

EFC-400 Release 2021 – up to 10 Program Instances

Overview of the new features:

- Storage of calculations with limit value guideline as B%- and E%-data
- Triangulation with selectable resolution from 2000x2000 to 8000x8000 points
- Automated batch processing without interruption through warning dialogs
- Adding the maximum calculation result value to the coordinate list
- New program for subtraction of calculation datasets
- Improved presentation of maximum values in X- and Y-window
- Simultaneous and efficient working with up to 10 instances
- New Models in Libraries for Ships and Trains
- 3D-Hardware – Acceleration can be turned off now

General Improvements:

- As in previous releases, the hardlock drivers are up to date.
- The Audible QSI export has now been adjusted to exclude any surcharges from export for all procedures F2 to F12. Setting surcharges on the QSI model is the sole responsibility of the sound expert's user.
- During QSI export the configuration is now logged under the name 'Noise2QsiConfig.log' and saved to the same path as the QSI data.
- When working with EFC-400, it is possible to open up to ten instances on one computer (ten is the preset maximum). This can be an advantage when multiple calculations are to be carried out simultaneously. When instances are closed in order to open new ones, it was – up to now – necessary to do this in chronologically reversed order. This procedure is not necessary anymore since each instance memorizes automatically the right order of directories and sequences.

Virtual Reality Interface:

- The legend for presentation of calculation results in the 3D-Virtual-Reality-window is now displayed sharper.
- The 3D-hardware acceleration can be deactivated in 'Advanced Settings | System'.

Cartographical Data:

- When loading dxf background maps 'frozen layers' are no longer displayed.

Extension of Libraries:

- A new example of a container ship with an antenna system on the ship's bridge is included in the high frequency version. This model can also be found in the antenna library with the name 'Ship'.

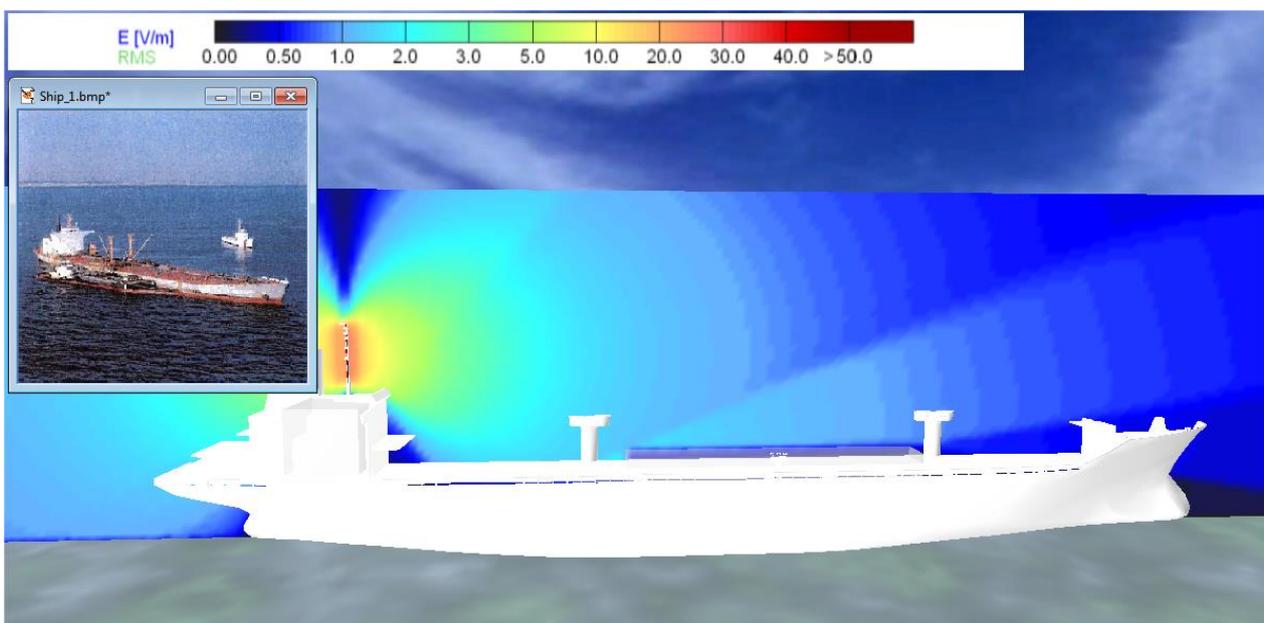


Fig.: new example of a container ship with antenna system

- New examples for AT-stations can be found in the directory example/bahn.

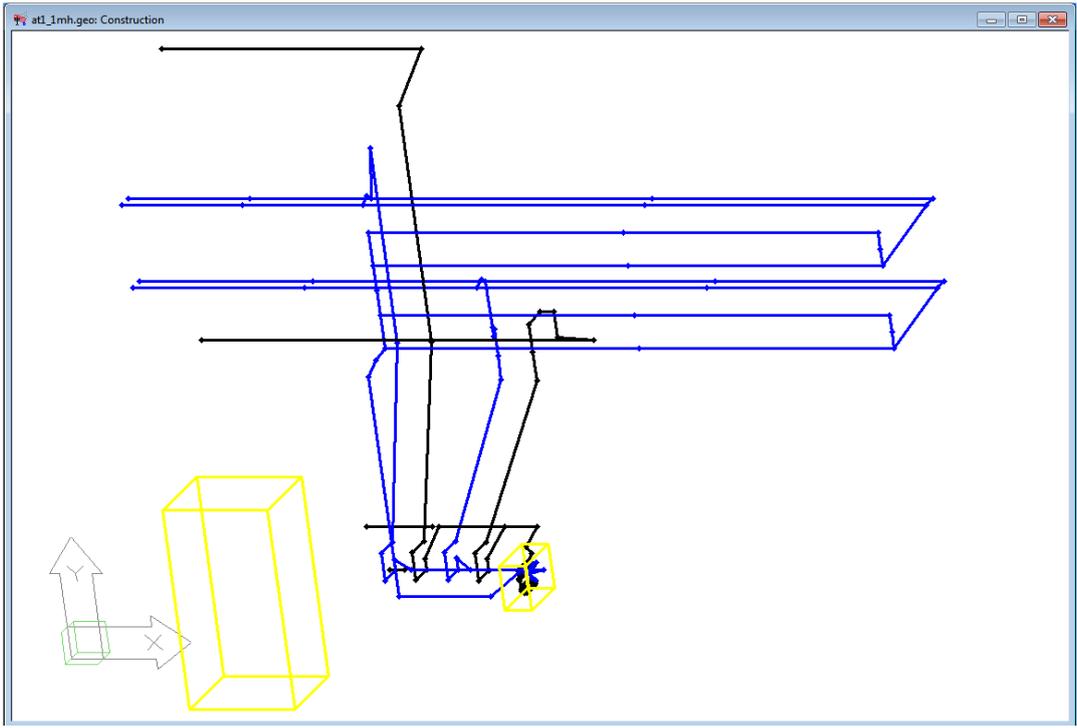
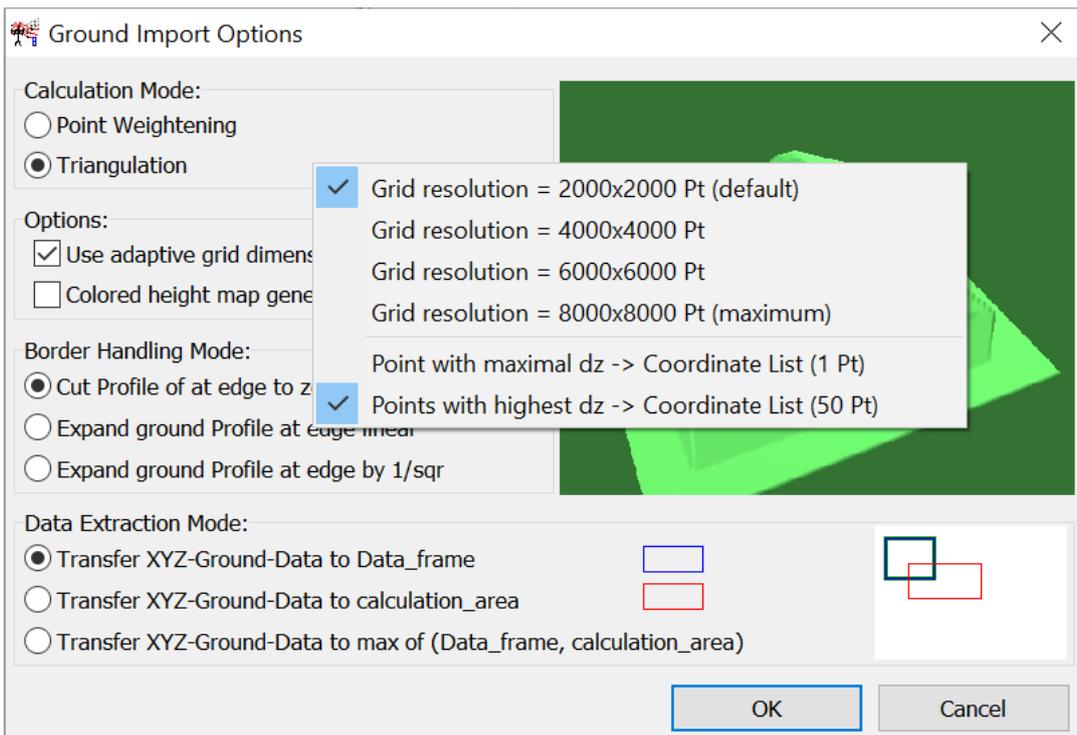


Fig.: new example of an auto-transformator-station for train supply

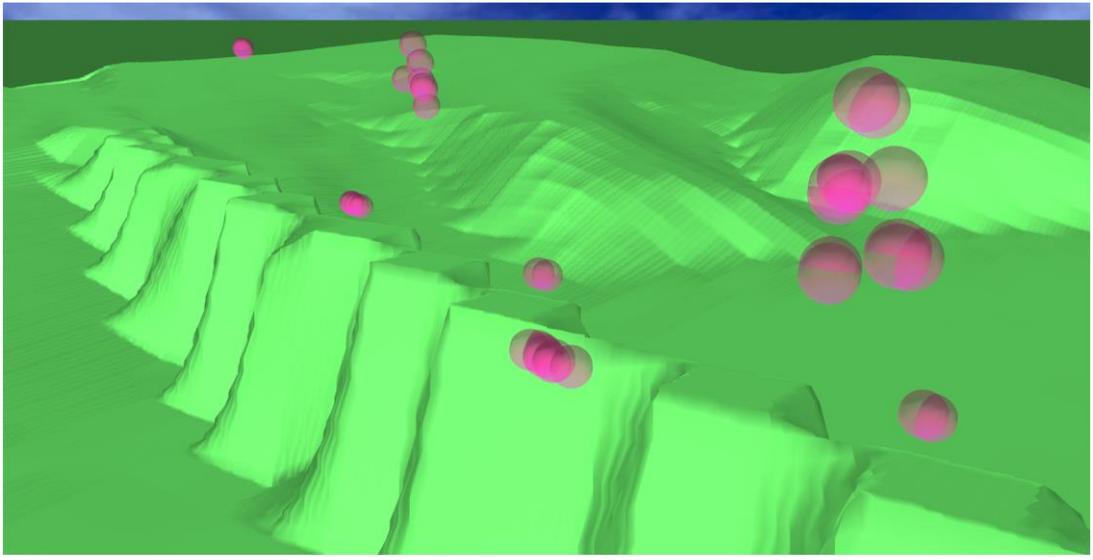
New Calculation Functions:

- If the program for automated batch processing (batch-file) was called from the command line, it was possible to interrupt the continuous processing by warning dialogs such as 'The calculation area will be adapted to the ground profile!' Now all warning dialogs are suppressed when executing from the command line, because it is assumed that experienced users check the geometry in detail before.
- B- and E-field calculations executed with a selected limit value guideline can now also be saved as B% and E% data. When reloading, the selected limit value guideline is automatically restored.
- When triangulating xyz ground data, the user can now set the raster resolution via a local context menu. The range of values lies between a resolution of 2000 x 2000 points and a maximum of 8000 x 8000 points.



- The error of the triangulation can be read by the user from the 'error.log' file or can be written to the coordinate list as maximum DTM deviation during triangulation by activating the 'point with maximum dz to coordinate list' option.

Furthermore, these point deviations can be displayed as sphere markings in 3D to control if they are relevant for the route of the transmission line.



- For additional control, tower and building positions over the terrain are logged in the file 'Object2Ground.log' when loading a raster data DTM, which allows to check how much the z-object height differs from the z-coordinate of the terrain.

	A	B	C	D	E	F	G	H	I	J
1	NOTE: ground-mode = ABSOLUTE									
2										
3	Object	number	X_object	Y_object	Z_obj_absol	Z_ground	Delta_Z[m]		Object name	
4										
5	Ext-Tower	1	314791.79	5966960.14	24.8	25.966	-1.166		Po_C23__	
6	...									
7	Ext-Tower	240	314918.216	5966830.48	25.32	25.237	0.083		380 kV Portal	
8										
9	Ext-Tower	187	312559.6	5966141.2	5.31	6.528	-1.218 MIN		M9_110 kV YWB-16 WA1+4	
10	Ext-Tower	53	307423.469	5956038.02	86.397	84.694	1.703 MAX		38_D81/16/21_T1+7.5	
11										
12	Building	1	312832.3	5966826.05	7.13	7.142	-0.012		BUILDING1	
13	...									
14	Building	50	294871.95	5924093.75	61.28	61.318	-0.038		CASE23	
15										
16	Building	50	294871.95	5924093.75	61.28	61.318	-0.038 MIN		CASE23	
17	Building	44	297763.25	5932522.15	61.43	61.371	0.059 MAX		CASE17	
18										

- A new program called 'Diff_Converter' can be found in the directory 'EFC-400/WhatsNew/Tools'. It can be used to subtract or add different calculation datasets. This feature makes it possible to calculate the difference between target and actual states, for example.

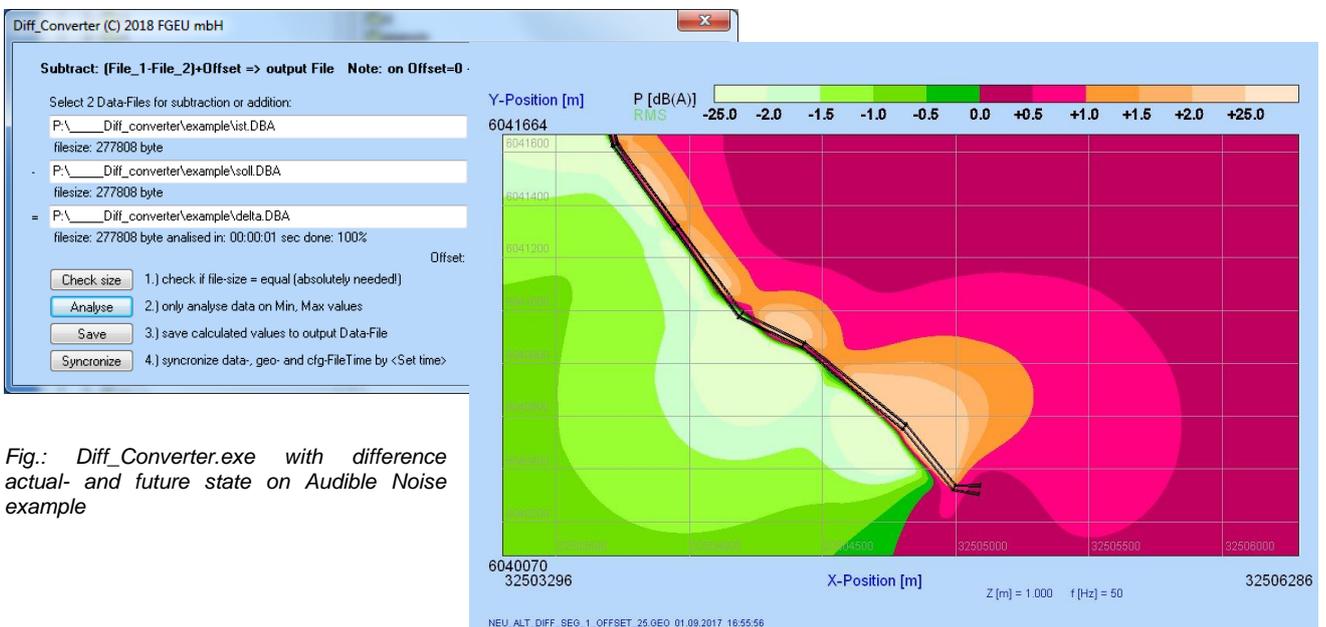
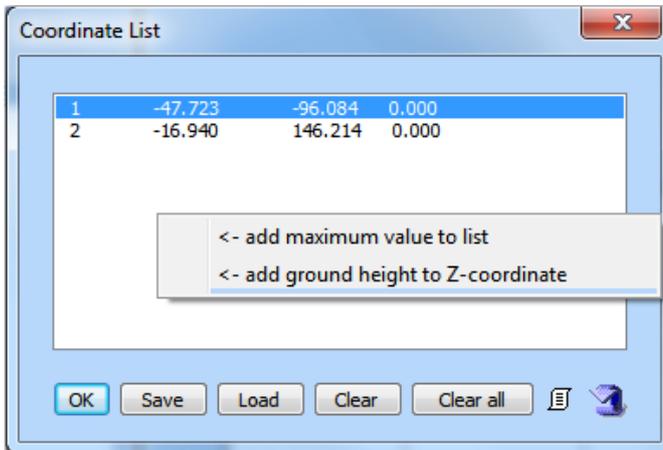


Fig.: Diff_Converter.exe with difference actual- and future state on Audible Noise example

Improved User Interface:

- In the coordinate list there is now a local context menu which can be opened with the right mouse button and contains two new commands. First: 'add maximum value to list' adds the maximum value of a calculation to the coordinate list as a point, so it is no longer necessary to determine it manually with the cursor in the calculation window. Second: the command 'add ground height to z-coordinate' adds the height of the ground to relative z-coordinates, if the z-coordinates are not already absolute heights.



- When displaying big calculation datasets as a set of curves (in green) in the X- or Y-plot, only a small, statistical selection of curves is selected for faster image generation. Until now, data was discarded in this procedure and that is why it was possible that the actual maximum value was not displayed. The procedure was modified so that the maximum value is now searched for and displayed in every interval section.

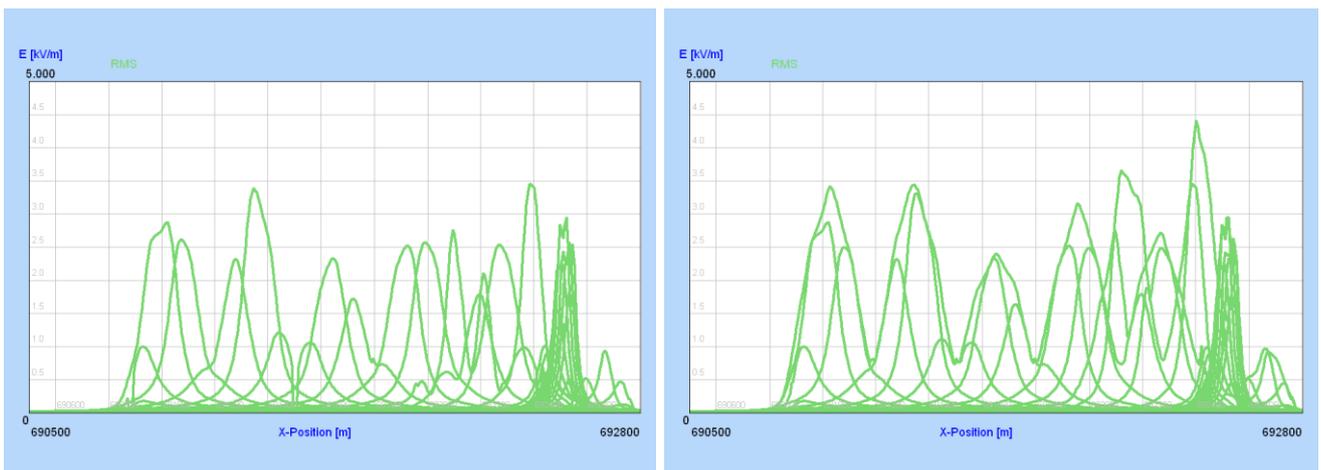


Fig.: old data presentation (left) compared to new one with improved resolution of the maximum values (right)

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