

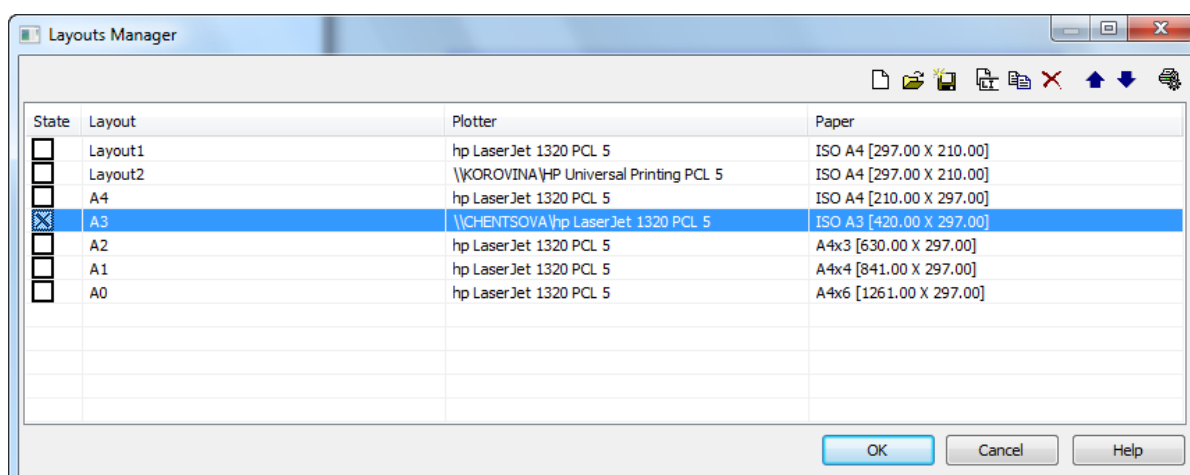
nanoCAD 4.5: What's New

- **Graphics acceleration and settings**

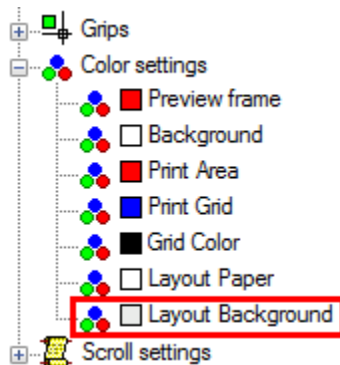
- ▶ nanoCAD has improved performance when working with drawings containing complex blocks.
- ▶ **Improved compatibility mode** was added to the **System settings** (Menu *Tools->Options->System settings->Print preview mode settings*). This mode turns on OpenGL software emulation by Windows system. It is useful in case videocard hardware driver has issues with OpenGL.

- **Drawing Layouts**

- ▶ To manage the layouts in the document, the **Layouts manager** (the **Insert** menu) has been added. It allows you to switch the tabs, create new layouts, save layouts as template, copy, rename, move and delete layouts and also set layout options to plot:



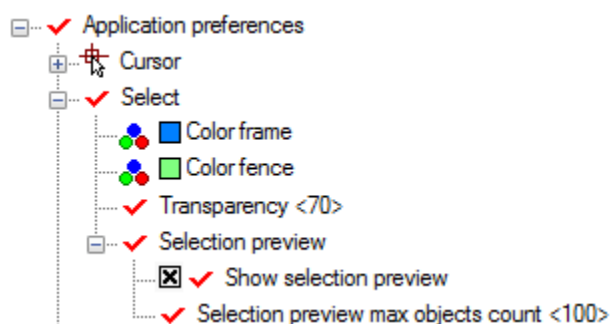
- ▶ Layout background has been added:



- **Dynamic Objects Highlighting Mode.** Dynamic objects highlighting mode has been added to preview objects of the selection or selection set. The objects that are located under the cursor or falling into the selection set when using other ways to select objects (frame, crossing window, line, etc.) are highlighted dynamically. Objects are highlighted the same color which they have:



The maximum number of the dynamically highlighted objects in preview is set in the **Select** section of the **Option** dialogue box:

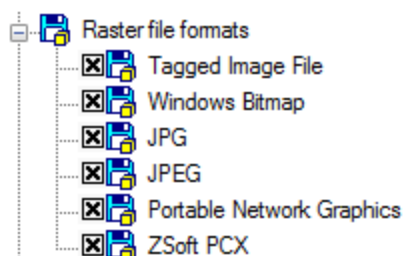


By default the value is 100. The 0 specified value or deselection of the **Show selection preview** check box turn off the dynamic highlighted mode.

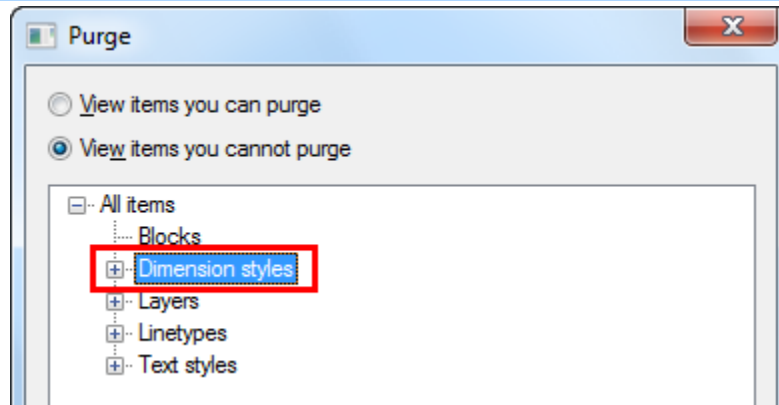
- The **Add selected** command (**ADDSELECTED**) has been added. The command creates a new object using type and properties of a selected object. A new object has the type and properties (color, layer, line type and etc.) of the selected object, but the command prompt to specify its geometric properties (length, radius, center point of circle and etc.) is shown.
- **Object editing by grips.** 4 additional modes of editing by grips were added:
 - ▶ Move (**GRIP_MOVE**)
 - ▶ Rotate (**GRIP_ROTATE**)
 - ▶ Scale (**GRIP_SCALE**)
 - ▶ Mirror (**GRIP_MIRROR**)

Select a grip and press an Enter or Space key to cycle through modes.

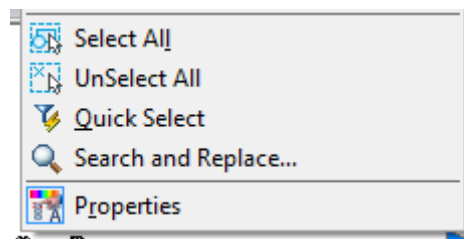
- **Raster support**
 - ▶ Three commands to set value to system variable **IMAGEFRAME** were added (Menu *Modify->Object->Image* Frame On/Frame Off/Print Off).
 - ▶ It is possible to open DWG-files with a PDF underlay in it. User can move, scale and rotate a PDF underlay. Frame of a PDF underlay can be turned on/off via system variable **PDFFRAME**.
 - ▶ Raster files in PCX format are supported:



- The **Dimension styles** element has been added into the **Purge** dialogue box:



- The **UnSelect All** command has been added into the right-click menu:

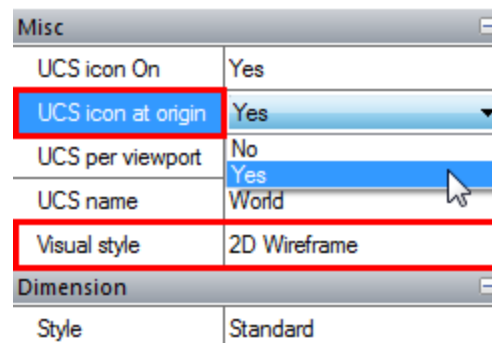


- **Inspector was improved**

- ▶ The **Select all objects** and **UnSelect All** icons have been added into the Inspector window (they are located to the right of the **Remove from selection** and **Leave in selection** icons). The **Select** and **Select similar objects** icons have been changed.



- ▶ The UCS icon at origin and Visual style options have been added in the **Inspector** window:



- ▶ The **Plot style** section that includes the **Plot style**, **Plot style table**, **Plot table attached to** and **Plot table type** options, has been added in the **Inspector** window:

Plot style	
Plot style	By Color
Plot style table	None
Plot table attach...	Model
Plot table type	Not available

- ▶ In the **Geometry** section of the **Inspector** window for the **Arc** command, the **Total angle** option has been added:

Radius	56.978
Start angle	34
End angle	139
Total angle	105
Arc length	104.4177

- ▶ In the Pattern section of the **Inspector** window for the **Hatch** command, the **Type**, **Pattern name** and **Associative** options have been added:

Pattern	
Type	Predefined
Pattern name	ANSI32
Angle	0
Scale	100
Origin X	0
Origin Y	0
Spacing	100
Double	No
Associative	Yes

- ▶ For the **Spline** command in the **Inspector** section, the following options have been added:
 - the **Data Points** section: Fit points, Fit points X, Fit points Y, Fit points Z, Control points, Control points X, Control points Y, Control points Z, Weight.
 - the **Misc** section: Method, Periodic.

Data Points		Data Points	
Number of fit points	7	Number of control points	9
Fit points	1	Control points	1
Fit point X	268.9155	Control point X	268.9155
Fit point Y	71.176	Control point Y	71.176
Fit point Z	0	Control point Z	0
Misc		Misc	
Method	Fit	Method	Control Verticies
Degree	3	Degree	3
Closed	No	Closed	No
Periodic	No	Periodic	No
Planar	Yes	Planar	Yes
Start tangent vector X	0.7419	Area	24171.7956

- ▶ You are able to edit length and angle of the lines in the **Inspector** window (the **Geometry** section):

Delta X	74.6959
Delta Y	-91.8138
Delta Z	0
Length	118.3607
Angle	309

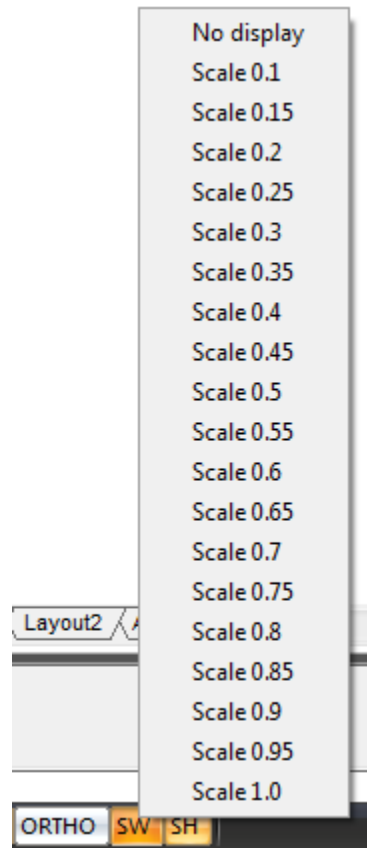
- ▶ You are able to edit the **Radius ratio** option in the **Inspector** window for the **Ellipse** and **Elliptic Arc** commands. If you enter incorrect value, the corresponding message will be displayed:

Major radius	100
Minor radius	35
Radius ratio	0.35
Start angle	0
End angle	360

- ▶ The "Value must be positive" message is shown, when you enter a negative value in the **Inspector** section for the **Hatch** command.
- ▶ The **Object type** list of the **Inspector** window is opened by left click (in the previous version you should click twice).
- **Changes in Layers**
 - ▶ The auto-scrolling and **Change description** option called by right-click menu are realized in the **Layers** dialogue box.
 - ▶ Now you are able to block a layer from the printing in the **Layers** dialogue box.
 - ▶ The warning message is displayed when you switch to the turned off layer.
- You are able to lock the **Purge** and **Purge All** (the **Purge** command) buttons in case, if the document contains no elements to remove.
- **Changes in the Hatch command**
 - ▶ The hatch algorithm formed by the segments, where start and end points do not coincided, has been changed. As a result, there is no spill of hatches when copying and moving.

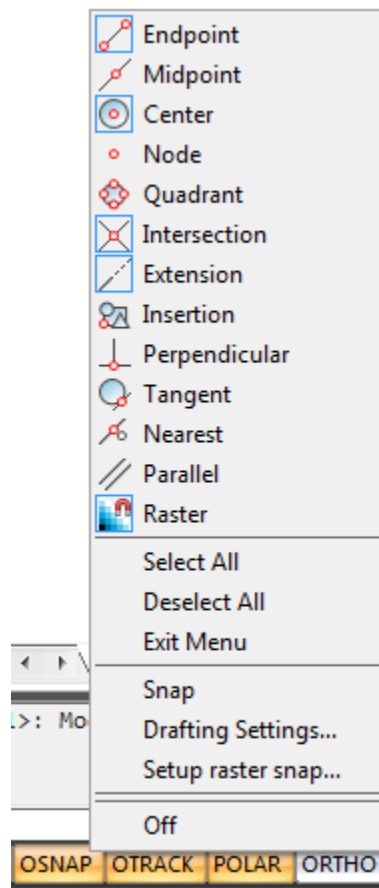
- ▶ The hatch algorithm for compound paths formed by intersecting objects such as rectangles, circles has been improved.
- ▶ The “Unable to fill the boundary” is shown when you try to hatch the area formed by intersecting line segment choosing the **Solid** model and the **Select objects** option.
- ▶ There is automatic blocking of the **Associative** option in the Hatch dialogue box, when you edit a non-associative hatch.
- The commands marked with «-» have been added. When you input them in the command line, the dialogue boxes of these commands do not display on the screen.
 - BOUNDARY,
 - COLOR,
 - INSERT,
 - TEXT,
 - LAYER.
- The **Color** command has been added.
- **Insert Block (INSERT, INSBL)** command was improved. Any DWG-file can be inserted as a block into the current drawing. Use *Browse* button in the *Insert Block* dialogue.
- **LISP support was added.** To load lsp and mnu-files use command **LSP**. nanoCAD should be switched to the LISP-console mode to be able to interpret LISP expressions in an interactive mode.
- **Advanced tools** section of the **Modify** menu has been added.
 - ▶ **Convert Text to Multiline Text** command converts selected Text objects to a single Multiline Text. Source Text objects will be deleted and their content will be added to the Multiline Text.
 - ▶ In the **Advanced tools** section of the **Modify** menu has been added the **Just text (TJUST)** command that allows you to modify justification of the text object without changing its position.
- **Changes in the Plot dialogue and settings**
 - ▶ The printer used by default in the operating system is displayed in the **Plot** dialogue box.
 - ▶ Click on the **Print** button in the **Plot Preview** dialogue box closes the **Plot** dialogue box.
 - ▶ The auto-save user settings option to be used for reprinting has been added in the **Plot** dialogue box.
 - ▶ Dialogues *Add Paper Format* and *Modify Paper Format* (Menu *Tools->Options, Papers* item) were changed. Margin settings were added.

- The line width control on the screen in the model space has been transferred from the **View** menu to the **SW** right-click menu in the status bar.



- The warning message will appear in the attempt to delete the **Model** tab and the last page in the document. It is shown when an incorrect name of layout while copying, creating or renaming were entered.
- The warning messages is shown, when you try to enter negative or zero values of the ellipse radiuses, or when a value of minor radius is bigger than a value of major radius, or when the **Start angle** and **End angle** options are become equal (degenerate geometry).

- Icons were added into the **OSNAP** context menu:



- If you change the order of the objects on the drawing, the **SORTENTS** system variable is automatically set to 127, no matter what value it had before.
- You are able to select a word by double clicking when you edit a multiple text.
- You are able to change the width of the selected polyline segment by using **PEDIT** command.
- You are able to cancel the override block by using the **Undo** command.