 TurboCAD LTE 2021 New Features

User Interface & Usability

1. Keyboard Shortcuts:

TurboCAD LTE 2021 (Both variants)

This brilliant new feature is set to revolutionize the way people use TurboCAD LTE! The user now has the ability to set up keyboard shortcuts that consist of either two or more keystrokes to quickly invoke any TurboCAD LTE command.

![Keyboard Shortcuts Image]

2. Isolate and Hide Objects:

TurboCAD LTE 2021 (Both variants)

This terrific new feature allows you to take a complex drawing and to quickly reduce its complexity by allowing you to select certain entities and to isolate them independent of layers or groups. In addition to isolating certain objects, you also have the choice of hiding additional objects so that you can focus only on the entities that are important during the editing procedure. When complete you can simply hit the Unhide option and the drawing will return to its previous state.
There are three options for isolation:

I. Isolate Objects:

   “Isolate object” hide all objects except selected object in the larger drawing temporarily.

II. Hide Objects:

   Hide Objects” Hide selected object in the drawing temporarily.

III. End Isolation:
Click End Isolation to show the all objects.

3. **Select by Entity Type.**

*TurboCAD LTE 2021 (Both Variants)*

Now Circle/Ellipse item of previous TC LTE versions is separated into two cases: Circle or Ellipse. The same is for Circular and Elliptical arcs. Previous versions could not select Circles or Arcs separately.
4. **Customizable Ribbon Configuration**

*TurboCAD LTE 2021 (Both variants)*

TurboCAD LTE boasts a new variety of excellent user interface i.e. RIBBON INTERFACE similar to that found in Microsoft Word and the latest versions of AutoCAD.
Users now have the ability to fully customize the Ribbon Interface. You can now Add and Rename Tools, Groups and Tabs. In addition, Tabs may be hidden or renamed, and manually created XML Config files can be directly imported into TurboCAD LTE. UI Themes are also fully supported in the Ribbon.

In Customize Ribbon, the following options are available:

Add: Adds a selected tool into the tab that has been selected.
**Remove:** Removes a selected tool from a tab.

**Rename:** Rename a selected menu tab using this button.
**New Tab:** This button adds a new Menu tab.

**New Group:** Creates a new group in a selected menu tab.
**Hide Tab:** Unchecking the tab will hide tab from the Ribbon.
**Move Tabs:** Tabs can be repositioned using up/down arrow buttons.

**Import Ribbon:** Manually created custom(.xml) config files can be imported and used in Ribbon UI.
5. **Select by Similar - Select objects with shared or similar properties tool**

*TurboCAD LTE 2021 (LTE Pro only)*

**Overview**

A powerful new tool that allows you to select any 2D or 3D object type or a Block and then find all occurrences of that in the drawing. Very detailed selections can be made that include parameters such as pen color and style, brush color and style, layer, even the selected object’s coordinate system. A great tool to use in conjunction with making further global changes to that selected object.

To Use:

- Select an object in the drawing

![Diagram showing selected object on Layer 1, Layer 2, and Layer 3]

- Then go to the **Edit** menu and choose **Select by Similar**:  
- After choosing Similar, a new Dialog box will appear which will let define which of the selected object’s parameters will be selected:

**Result:** All the objects that are on the same layer as the selected object will be selected automatically.
Note: This command is only accessible after you have selected an object.

6. **Construct Similar**

*TurboCAD LTE 2021 (LTE Pro only)*

The “Construct Similar” tool takes properties from one object and applies them onto active tool. You can set an object’s properties before it is created in one click. Analogous to the ‘Format Painter’ tool found in MS Office applications. The tool is found on the main toolbar of the program.
To use Construct Similar, first choose the Object type you wish:

Menu item is enabled if the active tool is a tool for the construction geometry (‘Draw Line’, ‘Draw Arc’ etc.).

**Command Description:** Construct similar object

**Tool Prompt:** Select the entity to construct similar
7. **Audit System**

*TurboCAD LTE 2021 (Both variants)*

A new “Audit” item has been added to the Filters menu of the Selection Info Palette. This Audit System enables you to highlight ‘bad’ objects in Selection Info palette, turn on/off audit conditions and change their parameters, generate audit report for one or more objects, filter ‘bad’ objects in Selection Info palette, send notifications (about a ‘bad’ object) to Event Viewer palette.

- New item “Audit” was added to menu “Filters”.
- The possibility to highlight ‘bad’ objects in Selection Info palette
- The possibility to turn on/off audit conditions and changing their parameters
- The possibility to generate audit report for one or more objects
- The possibility to filter ‘bad’ objects in Selection Info palette

The possibility to send notify (about a ‘bad’ object) to Event Viewer palette

"Audit" report (HTML page).
8. Changing the styles of Ribbon icons with a lack of free space

*TurboCAD LTE 2021 (Both variants)*

When using the Ribbon Interface, as you change either the UI Scale or Icon size through the Options/Toolbars and Menus /Options menu, the Size and Style (with or without text) of the icon will dynamically change.

9. Repeat Last Command

*TurboCAD LTE 2021 (Both variants)*

The new Repeat command allows user to repeat the previous command with a single click.
10. Acceleration of the generation of Drafting Objects

*TurboCAD LTE 2021 (LTE Pro only)*

The creation of Sectional Views and Objects in the Drafting Palette has been significantly accelerated.

11. GDI Redraw speed improvement in case of a lot of small graphics

*TurboCAD LTE 2021 (Both Variants)*

For drawings containing lots of small objects, redraw speed has been accelerated.

12. Command-line: 4K monitors and dark theme support

*TurboCAD LTE 2021 (Both variants)*

New options have been added to the Command Line that allow for support of the Dark user interface theme.

With new, scalable vector icons, TurboCAD LTE is now fully optimized for 4K monitors. Through dynamic sliders, toolbar icons, the User Interface and other icons in other part of the UI can be resized to optimize readability on higher resolution displays.
13. **Image Manager Improvement**

*TurboCAD LTE 2021 (LTE Pro only)*

You can now select multiple files from Open Dialog box when importing pictures in the Image Manager palette.
14. **Improved Inspector Bar functionality**

*TurboCAD LTE 2021 (Both variants)*

Added the ability for users to use not only Text/Numeric fields and button controls, but “combo box” controls as well. This functionality allows users to reduce using the Tool's Local menu and reduce Inspector bar size.

15. **Ribbon Large/Small icons, available space icon sizing**

*TurboCAD LTE 2021 (Both variants)*

A new local menu option has been added when right-clicking on a Ribbon icon. Users can now change the icon size/icon text to “Large Image and Text”, which allows for display of a larger image of the tool icon with associated text.
16. Find Control in Custom Ribbon Page

*TurboCAD LTE 2021 (Both variants)*

**Marketing Copy:** The Find feature allows users to search or find Command/Group/Pop-ups/Tabs in the Ribbon tree.
17. Interactive Startup Splash Screen

**TurboCAD LTE 2021 (Both variants)**

**Marketing Copy:** Splash Screen has been added as a Startup Screen when Launching TurboCAD LTE for a better interactive user interface. The interactive screen displays recently created files and ability to open/create new file via Create tab, allows user to learn about TurboCAD LTE basics, including new feature videos, via Learn tab, and get access to the latest information about TurboCAD LTE, via News tab.

18. Resize Previews in Blocks Palette

**TurboCAD LTE 2021 (Both variants)**

**Marketing Copy:** A new slider has been added to the Blocks Palette which allows the user to resize previews of blocks within the Blocks Palette.
19. **Mouse Wheel Support within the Blocks Palette**

*TurboCAD LTE 2021 (Both variants)*

**Marketing Copy:** Using the mouse wheel, the user can now scroll through block previews within the Blocks Palette.

20. **Currently Available On**

*TurboCAD LTE 2021 (Both variants)*

**Marketing Copy:** A new feature has been added to the Commands section in the Customize menu, which allows the user to see the position of a particular command available in the menu, UIs and toolbars.
21. Viewport Hidden Line Performance Improvement

TurboCAD LTE 2021 (Both variants)

Marketing Copy: A new option “Use Hidden Line Cache” has been added to the cache section of the Viewport properties window. If this is turned on, Paper Space viewport processing (redraw, move, zoom) becomes significantly faster for large drawings.

Architecture and Construction

22. Multi-Landing Stairs by Path

TurboCAD LTE 2021 (LTE Pro only)

Creation of stair, using polyline as path
Stair height defined by the last polyline vertex (z value)
Stair riser height and risers count calculated from stair height and riser depth

23. Relative Angle fields for Wall and Polyline update

TurboCAD LTE 2021 (LTE Pro only)

While drawing walls or polylines, you can now choose to enter an Angle (which is absolute in relation to the world coordinates) or a Relative Angle which is the angle from the immediately previous segment (arc or line).
For the Wall tool, the Relative Angle is always enabled. At the first state we draw a straight wall (the relative angle is enabled)

The Relative Angle is also enabled with Curved Walls.

24. **Array and Copy tool Improvements, performance enhancements for ADT Objects**

*TurboCAD LTE 2021 (LTE Pro only)*

Architectural Desktop (ADT) objects can now be completely and accurately used with Copy and Linear Array copy tools. For example, the Array Fit Linear now takes into account all of the properties of the ADT object being copied, including Work Plane, Layer etc. Previously, this tool could create only one roof object. Now, multiple objects may be created. In addition, the overall processing of all ADT objects in a drawing, including the House Wizard, has been significantly sped up.

25. **Add Roof by Walls tool improvement**

*TurboCAD LTE 2021 (LTE Pro only)*

Previously, this tool could create only one roof object. Now, multiple objects may be created.
26. **Stair by Linework**

*TurboCAD LTE 2021 (LTE Pro only)*

Create stair by linework (similarly as in AutoCAD Architecture)

Line work is set of lines/polylines/arcs/curves. It cannot contain "self-intersecting" graphics (contours)

27. **Openings modifier**

*TurboCAD LTE 2021 (LTE Pro only)*

A new “Auto Modifier” option has added. With this option enabled, the Opening (wall clipping contour modifier will be generated automatically. Previously the Opening modifier had to be manually defined. If the opening modifier was not defined, then a rectangle (opening extents) was always used to make a hole on the wall. Only 3D objects are used as modifiers.
28. **Architectural Grid**

*TurboCAD LTE 2021 (Both variants)*

**Marketing Copy:** The Architectural Grid is a new tool that makes it easy to align other architectural objects in the drawing, such as walls and columns. Users can also import rectangular grids from DWG drawings and can change the properties of the grid and bubble representation, via the Selection Info palette.
2D Drafting and Editing

29. Arrow Tools

*TurboCAD LTE 2021 (LTE Pro only)*

There are four Arrow tools which allow you to quickly create arrows to annotate your drawings.

- Arrow Arc
- Arrow Curve
- Arrow Line
- Arrow Polyline

Results and Properties of using Arrow Tools:
30. Remove Overlapping Entities Tool

*TurboCAD LTE 2021 (Both variants)*

This new ‘overkill’ tool allows the user to eliminate overlapping lines and arcs, thereby allowing for the simplification of drawings by removing duplicate, redundant entities.

**Local menu options:**

Combine Overlap: Combine collinear objects that partially overlap into single objects.

Color, Layer, Line Type: select these LM items to not ignore objects properties during comparison. Event viewer shows the count of object that was changed (duplicated).

"Remove duplicate" functionality is working for Polylines, circle arcs, text, m-text, dimensions.

31. Trim by Entity

*TurboCAD LTE 2021 (Both variants)*

This interesting new command allows trimming of multiple entities by using a single 2D close profile as the cutting edge. All objects within the defined profile are trimmed and removed. This allows you to avoid having to select multiple objects to trim to just one cutting edge.

Select as closed 2D object to cut another object/ object placed inside it.

i. Select a closed 2D object (cutter).

ii. Transform/ move the selected cutter to cut the object inside it.
- Single Entity to trim:
  i) Enable ‘Define entity to trim’ in the inspector bar.
  ii) Move the selected cutter to cut the defined object.
32. **Highlight End Points**

*TurboCAD LTE 2021 (Both variants)*

A new local menu item “Highlight end points” (On/Off) has been added to “Edit” tool. This item is available for the following object types:

- Polyline
- Polyline 3D
- Double Line/Walls
- Spline/Bezier
The item is enabled if the selected graphic is non-closed and if vertex count > 2. If “Highlight end points” option is ‘on’, then endpoints are marked in red.

33. **Closed property for Polyline**

*TurboCAD LTE 2021 (Both variants)*

A property called ‘Closed’ has been added to the Selection Info palette, with this property, users can determine if a Polyline is closed or not. This is extremely important when performing functions such as Extrudes and Lofts.
34. **Trace Tools - Trace by Point and Trace by Rectangle**

*TurboCAD LTE 2021 (LTE Pro only)*

Trace tools (Trace by Point and Trace by Rectangle) are now supported in the new version of TurboCAD LTE.

35. **Text dragger: Ability to use degree, plus/minus, diameter signs while entering text**

*TurboCAD LTE 2021 (Both variants)*

TurboCAD LTE now supports Special Signs when inserting text into your drawing. The local menu includes Degree, Plus/Minus, and Diameter signs to use.
36. **Snap between two points**

*TurboCAD LTE 2021 (Both variants)*

Snap between two points allows you to have two subsequent points to let you snap to the middle of them.
37. Best Fit Circle and Line

*TurboCAD LTE 2021 (Both variants)*

The new Best Fit Circle and Line tools allow the user to draw a circle which is best-fitted through 3 or more defined points or a line through 2 or more points. Points can be extracted from a specified location or from a specific object.
38. **Auto-Numbering Feature**

*TurboCAD LTE 2021 (Both variants)*

The Auto-numbering tool allows you to select multiple text entities and have them auto-numbered. Numbers are placed either at the end of each text block or can replace the text block.

39. **Snap Improvement: Highlight Hit Graphic**

*TurboCAD LTE 2021 (Both variants)*

**Marketing Copy:** This feature highlights edges for snaps when you move 3D object or connect two, 3D objects together. This option has been added to both the Drawing Aids window and the related settings have been added to the Program Setup/Preferences dialog box as Visual Effect Settings, selected – Visual Effect Settings.
40. **OK and Cancel button added to Insert Fraction dialog box**

*TurboCAD LTE 2021 (Both variants)*

Improved usability by the addition of OK and Cancel button in the dialog box of the Insert Fraction in the Text Editor palette.
41. Named View Enhancements

*TurboCAD LTE 2021 (LTE Pro only)*

New functionality has been added where users now have the option of associating Layer Sets with Named Views, giving users a much better way to manage Layers Sets.

**Associating a set of layers with Named Views**

New functionality where you have the option of associating set of layers (Layer Sets) with Named Views. In addition to giving users a much better way to manage Layers Sets, this new feature lends itself to easier Viewport creation.

42. Extents Size property

*TurboCAD LTE 2021 (Both variants)*

The Extents Size parameter has been added to the selection Info palette properties. Extents Size parameter works with groups, blocks and insertions. You can now use the ‘Extents size’ property to select entity according to size valuation. Select objects that you think are big or small, or object in any range you want.
The Extents Size update provides you with additional flexibility so that you can use this parameter for various needs and for analyzing wrong entities.

43. Find Block in Blocks Palette

*TurboCAD LTE 2021 (Both variants)*

**Marketing Copy:** A new search bar has been added to the Blocks Palette which allows user to find a block by its name in the Blocks Palette.

44. Angular dimension tool improvement

*TurboCAD LTE 2021 (Both variants)*
The Angular Dimension tool has been improved with a Local Menu option that is enabled when the Angular Dimension tool is selected.

This new option allows the user to define an obtuse or acute angle dimension based upon the user selecting a vertex point on a 2D object and then defining 2 additional points which define the angle.

**Steps to use:**

1. Select the Angular Dimension tool from the Dimension sub-menu - Draw / Dimension
2. Right-click and select the Local Menu option ‘Angle Node’
3. Click on the vertex of 2D entity
4. Define the first angle endpoint
5. Define the second angle endpoint

After clicking the second angle endpoint, the obtuse Angle Node dimension is displayed. To see the acute Angle Node dimension, move your mouse cursor down away from the display of the Obtuse Angle Node Dimension.
45. Zoom in Print Preview

*TurboCAD LTE 2021 (LTE Pro only)*

Previously, it was not possible to zoom in and out using the wheel mouse on the print preview. Now user is able to zoom in in Print Preview windows, prior to printing to be sure things are looking correct. Such as line thickness etc.
46. Table Import and Table export

*TurboCAD LTE 2021 (LTE Pro only)*

Table import enables you to create a table based on a sheet from an Excel (*.xlsx) file.

Table Export allows you to save a table as an Excel (*.xlsx) file.
47. **Pick Point Hatch Improvement**

*TurboCAD LTE 2021 (Both variants)*

This Hatching tool now works with gaps in 2D objects. For example, trying to fill an area bounded by a Polyline, when there are gaps in the Polyline. Improvements to pick-point also apply to ADT objects (Walls, Doors and Windows), allowing to similarly fill in gaps between these objects.
48. Improved Coordinate Measure tool to include 3D

*TurboCAD LTE 2021 (Both variants)*

In earlier versions of TurboCAD LTE, the Measure Coordinates of the Point tool could only measure the X and Y values as it functioned like a 2-D tool fixed on the active workplace. Now, the measure coordinates tool behaves more like a 3D tool in that will show the 3D coordinate of the World coordinate system independent of the active user coordinate system.

49. Block and Group Editing Mode indicator bar
**TurboCAD LTE 2021 (Both variants)**

When editing a Block or Group, a (new) small toolbar appears in the upper-left corner of the drawing area. The toolbar displays the Block or Group name and includes a ‘Finish’ icon to return the user to the main Model Space.

### 50. Improved 3D Snap

**TurboCAD LTE 2021 (LTE Pro only)**

Now, the intersection of two, 2D objects not in the same Work Plane can be snapped to. Useful for 3D modification tools such Lofting, Covering and Extrusions.

### 51. Drafting Palette: Ability to select Layer Sets & Scale Drafting Objects
TurboCAD LTE 2021 (LTE Pro only)

As with Paper Space View Ports, the Drafting Palette now has an Option to select a Layer Set. The Layer Set can contain both visible and non-visible layers. This same Layer Set addition has been added to the Drafting Object via the local menu Properties.

Other than this, users can also define the Scale of Drafting Object through the local menu Properties of the Object.

52. Quick Dimension improvements

TurboCAD LTE 2021 (Both variants)

A new local menu option to the Quick Dimension tool now allows the user to dimension a Group of Graphics, such that the maximum X and Y-axis sizes of the Group are displayed.

53. Show Block insertion tree

TurboCAD LTE 2021 (Both variants)

The Selection Info palette now shows the block insertion structure.

This feature does not allow the editing, only visualization of the structure.
54. **Point of intersection for Dimensioning**

*TurboCAD LTE 2021 (LTE Pro only)*

The Apparent Intersection SNAP now works with Drafting Objects created in the Drafting Palette.
55. **Automatic Updating of Xrefs**

*TurboCAD LTE 2021 (Both variants)*

**Marketing Copy:** When using a file with Xrefs, if any of those external files are updated, then TurboCAD LTE now asks if you want to regenerate the file with the updated Xref.

56. **Leader Dimension Improvements**

*TurboCAD LTE 2021 (Both variants)*

**Marketing Copy:** Leader dimensions in DWG files are now displayed correctly with TC LTE 2021.

57. **Load/Unload Xrefs**

*TurboCAD LTE 2021 (Both variants)*

**Marketing Copy:** A New option “Status”, with two values: “Loaded” and “Unloaded” has been added to the Edit Xrefs dialog box. When a referenced drawing (Xref) is Unloaded from the current drawing, the drawing opens much faster and uses less memory. When the Xref definition is unloaded from the drawing file, the internal pointer to the referenced drawing remains. You can therefore restore all the information by Loading the Xref. In order to maximize the performance of TurboCAD LTE, it is recommended that you Unload any referenced files if they are not needed in the current drawing session but may be used later for printing/plotting.
58. **Edit Selected Block command**

*TurboCAD LTE 2021 (LTE Pro only)*

**Marketing Copy:** Now user can edit the selected block directly within the TurboCAD LTE drawing without having to select the Edit Content option from the Blocks Palette. This can be done by simply selecting the block and clicking “Edit Selected Block”, now added to the menu.

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**Rendering and Visualization**

59. **Visualize Render Mode**

*TurboCAD LTE 2021 (Both variants)*

**Marketing Copy:** A new render mode “Visualize” has been added to the TurboCAD LTE 2021. Visualize supports several device modes: OpenGLES2, OpenGL and GDI, out of which OpenGLES2 is the most advanced and the most productive device mode.

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**a. Visualize Hidden Line and Draft Render Mode**

**Marketing Copy:** ‘Visualize’ Rendering Type with both Hidden Line and Draft Render (including ‘Gouraud Shaded’ and ‘Flat Shaded’) modes has been added to ‘Camera Properties\Rendering’ page.
b. **Visualize Import LightWorks® and RedSDK materials**

**Marketing Copy:** The Visualize rendering technology includes the ability to import materials contained in TurboCAD LTE files that have been rendered either by LightWorks or RedSDK. The Visualize renderer does not currently include its own native materials for TurboCAD LTE. Currently, Visualize rendering supports color, texture, transparency map and bump maps, these parameters can be imported from LightWorks or RedSDK materials.
c. Visualize Anti-Aliasing

**Marketing Copy:** The Visualize renderer supports two types of Anti-Aliasing: Line Smoothing and Fast Approximation Anti-Aliasing (FXAA).
d. **Visualize Ambient Occlusion**

**Marketing Copy:** An Ambient Occlusion option is included in Visualize. Options for these are set in the Drawing Setup dialog box, and include the following parameters: Loops, Focus, Power, Blur Radius, Blur Power.
e. **Visualize Lighting**

**Marketing Copy:** Lighting options are included in Visualize. Options for this are set in the Drawing Setup dialog box, and include the following parameters: Default Presets, Intensity. This could get enabled with OpenGLES2 device type.
f. **Visualize Support images with alpha transparency**

**Marketing Copy:** Support of images with alpha transparency is included in Visualize. When the Opaque Background option is disabled (it is enabled by default), it makes all pixels of a certain color transparent (100% transparency). In Visualize mode, the transparency of each pixel corresponds to the alpha transparency value for the given pixel, specified in the alpha channel.

g. **Visualize Settings**
**Marketing Copy:** Visualize Settings have been added to the Program Setup window.

![Visualize Settings](image)

**Interoperability**

**60. PDF Enhancements**

a. **PDF Tools: Import PDF Page as vector Page, PDF Insert / Underlay**

*TurboCAD LTE 2021 (LTE Pro only)*

2D Vector PDF files can now be directly imported into TurboCAD LTE as a vector page. The file can be imported as either a TurboCAD LTE Object or Group of Graphics. The PDF Underlay tool allows you to insert a page of a PDF file into your drawing to use as reference or tracing layer. To use properly as a tracing layer, the file must be a vector PDF, rather than a bit-mapped PDF.

b. **Publish to PDF**

*TurboCAD LTE 2021 (Both variants)*

**Marketing Copy:** Publish to PDF Combine functionality of 2D and 3D PDF filters have been integrated into a single tool “Publish to PDF”, which has been added to the File menu.
6. **DWG/DXF filter**

*TurboCAD LTE 2021 (Both variants)*
TurboCAD LTE now supports AutoCAD 2020 DWG/DXF formats. Now the IFC filter correctly export/import PPM objects that using as wall openings.

7. **SKP filter: 2021 Support**

*TurboCAD LTE 2021 (LTE Pro only)*

The SketchUp SDK is updated to support the latest SKP file format (2021) for TurboCAD LTE 2021.

8. **STL Import Performance Boost**

*TurboCAD 2021 (Both variants)*

Marketing Copy: STL file import performance has been boosted up to 10 times.
Other Improvements:

1. **Improved Block/Group Editing** - Support snaps for background graphics
2. **Improved Format Painter Tool** - Ability to use Format Painter to transfer Custom Properties and PSD
3. **Improved PNG support** - Moved to CxImage engine to support large image export
4. **Improved Nudge functionality** - Now you can nudge object (currently always on 1 pixel) using the Number Keypad (may require Num Lock to be on depending on keyboard)
5. Construction lines should not delete with isolation command
6. **Keyboard**. Showing custom keyboard shortcuts in local menu.
8. **Block Palette Enhancements** - There is a new button in the block palette - "Options"
   There is a new option "Compensate for the offset of the base point..."
   to allow to reset a block's reference point to after using Edit Reference point is used on inserted Block.
9. **House Wizard Improvements** - House Wizard can be used on different work planes.
    Rooms on the parallel planes can be aligned relative to each other.
    Walls are built separately for each work plane.
10. **Multiline Text Improvements** - UI. Palette is used instead of modeless dialog.
    Multiline Text in place Editor (similar AutoCAD)