

New Features of CadnaA Version 2020

The list of new features offered by **CadnaA** is subdivided into the following sections:

- Calculation/Configuration
- **CadnaA**-Objects
- Further New Features
- Miscellaneous
- Import/Export
- **CadnaA**-Options
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The new features of CadnaA 2019 MR1 and MR2 are in Italics.

Calculation | Configuration

- CNOSSOS: calculations selectable according to CNOSSOS-EU, CNOSSOS-DE (Germany) or CNOSSOS-AT (Austria), (see tabs „Industry“, „Road“, „Railroad“)
- CNOSSOS: default temperature now depends on the CNOSSOS-procedure used
- Nord2000 (Industry): now also available with **CadnaA** 64-bit
- Nord2000 (Industry): **CadnaA** 64-bit using Nord2000 64-bit DLL now enables multithreading
- Nordic Pred. Method (Road): now with option „Norwegian Method“ for the evaluation of the maximum pass-by level
- parameter check (tab „Country“): sets the configuration of calculation according to normative or legal prescriptions (by using different parameter sets)
- dialog **Tables | Variants**: new option „Save Partial Levels per Variant“
- *CNOSSOS-EU Road: new road surface types accord. to CNOSSOS-DE*
- *CNOSSOS-EU Railway: vertical directivity corrected (now corresponds with the specification in CNOSSOS-DE)*
- *CNOSSOS-EU Railway: new track types, railhead roughnesses, noise reduction at rail and bridge types accord. to CNOSSOS-DE*
- *SonROAD18 (Swiss): new road surface types (KB-10 bis KB6, see library **Road Surfaces (global)**)*
- *SonROAD18 (Swiss): LwA' direct input applies road type „VS_80 Verbindungsstrassen, 80 km/h“ by default*
- *SonROAD18 (Swiss): new converter for traffic figures*
- *SonROAD18 (Swiss) now using propagation accord. to ISO 9613-2*

- *CNOSSOS-EU: ground absorption in the source-region G_s may be specified by a string variable at each source (e.g. CNOSSOS_GS=0.7)*
- *NMPB08 (Road, France): new updated road types*
- *Nordic 96-Road: calculation of L_{Amax} for n-th vehicle*
- *Nordic 96-Road: new option "hb interpreted as source height" on/off*
- *Nordic 96-Rail: new train types (BM 71, BM 74/75)*

CadnaA-Objects

- *receiver: new attributes EXCEEDVAL, EXCEEDVAL1, 2, 3, 4 reading the exceedances in dB (for the current eval. parameter or eval. parameters 1..4)*
- *point/line/area source, parking lot, tennis: new attributes TEINWRES_C, _D, _E, _N (C=current eval. parameter) reading the resulting operation time in minutes (also for mixed eval. parameters, e.g. Lde), for operation time options „steady-state“, „minutes“ and „diurnal pattern“*
- *barrier: now with cylindrical cantilever (just for 3D view, calculation as with screening edge of a plane cantilever)*
- *building noise map & facade points (**Options/Building Noise Map** dialog): new options "Height is following terrain" and "Lower Receiver max. 20 cm below eave"*
- *optimisable source: now enabling selection of a 2D directivity for a reference point*

Further New Features

- *Grid Evaluation (**Extras** menu, with options X/XL): now also for evaluation parameters 1 to 4 (r01 to r04) of the active variant*
- *Tables: new search feature in object tables and in the **Group** table (searches for the name, i.e. attribute BEZ), wildcards * and ? available*
- *Tables: now high-lighting the actual table row (with a single cell being selected)*
- *preselect popup (>>) offering text variables in dialogs **ObjectScan**, **Text Box**, Text Box (PlotDesigner), **Building Noise Map** (Arithmetics), **Grid Arithmetics** and **Result Table***
- *new local and global library **Directivity** (**Tables** menu)*
- *new types of directivity: rotationally symmetrical (as before), 3D directivity and 2D directivity (in angular steps 5/10/15°, in octaves or third-octaves)*

Miscellaneous

- *new keyword #(GLK, SetSTW, <stwnr>) to set the storey number (<stwnr>) in LUA*
- *action „Break into Pieces“ (**Modify Objects** dialog & context menu): new option "Split at closest polygon point" (showing the active reference point in blinking mode)*

- dialog **Edit Toolbar (Options menu)**: new option „Select Floor“ display a list box on the toolbar enabling to select the storey displayed with building evaluations
- Plan cell in Plot-Designer: new list box „Show Floor“ enabling to select the storey being displayed
- dialog **Modify Objects | Modify Attribute**: When several object types are selected now the list box box “Attributes” shows the common attributes.
- dialog **Options 3D-Special**: new option „Take invalid grid points from palette“ (instead of default-green), OFF by default
- dialog **Options | Appearance**: new option „Overlay Display if Iso-Lines“ for object type „Grid: Area“, enables the labeling of iso-lines while displayin iso-areas
- dialog **Options | Appearance**: For lines and fillings a transparency (%) can be specified (with type “Cartographic”, not for type “Simple”).
- Building Evaluation + Facade Points (dialog **Options | Appearance**): 2D appearance settings for angle (°) and reference (Y-Axis, North, Paper)
- object tables: When selecting the „Delete“ command from the table’s context menu while holding down the CTRL-key all table lines are deleted – after safety prompt.
- local text block CNABATCH (for batch calculations): The coding CALC_RASTER=2 to calculate all variants now also applies with PCSP calculations.
- new dialog **Proxy Server Settings (Options menu)**: offering various settings for web access via a proxy server

Import/Export

- **File | Import** menu, format „SketchUp“ (for **CadnaA** 64-bit only): now offers import from Sketchup 2019 x64 (NOTE – not available in **CadnaA** 32-bit)
- library **Directivity**, button „Import“: now import of directivities from EASE Asciii (*.xhn)
- import filter “Sketchup 2015”: Layer and group designation are saved as string variables in the memo-window.
- CLF import (common loudspeaker format) via **Directivity** dialog into the local or global library **Directivity** (*.clf1, *.clf2)
- bitmap import via WMS: access to WMS server now offering authentication (per user name and password)
- bitmap import from Google Maps, Bing Maps or OSM: URL of a map section can be copied via the clipboard transforming the bitmap according to the selected coordinate system
- options for Google Maps import: default now „Use Bitmap Dimensions“

CadnaA-Options

- options X/XL: Grid Evaluation (**Extras** menu): now also for evaluation parameters 1 to 4 (r01 to r04) of the active variant
- *options X & XL: new Lua function `cna.get_ini_path()` (reading file path + filename of CADNAA.INI file) and `X:break_lines(Y)` (object X gets broken by object Y)*
- *options X & XL: new command **Lua-Skripts Presets** on **Extras** menu to run Lua scripts automatically*
- *options X & XL: new supplied Lua script "Transfer attributes" for transferring attributes between objects*

Bugfix

- Sonroad18: error in directivity corrected