Quick Start Guide

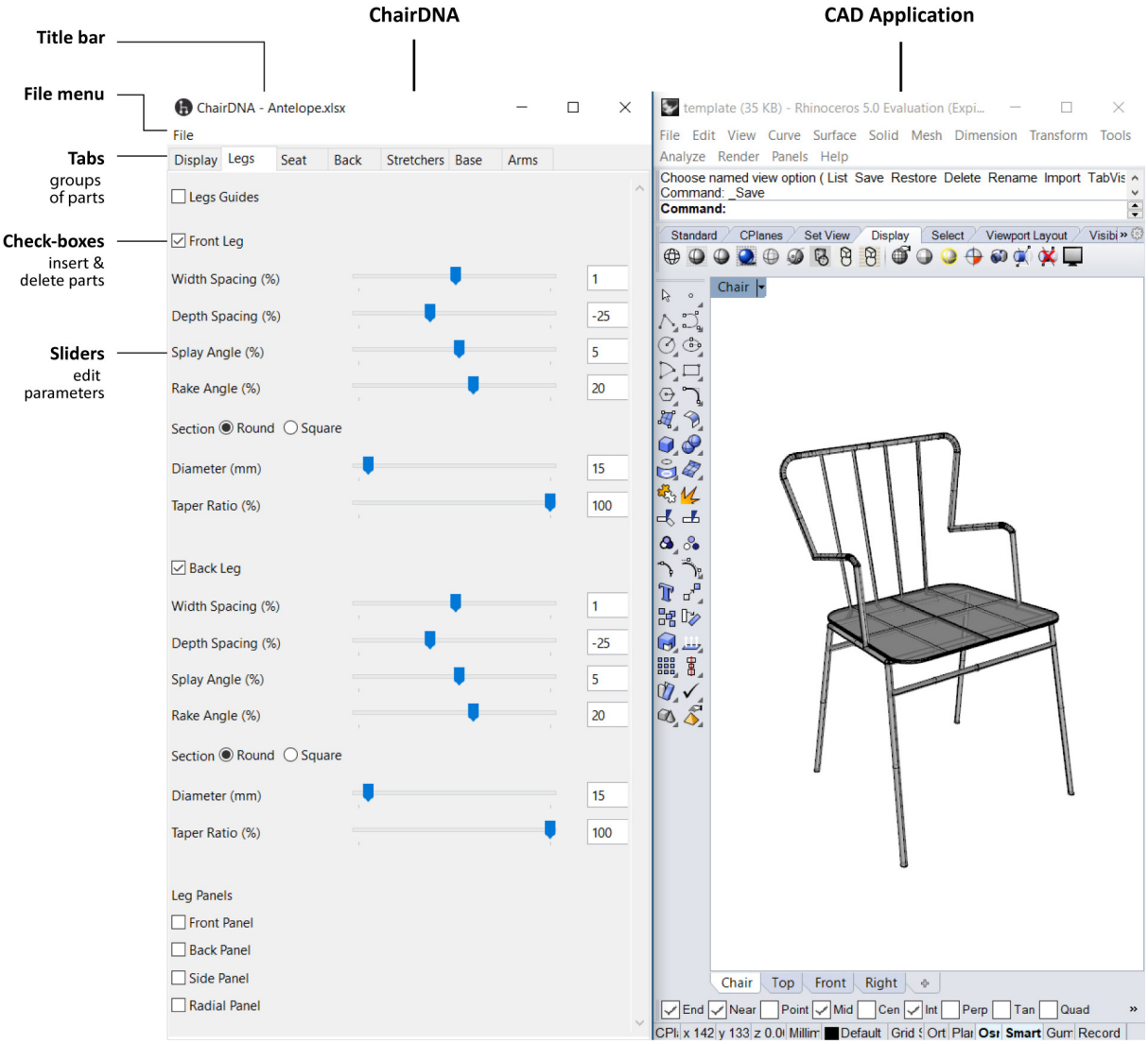
ChairDNA 1.2 is a program that allows the generation of multipurpose chairs.

The program lets you generate symmetrical chairs of many different types, while ensuring they obey correct anthropometric standards. Chairs may be generated by adding parts, step-by-step, until a desired solution is reached, or by editing pre-defined templates (loaded from a library or randomly generated).

Interface

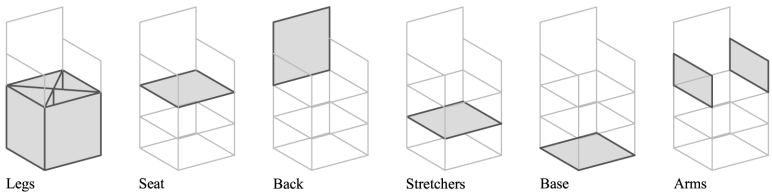
The *ChairDNA* tool interacts with three possible *CAD applications*: Rhinoceros 3D, AutoCAD or SketchUp.

In the *ChairDNA* interface you can generate chairs by adding/deleting parts and editing shape parameters. In the *CAD application*, you automatically visualize the generated model of the chair. In addition, you may edit visualization options, but you should not edit the generated shapes during the usage of *ChairDNA*.



Tabs

Apart from the Display tab, the other six correspond to the main functional areas of the chair: *Legs*, *Seat*, *Back*, *Stretchers*, *Base*, and *Arms*.



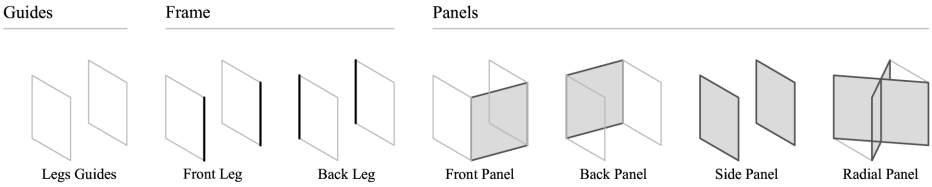
Check-boxes

When one check-box is checked the corresponding part of the chair is placed, otherwise the part is deleted.

There are three kinds of parts:

- *Guides*: the bounding perimeter of the area depicted by grey lines;
- *Frame*: the linear elements depicted by dark lines;
- *Panels*: the planar elements depicted by shaded grey planes.

Example: in the *Legs* tab, the user can add/delete one of the six parts represented below:



At the beginning, only some check-boxes are enabled to be checked; others will become enabled when the parts are inserted.

Example: in the Seat tab, the *Seat Cross Rail* only becomes enabled when the *Seat Side Rail* is checked.

Sliders

Whenever a part is placed, its shape can be edited by manipulating sliders or inserting values in the text-field.

Example: By manipulating the *Legs* parameters, one can obtain chairs with four, three, two, or one legs.

Display

Guides: turn several guides on or off.

Solid mode: manage the appearance of the model, between wireframe and solid.

File

New: resets *ChairDNA* to the initial state.

Open: imports a design whose parameters are stored in an Excel file. The user may open a pre-defined chair from the program library or open a chair that was previously saved.

Save/Save as: exports a design to an Excel file, which stores all the parameters of the current design.

Random: generates a random design. If the word ERROR appears in the title bar, it means that some constrains were violated. In that case, repeat the process.

Exit: quits *ChairDNA*