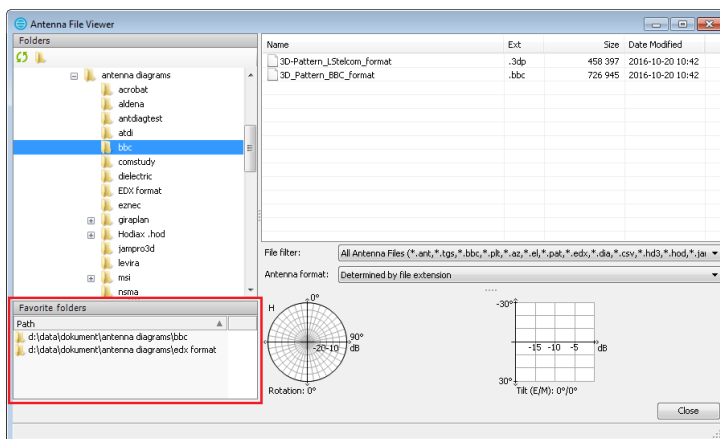


**FIXED:** Interpolation crash when computer has exactly 32 CPU threads.

## 2.5 Antenna file viewer

**NEW:** VSoft Communications antenna diagrams can be presented and applied to a transmitter.

**NEW:** Favorite folders added. These are stored as user settings.



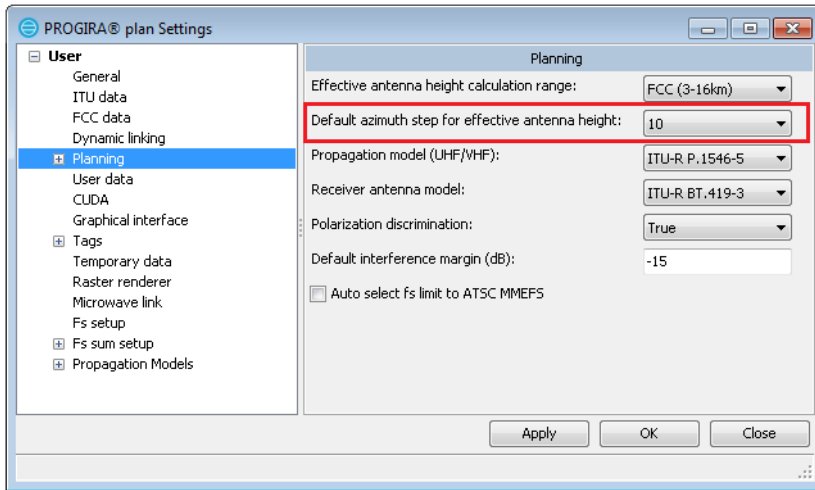
**FIXED:** Header parsing in EDX (.pat) antenna file format.

**CHANGED:** ASCII encoding now used when reading EDX (.pat) antenna files

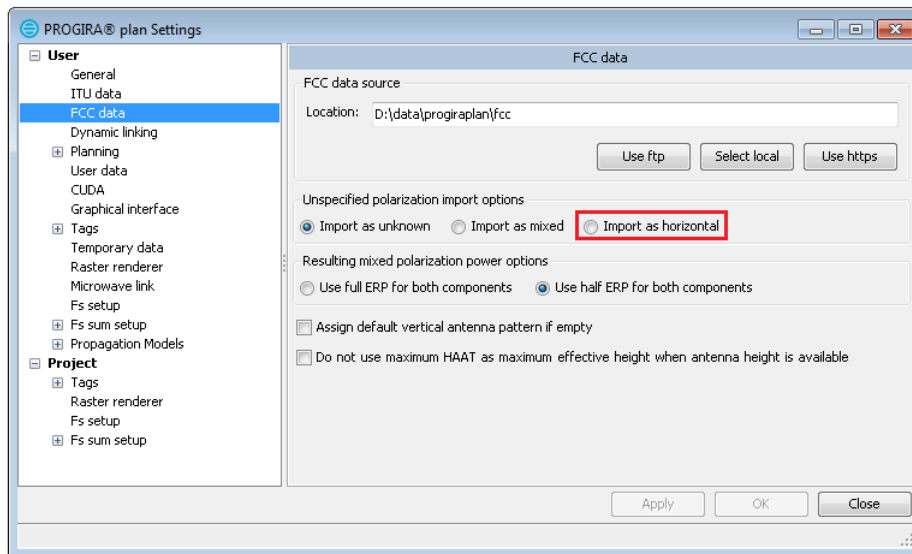
**CHANGED:** Horizontal diagram in BBC antenna file format removed from import.

## 2.6 User Settings

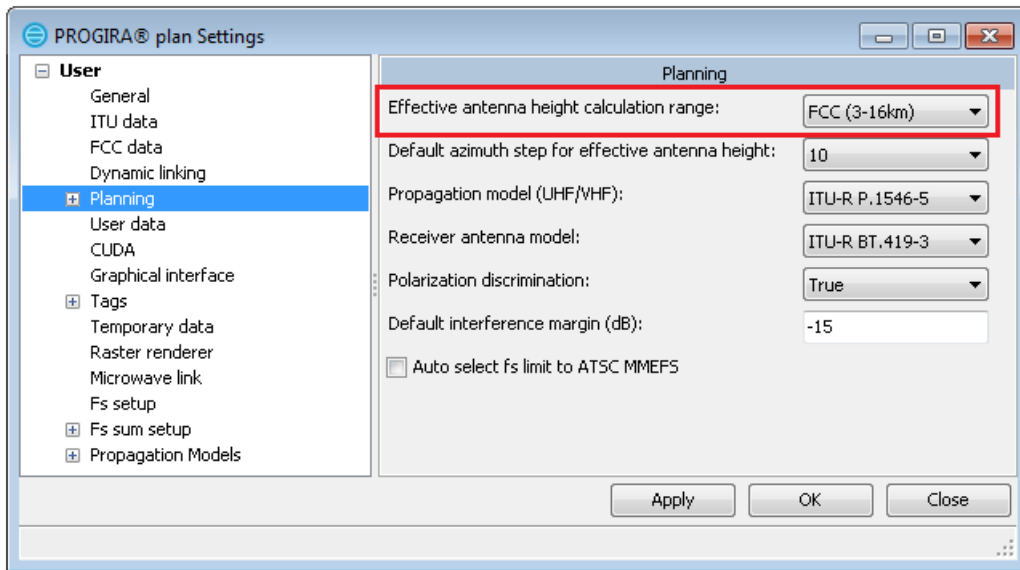
**NEW:** "Default azimuth step for effective antenna height" added to Planning settings. The default value is 10 degrees.



**NEW:** "Import as horizontal" option added to FCC data settings.



**FIXED:** "FCC (3-16km)" option in "Effective antenna height calculation range" could not be set.



## 2.7 Population coverage

**NEW:** Server population calculation method now adds explanations for values to a result when raster having unique renderer is used.

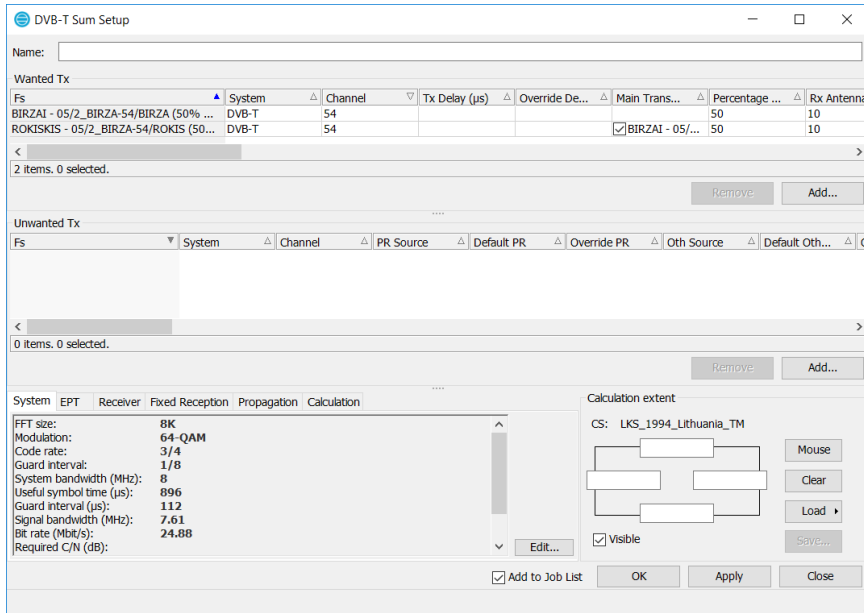
**NEW:** Server population calculation method now works with point and polygon population data.

**FIXED:** Group names were missing in the output of population coverage calculation using point data having group names in some encodings.

## 3 Network planning module

### 3.1 Fs Sum

**NEW:** Gapfiller transmitters can temporary be made synchronous for a system sum.



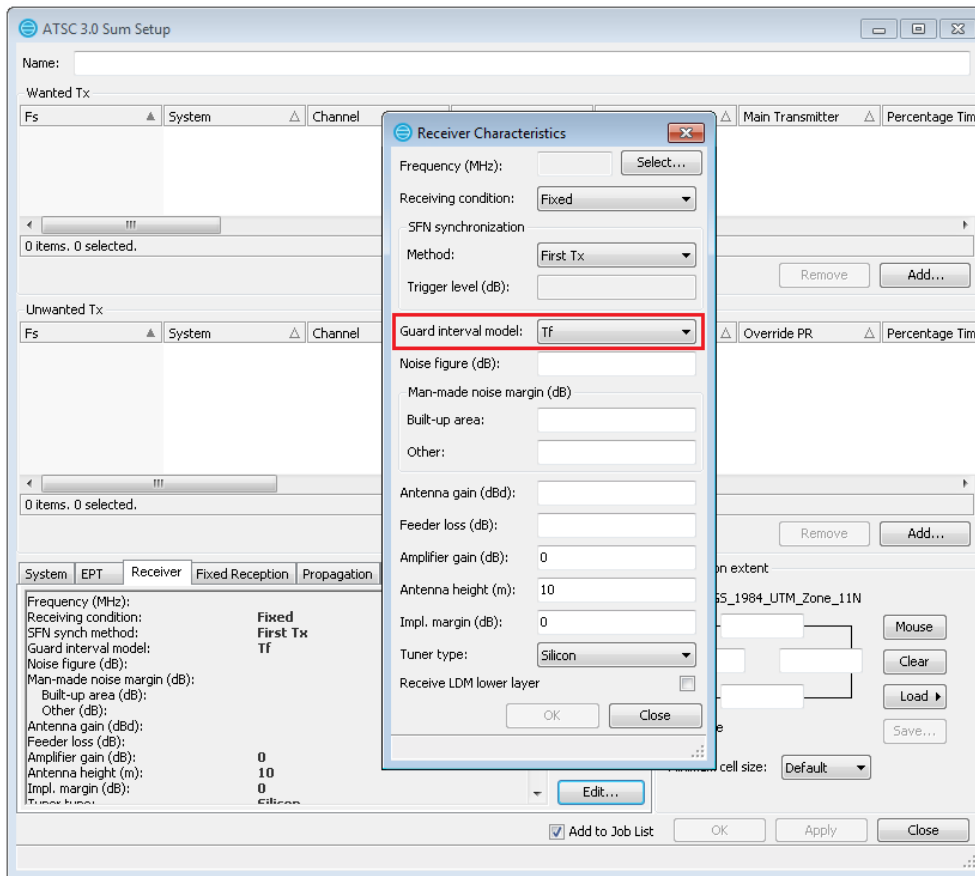
**FIXED:** When recreating sum setup from a calculated sum all gapfiller delays were wrong.

**FIXED:** ATSC summation was ignoring interfering field strengths calculated at 50% time.

**FIXED:** In rare cases FM and analogue TV system sums produced wrong results in parts of calculation area.

**FIXED:** Wrong data in Receiver parameters tab were set for ATSC 3.0 after changing reception mode.

**CHANGED:** Default guard interval model is now set to "Tf" in ATSC 3.0 summations.



## 3.2 Analyze location

**FIXED:** Did not show static protection ratios, only actual values of dynamic ones were shown for ATSC sums.

**FIXED:** Text formatting was disordered in reports for ATSC sums.

## 4 Frequency planning module

### 4.1 General

**NEW:** Frequency planning functions can now use antenna diagrams according to item (b) of §73.625 of FCC regulations.

**CHANGED:** Frequency planning on AM and DRM transmitters now allow to set filter distance to more than 1000 km.

**CHANGED:** Default set of active FCC services has been changed.



## 4.2 Broadcasting-aeronautical compatibility

**NEW:** Broadcasting-aeronautical compatibility check according to ITU-R recommendation SM.1009-1.

**Aeronautical transmitters**

Name	Type	Country	Azimuth, deg	Range, deg	Channel	Frequency, ...	Antenna hei...	ERP H, W	ERP V, W	Polarization
Alytus COM	COM	LTU		74	17	118.4				Horizontal
Alytus ILS	ILS	LTU	305		2	108.15	2			
Alytus VOR	VOR	LTU		74	20	110				

3 items. 0 selected.

**Broadcasting transmitters**

Name	System	Channel	Frequency, ...	Antenna hei...	ERP H, W	Country	ERP V, W	Polarization	Longitude	Latitude
1AS 100.1 MHz	FM	100.1	100.1	250	19952.623	LTU		Horizontal	025E1800.00	54N4...
1AS 100.4 MHz	FM	100.4	100.4	57		LTU	3981.072	Vertical	022E2200.00	56N1...
1AS 100.8 MHz	FM	100.8	100.8	130	10000	LTU		Horizontal	024E4500.00	56N1...
1AS 100.9 MHz	FM	100.9	100.9	200	19952.623	LTU		Horizontal	023E1500.00	55N5...
1AS 101.3 MHz	FM	101.3	101.3	60		LTU	1000	Vertical	024E1700.00	55N0...
1AS 101.9 MHz	FM	101.9	101.9	200	19952	LTU		Horizontal	025E0000.00	55N4...
1AS 102.3 MHz	FM	102.3	102.3	150	10000	LTU		Horizontal	024E0000.00	54N0...
1AS 102.6 MHz	FM	102.6	102.6	250	19952.623	LTU		Horizontal	025E1800.00	54N4...

580 items. 0 selected.

**Setting**

Setting	Value
Include buildings	False
Interference modes	A1, A2, B1 (ICAO), B2 (ICAO)
Refractive factor	1
Skip below B1 cut-off, dB	20
Terrain profile step, m	100
Use 2 ray prediction for ILS	True

Data Entry

Add tx... Add tx by Location... Calculate Close

## 4.3 Coverage contour

**NEW:** Support for multiple wanted transmitters in Coverage Contour.

## 4.4 Frequency scan

**NEW:** Yes/no flag indicating whether ERP restrictions are required added to frequency scan report.

-----  
 Channel Frequency, MHz Total area, km<sup>2</sup>, ERP restrictions  
 -----

87.5	87.5	533.3	<b>YES</b>
106.6	106.6	308.7	<b>NO</b>
106.7	106.7	232.9	<b>YES</b>