

1.3 New Features of CadnaR 2.4

The list of new features offered by **CadnaR**, release 2.4, is subdivided into the following sections:

- Calculation/Configuration
- **CadnaR** Objects
- Further New Features/Miscellaneous
- Import / Export

Please note that some of the new features require the appropriate **CadnaR** option.

- new option SET: The expert option “SET“ allows to generate spectral sound power levels using technical system parameters like e.g. power in kW, volumetric flow rate in m³/h or rotation frequency in Hz (offering the same features as option SET in **CadnaA**).
- new option OFFICE: This option combines selected features of the options “Calculation & Handling” and “Project Organization” (for further details see Chapter 1 - Introduction).
- new option T: This option contains selected features of the option “Audio” and complements the option “Office“ (for further details see Chapter 1 - Introduction).
- sigma criterion for particles (by using an iterative doubling of the number of particles, until the maximum standard deviation set in the configuration is fulfilled at all voxels and/or receivers, see chapter 9.1.3, "Calculation" tab)
- estimation of the required maximum runtime of the particles (by evaluating the mean free path and the mean absorption, chapter as before)
- automatic configuration settings for particle model (maximum runtime, standard deviations voxel/receivers, chapter as before)

**Calculation/
Configuration**

CadnaR objects

- free-field simulation for source groups (requires ObjectTree, Option ORG, see chapter 9.1.3.6)
- new objects: Height Point (see chapter 5.18), Contour Line (see chapter 5.19), PolyMesh (see chapter 5.20)
- new actions/commands on dialog **Modify Objects** and on the context menu:
 - Simplify Geometry (see chapter 6.2.6)
 - Spline (see chapter 6.2.5)
 - Modify Order of Points (see chapter 6.2.4)
 - Break into Pieces (see chapter 6.2.7)
 - Connect Lines (see chapter 6.2.8)
- new action on dialog **Modify Objects**, „Delete Duplicates“ (see chapter 6.2.14)
- Command/action „Parallel Object“ now generates barriers and vertical area sources at polygon objects (see chapter 6.2.12).
- new context menu commands: Group/Ungroup PolyMesh, Delete Grid-Points (for Calculation Area), Break Lines/Areas (see chapter 6.3)
- Box-type obstacle and box-type sources may now be freely rotated.
- Hyperlinks to files can be established in the **Memo-Window** dialog (see chapter 5.1, section "Hyperlink").
- command/action "Duplicate": now also in z direction possible
- Receiver: Switching of active variants possible on **Reverberation Time** dialog.
- Auxiliary Polygon: By the context menu command **Create Poly with n Edges** a polygon with n-edges can be generated from an auxiliary polygon with exactly two points.

- A bitmap or meta file can be pasted as a symbol into the graphics via the clipboard (by using the menu command „Paste“ or by the keyboard shortcut CTRL+V).
- Now, by default, only equidistant grids or voxel grids can be specified. In case of changes it will be prompted whether the respective other grid shall be adapted using the same increment (see chapter 9.1.5 and 9.1.6).
- The voxel borders can be displayed in 2D via the **Coordinate Grid** dialog (see chapter 9.1.4.8).
- generation and analysis of measuring envelopes consisting of a mesh of receivers (requires option CAL, see chapter 9.1.7.5, section "Generate Envelope")
- Now, the toolbox is moved in conjunction with the main window.
- OpenGL 3D-view: interactive video capture feature (see chapter 9.1.4.1, section "Video menu")
- 3D-View: SHIFT double clicking selects objects in 3D and in 2D simultaneously.
- new import format ASCII-Objects (for object geometries, see chapter 9.1.1.1, section "File Format ASCII-Objects")
- new import format ASCII-LibObj for import of spectra into the local libraries (see chapter 9.1.1.1, section "File Format ASCII-LibObj")

**Further New Features/
Miscellaneous**

Import / Export