



Dear Madams and Sirs,

with the following information we would like to present you the **new version 4.0 of IMMIS^{em} / IMMIS^{luft}**.

Specifically, we would like to point out that the user interface is completely revised, new database fields for particles were introduced and the number of database fields is now variable.

This newsletter with additional links is also available at <http://www.ivu-umwelt.de/e/>.

For further information please contact us by phone, e-mail or by returning the enclosed reply form.

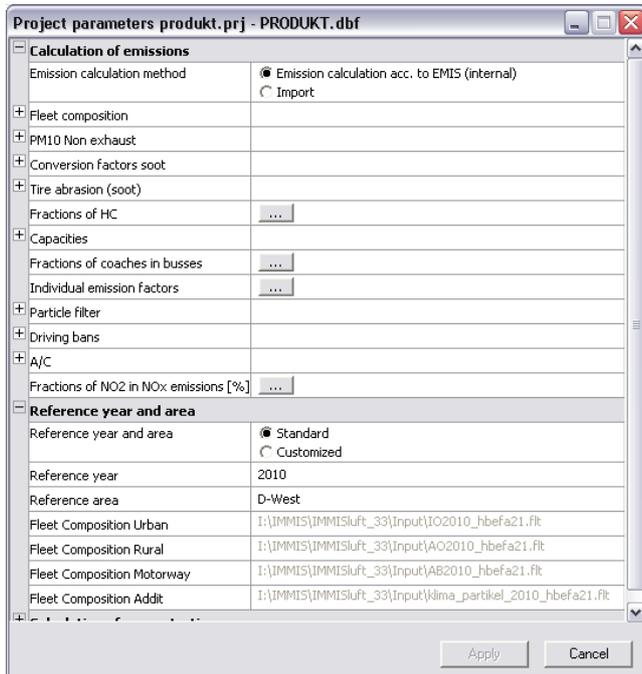
On behalf of our team

(Volker Diegmann)

New user interface

Easy-to-use control center

The new dialog Project parameters replaces the previous dialogs parameters emission, parameters concentration and reference year.



Project parameters are arranged in a tree-like structure. The new dialog can remain open while continuing working with the program.

New Result Table

A new street table with a grid structure replaces the old results table.

| No | Streetname | MDT | EM_PART g/(m³d) | EM_PM10 g/(m³d) | EM_PM25 g/(m³d) | EM_NOX g/(m³d) | EM_NO2 g/(m³d) |
|----|-----------------------|--------|--------------------|--------------------|--------------------|-------------------|-------------------|
| 1 | Albmannshäuser Straße | 20'000 | 0.406 | 2.916 | 0.406 | 11.045 | 1.826 |
| 2 | Bachstraße 1 | 2'000 | 0.018 | 0.198 | 0.018 | 0.402 | 0.139 |
| 3 | Biebricher Straße | 1'000 | 0.009 | 0.099 | 0.009 | 0.201 | 0.070 |
| 4 | Bodenheimer Straße | 1'000 | 0.009 | 0.099 | 0.009 | 0.201 | 0.070 |
| 5 | Buntertorsteinweg I | 30'000 | 0.798 | 4.563 | 0.798 | 19.996 | 3.934 |
| 6 | Buntertorsteinweg II | 30'000 | 0.798 | 4.563 | 0.798 | 19.996 | 3.934 |
| 7 | Delmestraße I | 1'051 | 0.011 | 0.113 | 0.011 | 0.277 | 0.074 |
| 8 | Delmestraße II | 1'051 | 0.011 | 0.113 | 0.011 | 0.277 | 0.074 |
| 9 | Delmestraße III | 1'051 | 0.011 | 0.113 | 0.011 | 0.277 | 0.074 |
| 10 | Donaustraße | 1'000 | 0.009 | 0.099 | 0.009 | 0.201 | 0.070 |
| 11 | Eibstraße | 1'000 | 0.009 | 0.099 | 0.009 | 0.201 | 0.070 |
| 12 | Erlenstraße I | 2'000 | 0.018 | 0.198 | 0.018 | 0.402 | 0.139 |
| 13 | Erlenstraße II | 2'000 | 0.018 | 0.198 | 0.018 | 0.402 | 0.139 |
| 14 | Erlenstraße III | 1'000 | 0.009 | 0.099 | 0.009 | 0.201 | 0.070 |

The most important improvements are:

- Variable column width
- Copy the content of a row to the clipboard
- Sort the table by clicking on the column head
- Table head and line number stay visible while scrolling vertically and horizontally
- Display with any installed font

New toolbar and status bar

The toolbar has been completely redesigned.

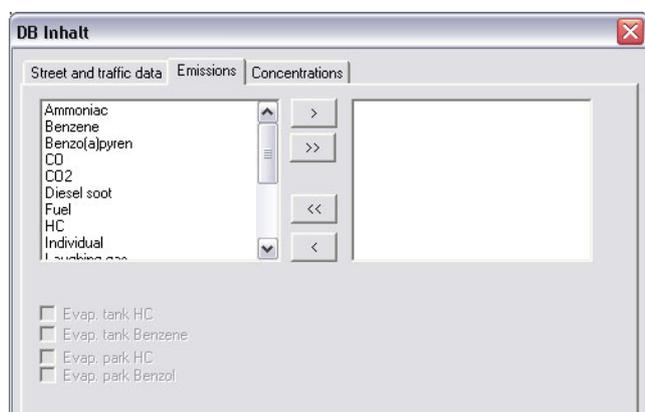


The name and path of the current database is now displayed in the status bar.

Revised database

Variable Size

IMMIS^{em/luft} stores all input data and calculation results in a dBASE-database. For the calculation, some fields have to exist – the so-called mandatory fields. Additionally, optional fields exist. Since version 4.0 these fields can be removed or added to optimize the database structure. The new dialog *DB Content* shows all optional fields with the possibility to add or remove them from the database.



Pollutants

NO₂ direct emissions

According to the latest studies the fraction of NO₂ on exhaust emissions is considerably higher than previously thought. With newer car fleets, this leads to decreasing NO_x emissions while NO₂ concentrations do not decrease in the same extent or even increase. The effect depends on vehicle type, fuel type and reduction technology.

An extension of the emission model IMMIS^{em} enables to define the fraction of NO₂ in NO_x emissions separately for different vehicle types to determine the fraction of NO₂ direct emissions.

A recent study with this emissions model for the City of Berlin shows, that compared to the current calculation method even in the forecast the NO₂ problem is distinctive.

PM2.5

IMMIS^{em/luft} now integrates the calculation of PM2.5 emissions and concentrations caused by road traffic. The fraction of PM2.5 in PM10 emissions generated through dust resuspension and wear can be defined individually.

Particle fields

Version 4.0 improves the display of particle emissions and concentrations. Fields for emissions, background, additional and total concentration of exhausts particles, PM10 and PM2.5 were introduced.

Calculation improvements

Environmental Zone

With IMMIS^{em/luft} version 4.0 streets can be individually labeled to be calculated with driving bans, e. g. within scenarios for environmental zones.

Orientation

The orientation of streets with open building structure is now considered in the calculation.

Improvements

The interpolation method for coupling coefficients of non-tabled geometry data has been optimized.

Declaration of light trucks

Light trucks can also be specified as fraction of MDT.

Display of days of PM10 threshold exceedance

Alternatively to the display of 90.4 percentile it is possible to display the number of days with threshold exceedance.

IMMIS^{em/luft} and GIS

ArcGIS 9.2

IMMIS^{em/luft} 4.0 works fine with ArcGIS 9.2. Installations of ArcGIS 9.1 are no longer supported.

MapInfo 9.0

The integration of IMMIS^{em/luft} in MapInfo has been improved with version 4.0 and is available for MapInfo 9.0.

IMMIS^{net} and MapInfo

The current version of IMMIS^{net} is available for MapInfo as well.

Contact

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