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EFC-400 Release 2024 – new Libraries and Functions

Overview of the new features:

- ❑ Isolines-DXF-export shifted to double in order to avoid rounding errors
- ❑ Detailed log-file of the calculated induced current with complex values
- ❑ Command line parameter '/LFHF' for simultaneous LF- and HF-calculation
- ❑ Calculation of multiple projects of entire directories via CMD
- ❑ Construction of 1- and 2-conductor cables now possible
- ❑ New command line parameter '/saveclose'

Extension of Libraries:

- A new example 'train_and_repeater.geo' of a train with an antenna system on board is included in the high frequency version. This model can also be found in the antenna library with the name 'Train'.

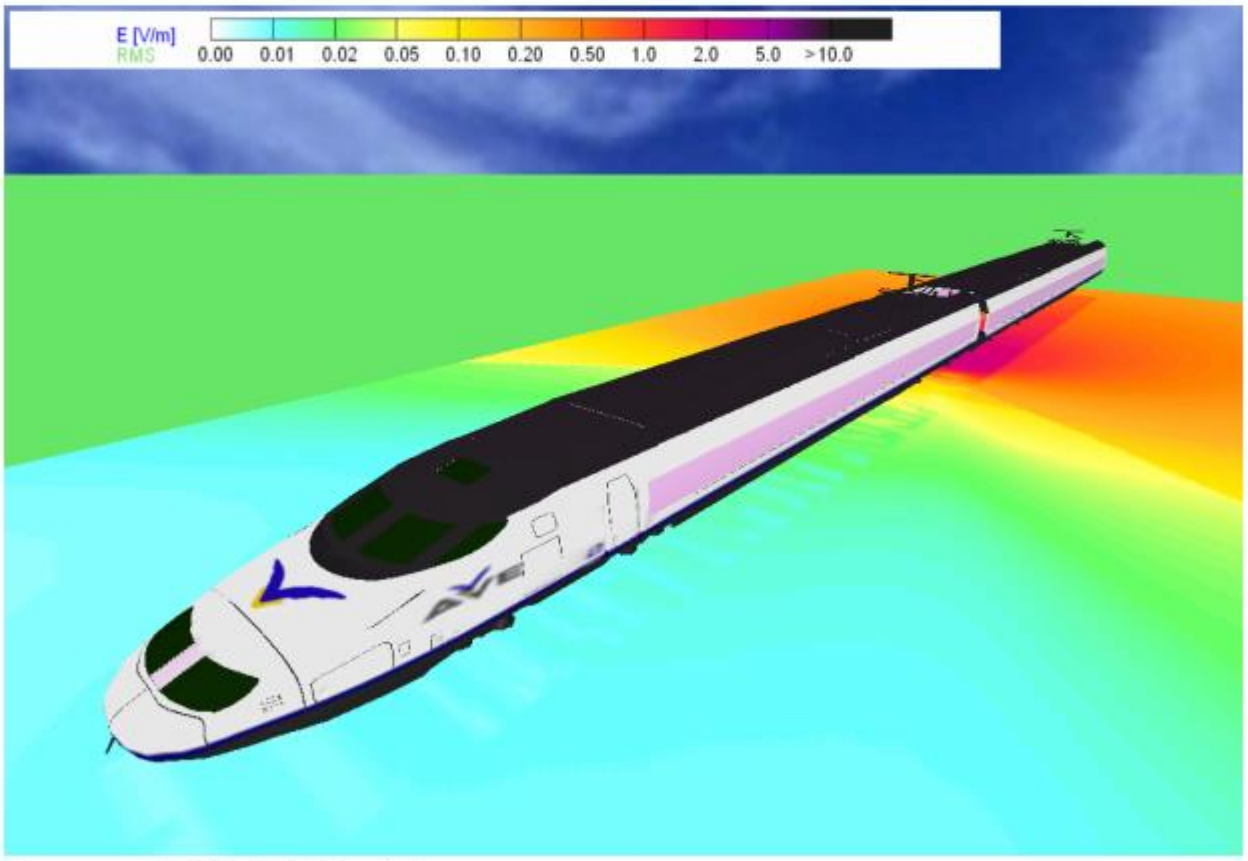


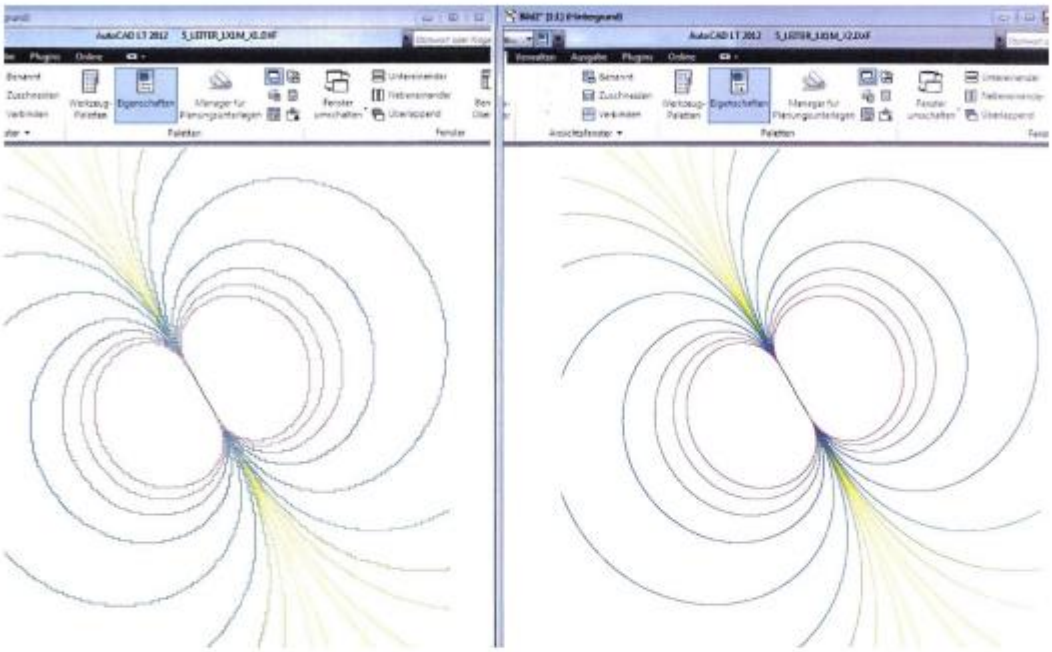
Fig.: new example of a train with internal antenna

New Calculation Functions:

- After a calculation, both, induced currents and induced voltages are displayed in the geometry list. A log-file with the name 'induction_tab.log' is created in the work directory. This file contains complex currents and voltages as well as the complex impedance per unit length.

Cartographical Data:

- The export of calculation data as DXF-isolines was modified from the number format single (left picture) to double (right picture), so that rounding errors do not occur anymore in exported isolines, when working with UTM-coordinates.



- In the dialog box for background map import, the resolution is now set to 300 dpi and the map scale to 1:10.000 by default.

New Construction Functions:

- In the function 'Construct cable' it is now possible to insert 1 as the number of phases of a cable. Using 'Connect', the 1-conductor-cable is rounded at the corners, too.

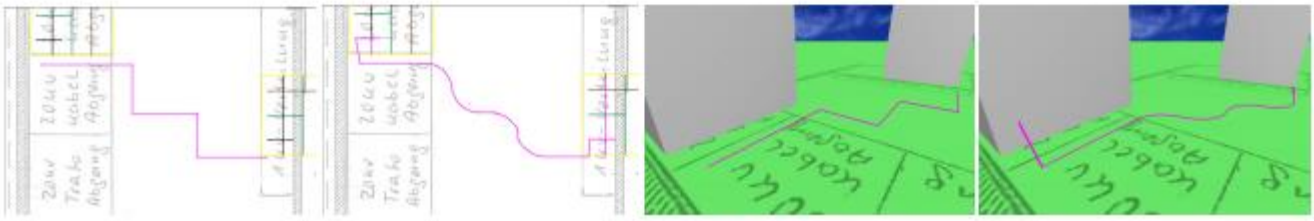
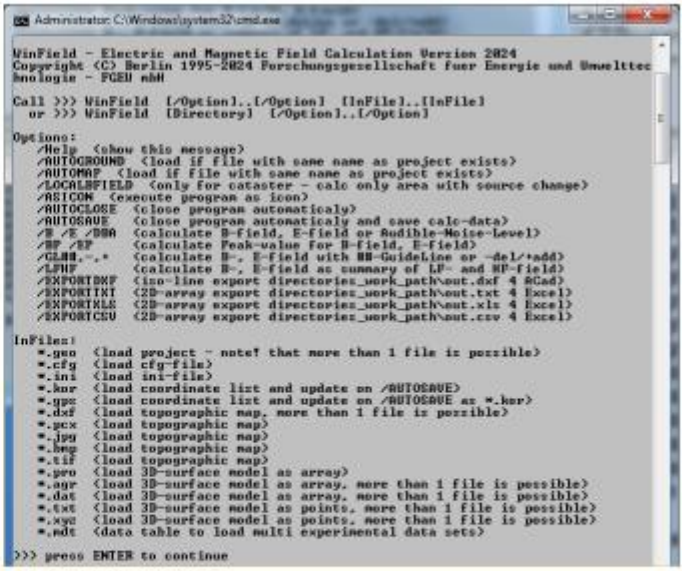


Fig.: Connection of a 1-phase-cable rounded off automatically while connected

General Improvements:

- Projects are always saved and opened together as geometry (*.geo) and configuration (*.cfg). If the configuration is missing, e.g. during 'third-party-export', an error message: 'Configuration (*.cfg) not found!' is displayed to indicate that the processing/calculation is carried out with an arbitrary - the last loaded - configuration.
- In addition to the function '/autoclose' there is now the function '/saveclose' which saves the calculation data before closing the program. The present '/autoclose' function has not become redundant by that, since it is usefull when calculations are carried out in order to export data without saving the calculation results themselves.
- On the CMD, not only the filename of a geometry can now be specified for the calculation, but alternative a directory from which all geometries are calculated one after the other.
- There is a new CMD parameter '/LFHF' with which the simultaneous LF and HF calculation is carried out.



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