



What's New in DraftSight® 2019

DraftSight® 2019 provides the following new features and improvements in its Professional, Premium, Enterprise and Enterprise Plus versions.

Features which are available also in the Standard version are marked with an asterisk (*).

New Features:

- **Image Tracer** [Command: TRACEIMAGE]. Lets you to convert an attached raster image of BMP, JPEG, PNG file format into vectorized line entities.
 - Image profile types with pre-set setting values are provided for you to select when tracing the image.
 - Advanced settings allows you to adjust and fine tune the default values for better conversion quality and result. You can also save your custom settings to be re-used with similar image type.

(P.S. For this release, Image Tracer primary use cases and workflow are focusing on non hand-drawn architectural floor plans, logos and simple images with curves.)

- **DraftSight/HomeByMe Integration** [Command: DSHOMEBYME]. [HomeByMe](#) is a 3D web-based design application for home and space planning. DraftSight/HomeByMe Integration supports two different workflows by allowing you to:
 - (Workflow #1) Browse and import a .DSHBM file (exported from HomeByMe) directly into DraftSight application to generate 2D floor plan drawings.
 - (Workflow #2) Login to HomeByMe website directly from DraftSight task pane Palette, open the project and generate 2D floor plan drawings.
- **Import SVG file (*)** [Command: IMPORTSVG]. Lets you import a SVG format file into DraftSight and insert it as a Block.
- **Drawing Frame and Title Block Library** [Command: TB_FRAME]. Provides a set of predefined Frames and Title blocks according to engineering standard and lets you specify the size and scale.
- **Block Attribute Manager** [Command: BLOCKATTRIBUTE MANAGER]. Manages properties and settings of BlockAttributes in Block definitions.
- **Using Formulas in Table Cells**. Lets you use formulas in cells with arithmetic operators and the Sum, Average, and Count functions (to calculate values based on the values from other cells).
- **Trimming of Hatches and Gradients**. Lets you trim Hatches and Gradients with the Trim and PowerTrim commands. Divided Hatches and Gradients maintain associativity and remain as one entity.



- **Moving Entities by Click and Drag.** Moves entities into a new position much faster by clicking anywhere on an entity and dragging it with one mouse click.
- **Hairline Option for Printout (*).** Sets a "hairline" linewidth in the Print dialog box used especially for laser cutter output.

New Improvements:

- **Center Marks (*)** [Command: CENTERMARK]. Display of center marks according to standards improved.
- **Layer: Viewport Layer Freezing (*).** Freezes specified layers in new viewports on layout sheets (New VP Freeze option), or freezes selected layers only in the current layout viewport (VP Freeze option).
- **SVG scalable icons for HD displays (*).** User interface icons scale seamlessly on high-resolution (4K) displays.
- **3D Mouse Support (*).** Lets you use 3D Mouse models to navigate 2D or 3D drawings. You can simultaneously pan and zoom the drawing, and rotate the model. *(P.S. If using 3Dconnexion® devices, please download and install their latest driver version 10.5.13 or later at <https://www.3dconnexion.com/service/drivers.html>)*
- **New Ribbon Tab for “Import” (*).** Consolidates all the “Attach” and “Import” tools of different file formats into a single, more intuitive and easy to find ribbon tab.

API:

- **API enhancements.** Following are some enhancements to the API:
 - Get the toolbar ID.
 - Insert and modify curved text.
 - Access and modify custom entity.
 - Enhance the existing options for exporting drawing models or sheets to PDF files.

Premium and Enterprise Plus Features:

- **3D Modeling tools:** Let you create the following 3D objects:
 - Box: Creates a three-dimensional solid box.
 - Pyramid: Created a three-dimensional solid pyramide.
 - Wedge: Creates a three-dimensional solid toroid.
 - Planar surface: Creates a rectangular planar surface.
 - Cone: Creates a three-dimensional solid cone.
 - Cylinder: Creates a three-dimensional solid cylinder.
 - Sphere: Creates a three-dimensional solid sphere.
 - Torus: Creates a three-dimensional solid toroid.

- **Other 3D Tools:**
 - Extrude: Creates a 3D solid or surface.
 - Loft: Creates a 3D solid by lofting between existing cross sections.
 - Polysolid: Draws 3D solid objects in the shape of a polygonal walls.
 - Push and Pull: Modifies 3D solids or bounded areas by extrusion.
 - Revolve: Creates a 3D solid or surface by revolving a 2D object about an axis.
 - Sweep: Creates unique solid primitives or surfaces by sweeping existing two-dimensional entities along a path.

- **Solid Editing Tools:** Let you create more complex 3D solid objects using different methods.
 - Union: Creates a composite region or solid by addition.
 - Subtract: Creates a composite region or a 3D solid by subtraction.
 - Intersect: Creates regions or 3D solids from the intersection regions or of 3D solids.
 - 3D Rotate: Rotates drawing entities in 3D space around a specified axis.
 - Align 3D: Aligns entities with respect to other entities or other target points in 3D space.
 - Mirror 3D: Creates a mirror image in a 3D plane around a 3D axis.
 - Pattern 3D: Lets you create a pattern of entities in 3D space, either in a linear matrix or a circular alignment about a rotation axis.
 - Chamfer Edges: Bevels the edges of 3D solid objects.
 - Fillet Edges: Rounds the edges of 3D solid objects.
 - Interference checking: Checks interferences within a solid model.
 - Slice: Slices 3D solids with a plane or surface.
 - Thicken: Creates 3D solids from surfaces by thickening them.

- **Solid editing command** [Command: EDITSOLID]: Lets you modify edges, faces, and bodies of 3D solid objects.

- **Mesh tools:** Let you create 3D surfaces that are shown as wireframe models without defining entities and boundaries that already exist in the drawing.
 - 3D Face: Creates three- or four-sided surfaces in space.
 - 3D Mesh: Creates 3D PolygonMeshes.
 - Box: Creates a box shaped 3D PolygonMesh.



- Cone: Creates a cone or cylinder shaped 3D PolygonMesh.
 - Pyramid: Creates a pyramidal 3D PolygonMesh.
 - Sphere: Creates a spherical 3D PolygonMesh.
 - Torus: Creates a torus shaped 3D PolygonMesh.
 - Wedge: Creates a wedge shaped 3D Polygonmesh.
 - Edge: Creates a 3D PolygonMesh between four boundaries.
 - Revolved: Creates a surface by revolving a path curve (profile) around an axis of revolution.
 - Rules: Creates a ruled surface between two boundary curves (profiles). The resulting surface is a PolygonMesh.
 - Tabulated: Creates a tabular surface using a path curve and a direction vector. The resulting surface is a PolygonMesh.
- **Snapshot tools:**
 - Cross Section: Creates a cross section based on the intersection of a plane and 3D solids.
 - Make Flat Snapshot: Creates a flat representation of 3D solid objects and Regions, projected to the drawing's X-Y plane of the active Custom Coordinate System (CCS).
- **2D Constraints:**
 - Geometric constraints: Define Geometric Constraints for one or two entities. The following options are available:
 - Coincident: Defines a coincident geometric constraint to two points on entities or constrains a point on an entity to an entity.
 - Fix: Causes points on entities and entities to maintain fixed positions.
 - Perpendicular: Causes two Lines or linear PolyLine segments to be perpendicular to each other.
 - Parallel: Causes two Lines or linear PolyLine segments to be parallel to each other.
 - Horizontal: Causes Lines and linear PolyLine segments or pairs of points on entities to be parallel to the X-axis of the current coordinate system.
 - Vertical: Causes Lines and linear PolyLine segments or pairs of points on entities to be parallel to the Y-axis of the current coordinate system.
 - Tangent: Causes one entity to be tangent to another.
 - Smooth: Causes a Spline to constitute fluid geometric continuity with another Spline, Arc, Line, or PolyLine.
 - Collinear: Causes Lines and linear PolyLine segments to be collinear.
 - Concentric: Causes the center points of Arcs, Circles, Ellipses, or elliptical Arcs to coincide.
 - Symmetric: Causes two entities or constraint points on entities to lie symmetrically with respect to a symmetry line.
 - Equal: Constrains Lines to the same length, or Arcs and Circles to the same radius.



- Dimensional constraints: Define Dimensional Constraints for entities or between constraint points on entities. The following options are available:
 - Aligned: Constrains the direct distance between two points on entities.
 - Horizontal: Constrains the horizontal distance between two points on entities.
 - Vertical: Constrains the vertical distance between two points on entities.
 - Linear: Constrains the horizontal or vertical distance between two defining points on entities.
 - Diameter: Constrains the diameter of a Circle, Arc, or curved PolyLine segment.
 - Radial: Constrains the radius of a Circle, Arc, or curved PolyLine segment.
 - Angular: Constrains the angle between three constraint points on entities or between two Lines or PolyLine segments, or to constrain the total angle of an Arc or curved PolyLine segment.