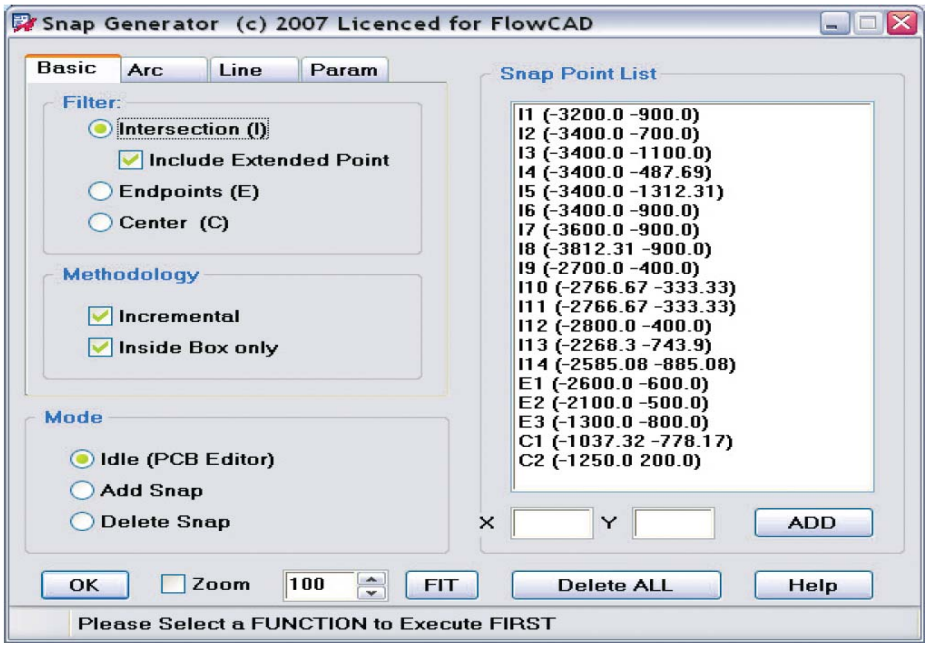
FlowCAD

FloWare SnapGen

Plug In for OrCAD PCB Editor and
Allegro PCB Editor

Snap Generator



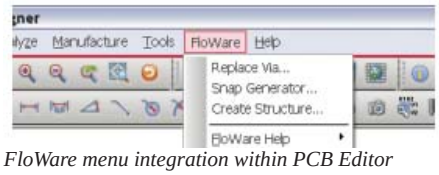
Snap Generator menu with filter selection and coordinates of snap points

FloWare Modules

FloWare Modules are software plug-ins for Allegro PCB Editor and OrCAD PCB Editor for Cadence PCB Layout tools.
These optional modules are written by FlowCAD using Cadence´s open programmable language SKILL.

Installation of these add ons is done by simply saving the files for example in the install path from PCB Editor and the Editor will automatically detect this new module and displays its menu within the PCB Editor menu structure as „FloWare".

The user can select FloWare like any other Allegro or OrCAD command by using the menus or a shortcut on the keyboard. FloWare is as integrated as the core functions of PCB Editor.



FloWare menu integration within PCB Editor

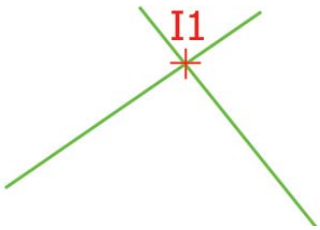
Snap Generator

In any PCB layout design, an important issue is creating or modifying geometric elements in conjunction with other geometric elements.

Polygons, lines or circles intersect with other lines, arcs or other elements. These exact intersetion points shall be used for further design i.e. placement or construction of shapes.

Snap Generator will enable you to create snap points at intersections, end points and centerpoints of objects. The snap points have absolute and exact coordinates and can easily be used for design tasks within PCB Editor.

Snap Generator is a FloWare toolkit which runs as an open menu in parallel to PCB Editor and offers the option to snap to an existing graphical entity when using native Allegro PCB Editor commands.



Snap point at intersection of two lines

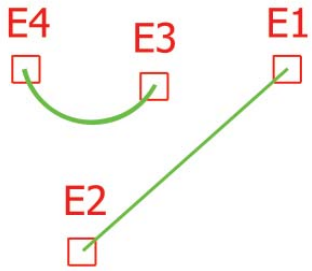
Intersection

Snap points will be created on the coordinates where two graphical elements intersect. In the FloWare module the user enables intersection mode and selects on the PCB Editor canvas two objects. A snap point will be created with an incrementing number. The snap point has the exact coordinates of the intersection and will remain in the database on a specific layer.

Snap point at extended intersection

Extended Intersection

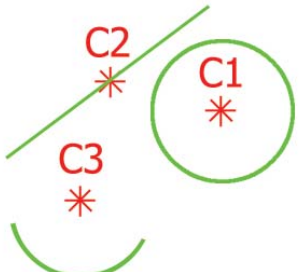
An extended intersection is created, if two objects (lines and arcs) intersect, if they would be continued. The FloWare module will calculate the virtual intersection after selecting the two objects in PCB Editor. The objects in PCB Editor will not be changed, only the incremental intersection point „I2“ will be added with the exact coordinates of this virtual intersection of extended objects.



Snap point at end points of lines or arcs

End Points

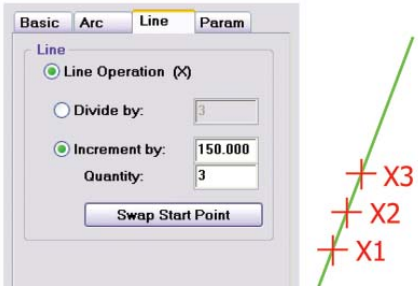
This feature will create snap points at the end of each object. The symbol used for snap points can be different for each category. In our example intersections are represented by a cross, whereas end points have a square symbol and center points use a star.



Snap points on center of lines, arcs, or circles

Center Points

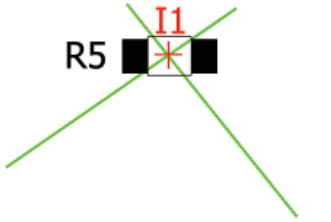
Snap points can be created on center points. A center point can be in the middle of a line, which is half the distance between the end points. The center point of an arc or circle is the center point of the radius of such an object. For squares and rectangular objects the center will be only one snap point in the middle of the object.



Create snap points every 150 units

Divide and Increment on Object

In the advanced mode for lines and arcs the user can use Divide and Increment. With „Divide by“ mode the user can devide the object in a number of segments with the same length.
With „Increment by“ the user can place snap points onto an object i.e. three snap points with a spacing of 150 units starting from the end point (see left figure). The units will be used as set in PCB Editor.



Placing a component onto a snap point

Place Components & Create Custom Shape with Snap Points

Snap points have an exact coordinate value. These values can be used in any PCB Editor command just by clicking on the snap point in the snap point list.
It is easy to place a component exactly onto a snap point. If you need to create a custom shape you can use the snap points to design such a shape. You select in PCB Editor the creat shape command and instead of entering the absolute coordinates, you simple select one snap point after the other. The FloWare module will hand over all coordinate information to open PCB Editor command.

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