



# ZWCAD 2025 Beta

## PRODUCT RELEASE NOTES

THE ZWSOFT TEAM

ZWSOFT | 2025/03/25

## **Welcome to ZWCAD 2025 Official!**

Dear friends,

We are glad to tell you that ZWCAD 2025 Official Beta is available now! Thanks to your valuable feedback for the previous version, ZWCAD 2025 Official Beta now comes with significant new feature and improvements. Now, let's take a look at this version.

This Release Notes mainly introduce the new features and improvements in ZWCAD 2025 Official.

Yours sincerely,

The ZWSOFT Team

March 2024

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# ZWCAD 2025 Release Notes

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## **1. Overview**

ZWCAD 2025 primarily includes improvements in 5 aspects: 2D functions, 3D functions, Interface, API, and Industry modules. The specific details are as follows:

### **Note:**

1. 32-bit version will be no longer supported from the 2025 version of ZWCAD, R&D Center is committed to providing users with a more stable and efficient 64-bit ZWCAD product.
2. Starting from the 2025 version, SP version will be no longer available and will be replaced by Update Packages which will be released every 2-3 months.

New Features&Enhancements	Description
<b>2D Functionality Enhancement</b>	
<a href="#"><u>PDF Import&amp;Attach Improvement</u></a>	Improved efficiency in importing and attaching PDF files.
<a href="#"><u>Plot Improvement</u></a>	Improved efficiency in plotting.
<a href="#"><u>Text Display Improvement</u></a>	Optimized display and editing accuracy for Thai, Arabic, and Hebrew languages.
<a href="#"><u>Associative Array Improvement</u></a>	Add “Tangent” branch command in array path, meanwhile fixed issues related to abnormal data in associative array creation and editing.
<a href="#"><u>Revcloud Improvement</u></a>	“Revcloud” has become the new CAD entity type. Revcloud shapes can be edited quickly by dragging grips.
<a href="#"><u>FAS/VLX File Support</u></a>	Compatible with AutoLISP files created with Visual LISP. supports direct loading FAS/VLX files.
<b>3D Functionality Enhancement</b>	
<a href="#"><u>Improvement of Efficiency in Opening 3D Drawings</u></a>	CPU capabilities were fully utilized to enhance the efficiency of opening 3D drawings.
<a href="#"><u>New Visualization Styles</u></a>	It added “Conceptual”, “Realistic”, “Shade of Grey”, and “X-ray” visual styles to provide diverse visualization effects. The display efficiency of 3D models has been enhanced for a smoother viewing experience.

<a href="#"><u>STEP File Import</u></a>	It supports the import of 3D files in STEP format (AP203 and AP214 versions).
<a href="#"><u>3D Gizmos</u></a>	In the 3D visual style, objects can be conveniently panned, rotated, scaled and transformed through 3D gizmos.
<a href="#"><u>New 3D workspace</u></a>	Optimizations have been made to the Workspace, significantly improving the ability for users to customize their workspaces.
<b>Interface and Interaction Optimization</b>	
<a href="#"><u>Ribbon Redesign</u></a>	A brand-new design of the ribbon, offering features such as slide-out panels, dragging panels, floating panels, and collapsed panels as icons, to provide users with a highly customizable interface.
<a href="#"><u>Panel Redesign</u></a>	Stacked and auto-hidden panels provide users with a bigger drawing space. A new navigator allows an easier interactive way of dragging and docking panels.
<a href="#"><u>Floating Documents Window</u></a>	Document windows can be dragged out of the main program as floating windows, so users can open one drawing on another monitor for reference.
<a href="#"><u>Help Document Redesign</u></a>	It supports filtering in the offline help document. It added online help documents (Supported languages: including Simplified Chinese, Traditional Chinese, English, Russian,

	German, Spanish, French, Japanese, Korean).
<a href="#"><u>Command Matching Improvement</u></a>	It supports non-initial string matching, and sorting commands by frequency of use, providing users with a more intelligent and convenient interaction method.
<b>Industry Application Improvement</b>	
<a href="#"><u>Point Cloud Module Improvement</u></a>	It added 3 visual styles including “Intensity”, ”Elevation”, and “Classification” and support configuration to meet different scenario needs.
<a href="#"><u>GIS Module Improvement</u></a> (Function will released in Beta2 version)	It supports the import of commonly used map sources such as Bing Maps, and the import of OGC standard map services. It also supports setting markers in the map and setting insertion points in the drawing, so the map can the drawing can be quickly matched according to geographical location.
<a href="#"><u>Raster to Vector Conversion</u></a>	Convert raster images to vector data to meet users' needs for converting paper drawings into DWG files.
<b>API Improvement</b>	
For detailed information, please refer to the <a href="#"><u>ZWCAD 2025 API Improvement</u></a> .	

## 2. New features and Improvement

### 2.1 2D Functionality Enhancement

#### 2.1.1 PDF Import&Attach Improvement

The PDF file can be attached or imported into ZWCAD for use. In the ZWCAD 2025, related functions for applying PDF files have been optimized, including improved efficiency in panning and zooming drawings containing PDF underlays, enhanced efficiency in importing PDF files, and optimized results when importing text from PDF files.

- Improved efficiency in panning and zooming drawings containing PDF underlays. The specific comparison data is as follows:

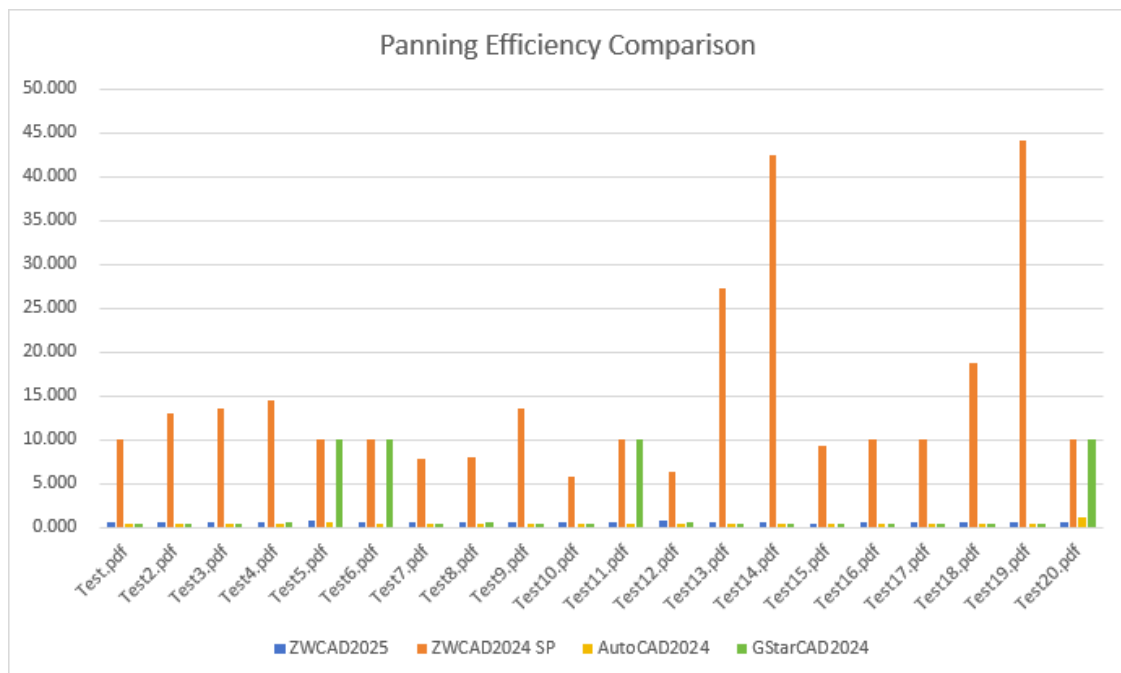


Figure 1. Comparison of panning with PDF underlay in drawings.

**Conclusion:** The panning efficiency in ZWCAD 2025 has improved by 24 times compared to ZWCAD 2024, it is 3 times faster than the competitor G2024, and equivalent to competitor A2024. The zooming



efficiency in ZWCAD 2025 has improved by 27 times compared to ZWCAD 2024, it is 15 times faster than competitor G2024, and equivalent to competitor A2024.

- Enhanced efficiency in importing PDF files, The specific comparison data is as follows:

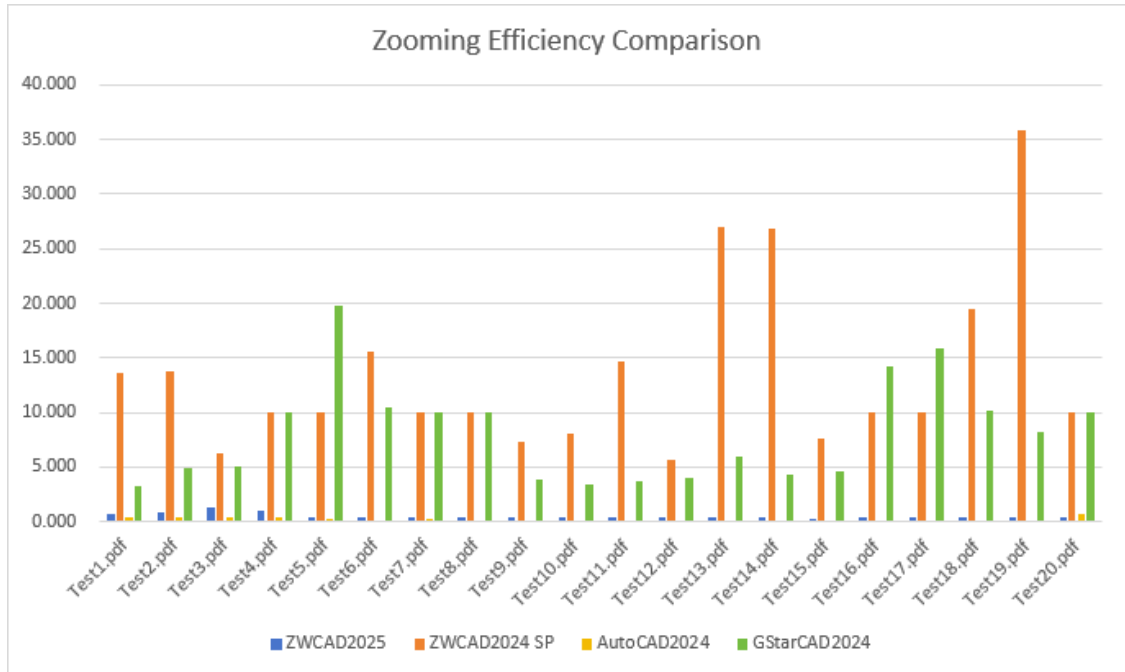


Figure 2. Comparison of zooming with PDF underlay in drawings.

**Conclusion:** Based on the above test samples, the efficiency of importing PDF files in ZWCAD 2025 has improved by 9 times compared to ZWCAD 2024, it is 3 times faster than competitor G2024, and 6 times faster than competitor A2024.

- Optimized results when importing text from PDF files.

### 2.1.2 Plot Improvement

ZWCAD 2025 has improved plotting efficiency and reduced the size of printed PDF files in some scenarios with PDF and physical printers. It has

enhanced the intelligent printing's ability to recognize frame, supports printing PDF files in some small languages, and fixed stability issues related to PLOT functions.

- Improved printing efficiency for drawing includes image or underlay.

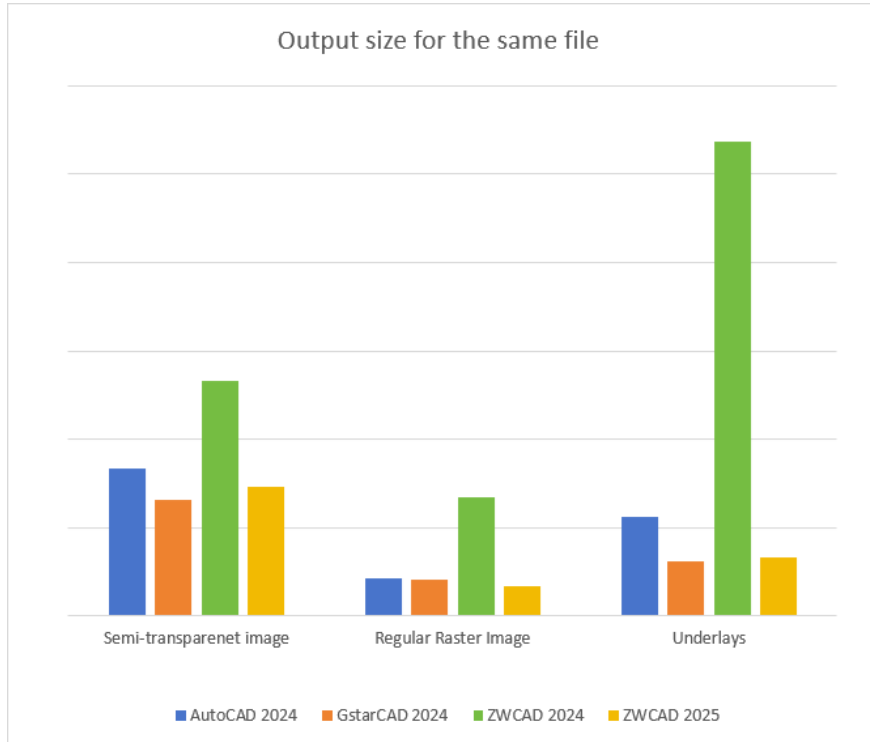


Figure 3. Comparison of print file sizes among various CAD products.

- Improved accuracy in smart plot frame recognition.

a) The accuracy of frame sequence recognition has been improved, especially when there are significant differences in frame sizes.

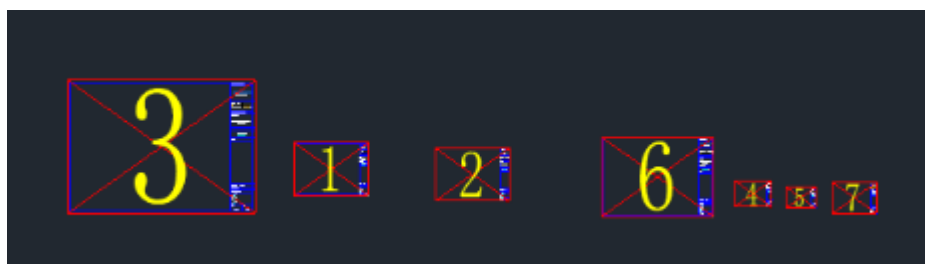


Figure 4. The recognition results on ZWCAD 2024

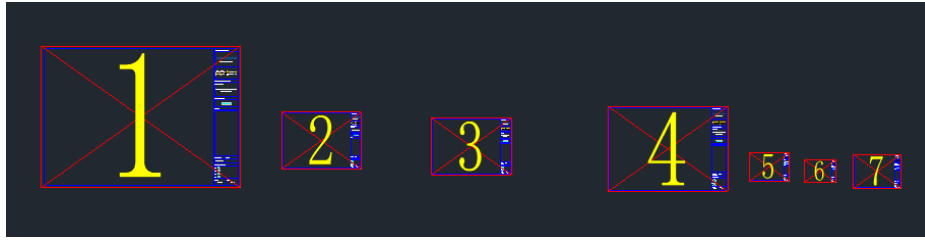


Figure 5. The recognition results on ZWCAD 2025

b) Enhanced accuracy in identifying and comparing the reference frame and graphics for clipping blocks.

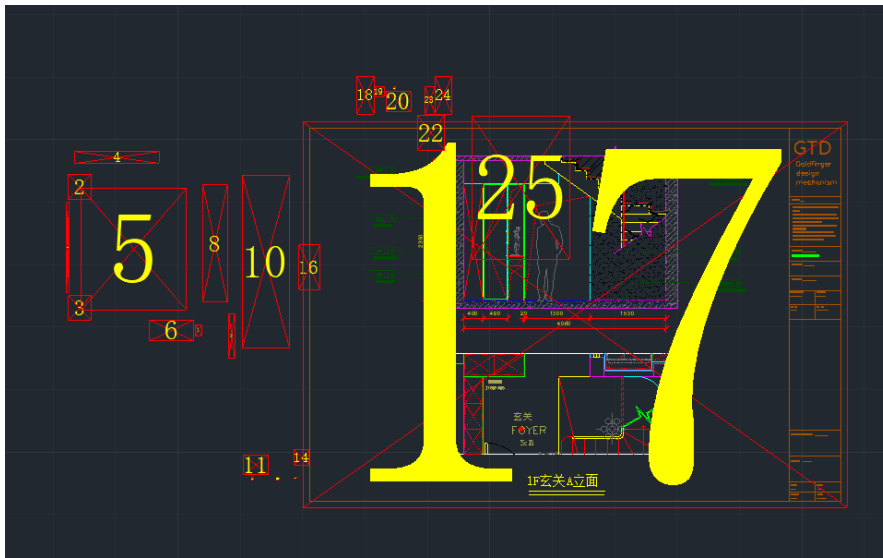


Figure 6. The recognition results on ZWCAD 2025

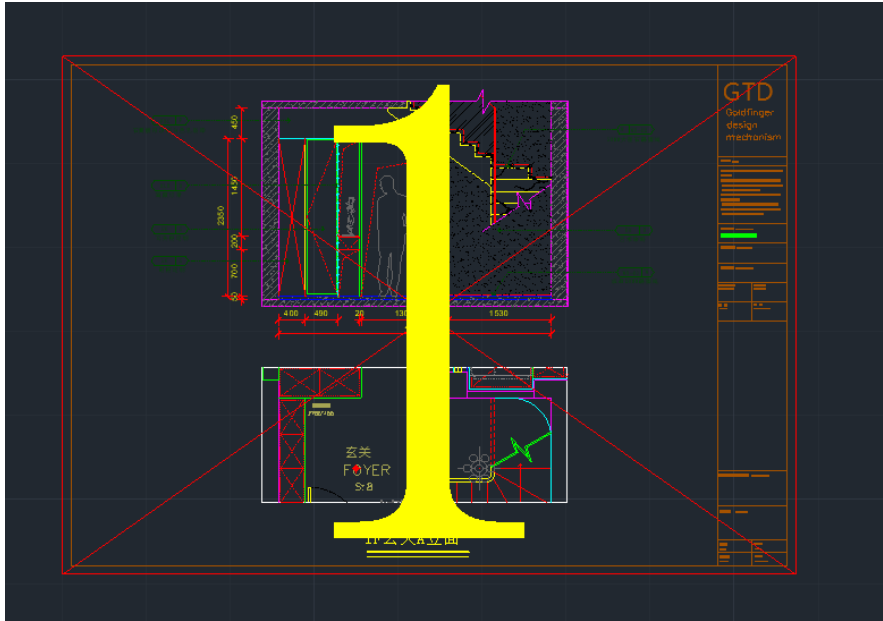


Figure 7. The recognition results on ZWCAD 2025

- Enhanced accuracy when printing Thai, Hebrew, Arabic, Sanskrit, and Khmer languages using the DWG to PDF.pc5 printer.

### 2.1.3 Text Display Improvement

ZWCAD 2025 has optimized the display and editing accuracy for Thai, Arabic, and Hebrew languages. It focuses on resolving issues such as incorrect line breaks in Thai text display, incorrect display of connected Arabic characters, and incorrect editing of text displayed and read from right to left. It also addresses the problem of incorrect character display order when mixing languages with different reading directions (right to left and left to right).

Language	ZWCAD2024	ZWCAD2025	Microsoft Office
Thai	ทางผู้ผลิตไม่สามารถปรับมิติขอบในความเสียหายใดๆที่เกิดจากการตัดตั้งโปรแกรมได้. ใช้งานเมื่อปรับหรือตัดแบบวงตัวในโปรแกรมนี้ อาจทำให้เกิดอันตรายกับ คน สัตว์ สิ่งของ หากมีข้อสงสัยหรือมีความต้องการปรับแต่งตัวคอมให้เหมาะสมกับการใช้งาน กรุณาติดต่อตัวแทนจำหน่ายหรือผู้ผลิต	ทางผู้ผลิตไม่สามารถปรับมิติขอบในความเสียหายใดๆที่เกิดจากการตัดตั้งโปรแกรมได้. ใช้งานเมื่อปรับหรือตัดแบบวงตัวในโปรแกรมนี้ อาจทำให้เกิดอันตรายกับ คน สัตว์ สิ่งของ หากมีข้อสงสัยหรือมีความต้องการปรับแต่งตัวคอม ให้เหมาะสมกับการใช้งาน กรุณาติดต่อตัวแทนจำหน่ายหรือผู้ผลิต	ทางผู้ผลิตไม่สามารถปรับมิติขอบในความเสียหายใดๆที่เกิดจากการตัดตั้งโปรแกรมได้. ใช้งานเมื่อปรับหรือตัดแบบวงตัวในโปรแกรมนี้ อาจทำให้เกิดอันตรายกับ คน สัตว์ สิ่งของ หากมีข้อสงสัยหรือมีความต้องการปรับแต่งตัวคอม ให้เหมาะสมกับการใช้งาน กรุณาติดต่อตัวแทนจำหน่ายหรือผู้ผลิต

Arabic	رجاء لا تغطي مكان تجهيز كيس الهواء بغطاء المقعد	رجاء لا تغطي مكان تجهيز كيس الهواء بغطاء المقعد	رجاء لا تغطي مكان تجهيز كيس الهواء بغطاء المقعد
Hebrew	טוט'רדאוה/שנבגקעיןחלרצממפ	טוט'רדאוה/שנבגקעיןחלרצממפ	טוט'רדאוה/שנבגקעיןחלרצממפ

The MTEXT feature has been enhanced to include "Left-to-Right Text Direction" and "Right-to-Left Text Direction" functionalities, allowing users with different language input directions to edit and read text according to their accustomed text input sequence.

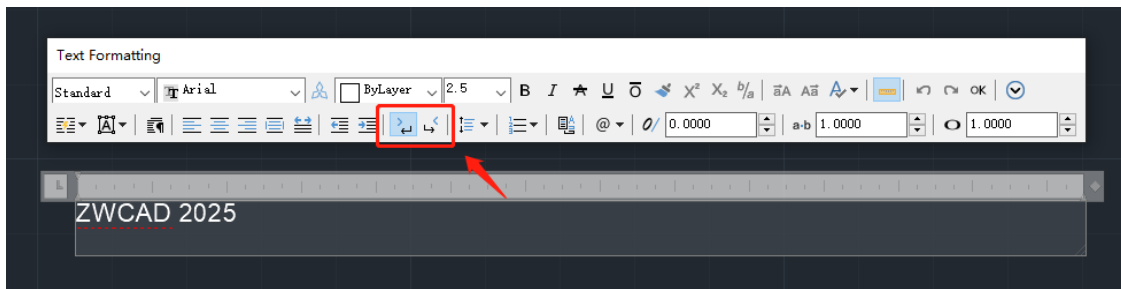


Figure 8. Text Direction Setting

### 2.1.4 Associative Array Improvement

ZWCAD 2025 has fixed issues related to abnormal data in associative array creation and editing. For drawings with associative array errors from previous versions, a ZRX tool is provided for repair. To perform the repair, load the "AuditArray.zrx" file as an attachment and execute the AUDITARRAY command.

Additionally, this version introduces a new "Tangent" branch command in path arrays. This branch ensures that cloned objects align with the tangent direction on the path, maintaining consistency between the cloned object's orientation and the path curve's tangent direction. This feature allows the cloned object's orientation to always face the tangent direction of the path curve.

### 2.1.5 Revcloud Improvement

Users often use revclouds for drawing review. Revcloud has become a

CAD object and command branches are expanded, facilitating the creation and editing of revclouds.

### Revcloud as CAD Object Type

In the past, the CAD object type for revclouds was “polyline”. In this version, it has been changed to "Revision Cloud." Users can directly edit the shape of revclouds by dragging its grips and can modify the arc length of revclouds through the properties panel.

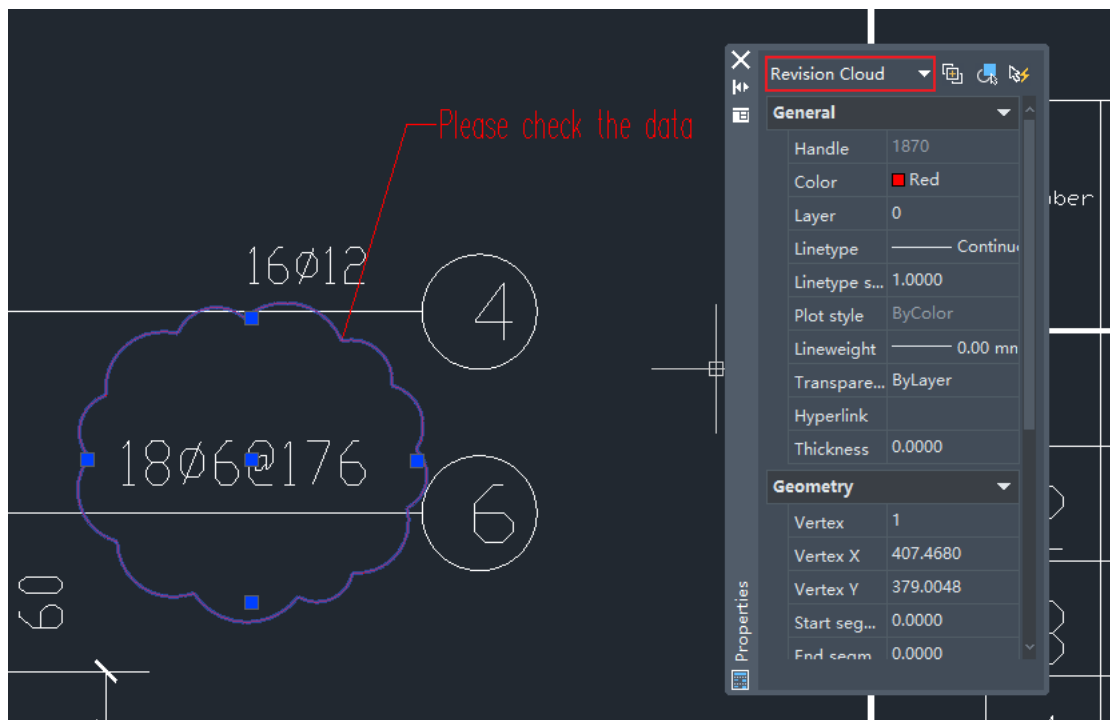


Figure 9. New CAD object called “Revision Cloud”

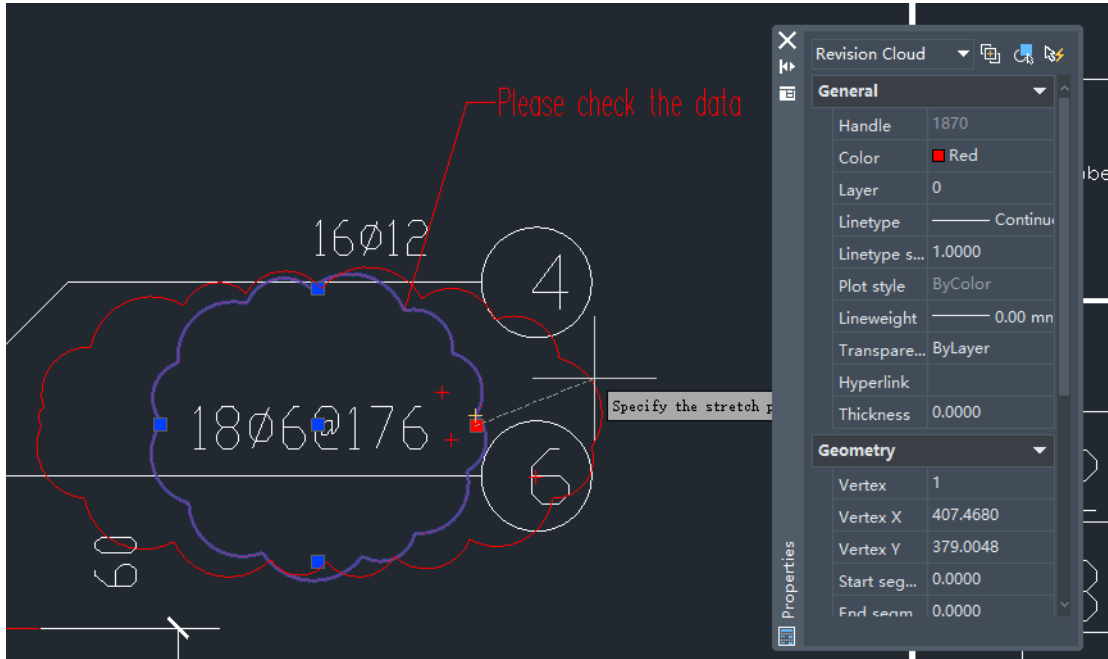


Figure 10. Users can change the shape of revcloud with grips

## New Branch Commands

“Circle”, “Ellipse”, “Modify” commands are added so you can create circular or elliptical revclouds. With the “Modify” command, you can edit the shape of existing revclouds.

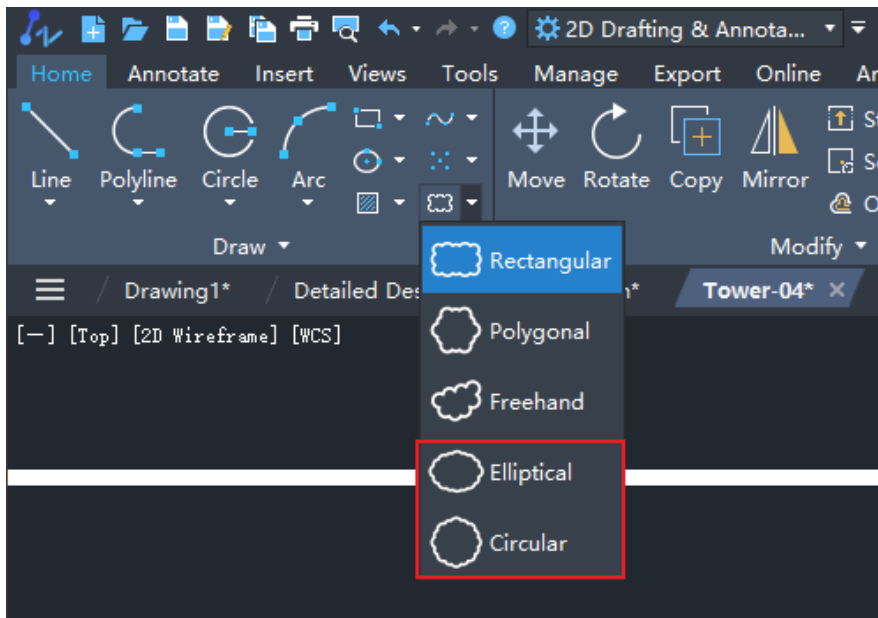


Figure 11. New revcloud types

## 2.1.6 FAS/VLX File Support

It supports the direct loading of standard LISP binary files in FAS and VLX formats. It improves LISP compatibility, eliminates format conversion and enhances development efficiency.

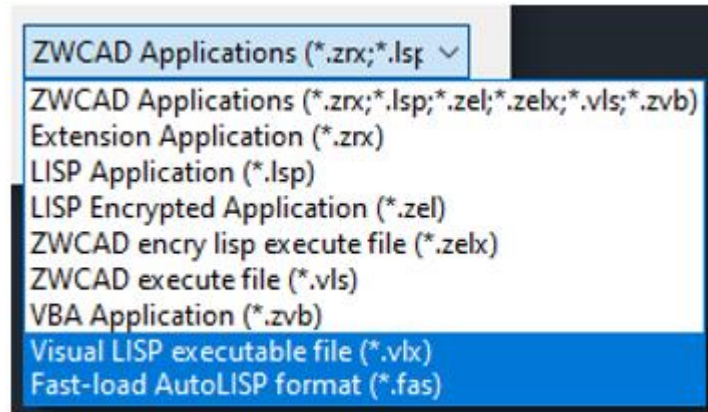


Figure 12. Directly load FAS/VLS applications

## 2.2 3D Functionality Enhancement

### 2.2.1 Improvement of Efficiency in Opening 3D Drawings

By fully utilizing CPU capabilities and leveraging multi-threading parallel technology, we significantly enhanced the efficiency of opening 3D drawings in ZWCAD.

### 2.2.2 New Visualization Styles

We added “Conceptual”, “Realistic”, “Shade of Grey”, and “X-ray” visual styles and optimized the display quality of visual styles including wireframe, hidden, shaded, and shaded with edges.



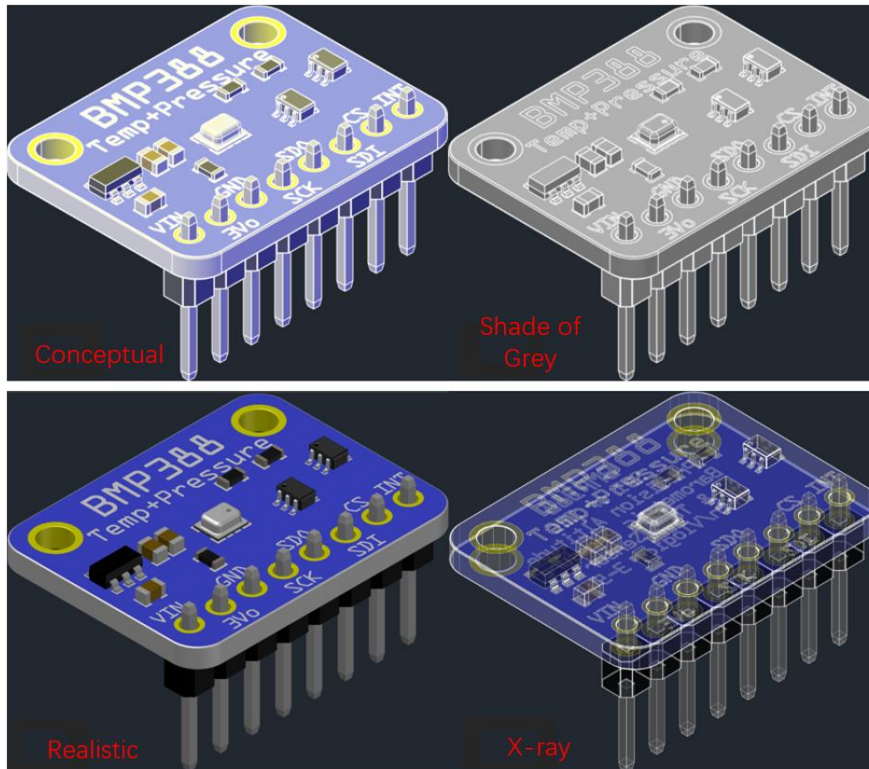


Figure 13. New 3D visual styles

### 2.2.3 STEP File Import

STEP is an international file format in the mechanical industry. By supporting STEP files import, the cost of file transfer from the design department to manufacturers can be reduced.

#### Supported STEP Versions

It supports the import AP203 and AP214 versions of STEP files.

#### STEP Import Settings

It supports configuration of the import of STEP files, including destination location, import method, and display settings.

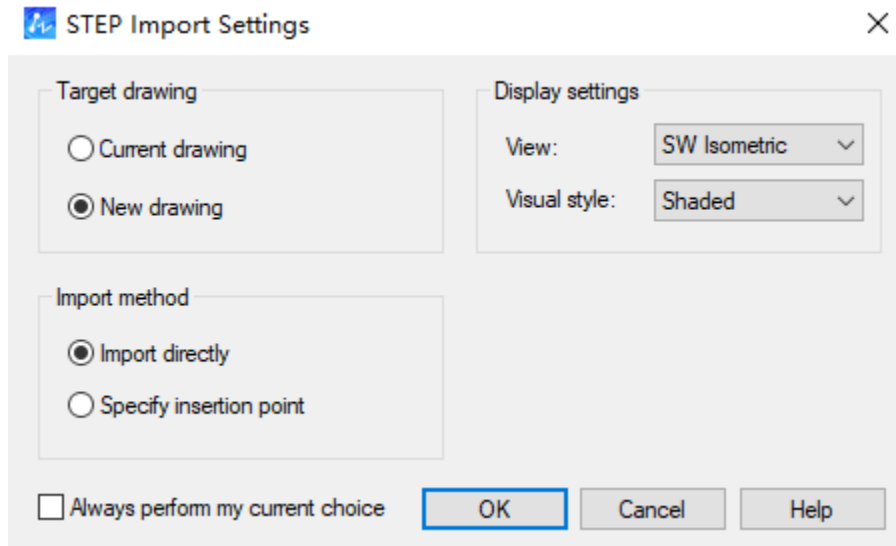


Figure 14. STEP Import Settings dialog

### 2.2.4 3D Gizmos

In the 3D visual style, objects can be efficiently and conveniently moved, rotated and scaled. When the gizmo is selected, you can switch between moving, rotating, and scaling by pressing the spacebar.

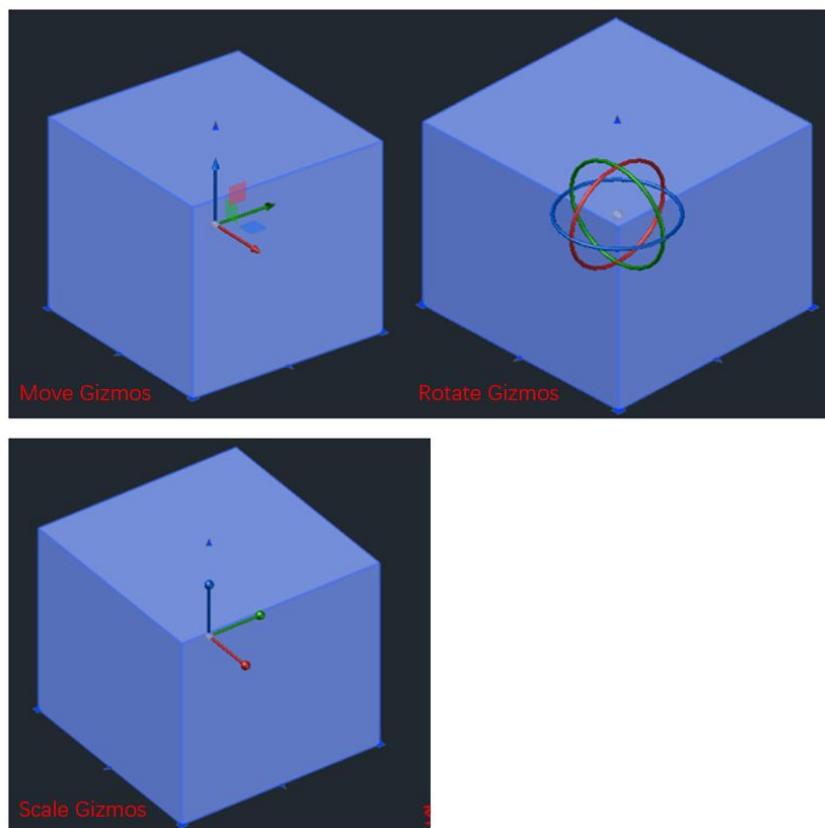


Figure 15. 3D gizmos help users edit 3D entities more easily.

## 2.2.5 New 3D workspace

To redesign the ZWCAD workspace, create separate workspaces for 2D drafting and 3D modeling, enabling users to focus on their commonly used functions according to their requirements.

### Add the "3D Modeling" workspace

Support switching the workspace in “Quick Access Toolbar” or “Status Bar”, with the "2D Drafting & Annotation" workspace launched by default.

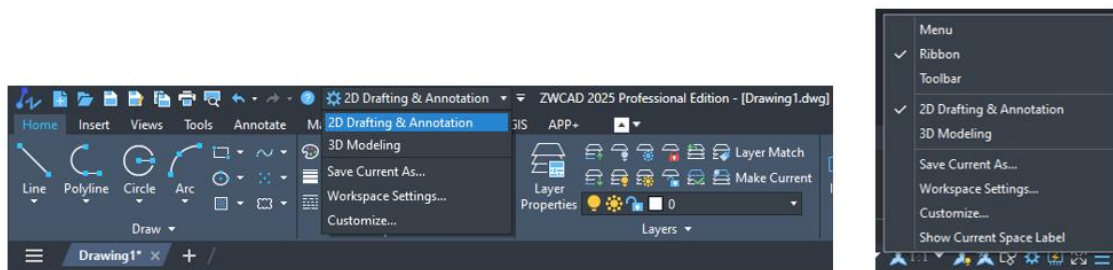


Figure 16. Switch the workspace by “Quick Access Toolbar” or “Status Bar”

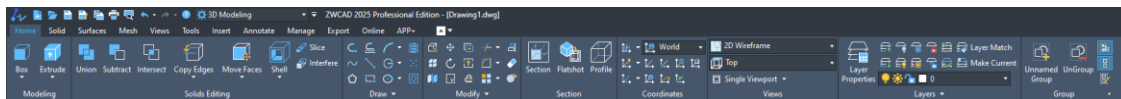


Figure 17. Ribbon setting for 3D workspace

### Workspace Settings

- Add the WSSETTINGS command, which opens the "Workspace Settings" dialog box when executed. In this dialog box, you can set the current workspace, the display order of workspace menus, and whether to save workspace modifications when switching workspaces.

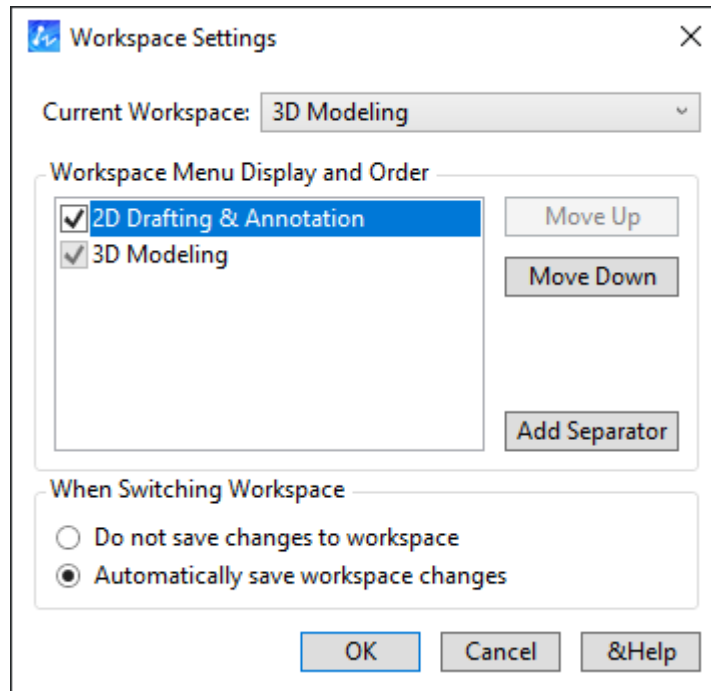


Figure 18. Workspace Settings Dialog

- b) Add the WSSAVE command, which opens the "Save Workspace" dialog box when executed. This feature allows you to quickly save the current workspace.

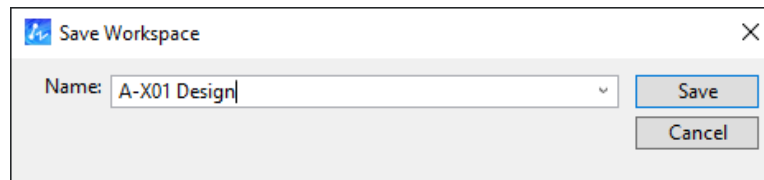


Figure 19. Dialog of saving workspace

- c) Add the WORKSPACE command, which is used to manage workspaces. This includes setting the current workspace, saving, editing, renaming workspaces, etc.

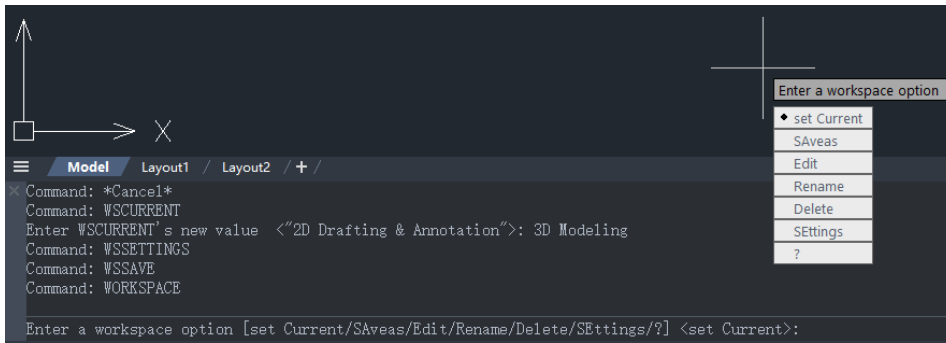


Figure 20. WORKSPACE Command

## 2.3 Interface and Interaction Optimization

### 2.3.1 Ribbon Redesign

The ribbon now includes new features such as slide-out panels, dragging panels, and floating panels. Combined with CUI, it enhances the customization level of interface.

#### Slide-out Panel

The panel can be expanded when you click on it and collapsed when you move the mouse away from the slide-out area. You can also fix the panel by clicking the “Pin” button on the left side to make it stay expanded or collapsed.

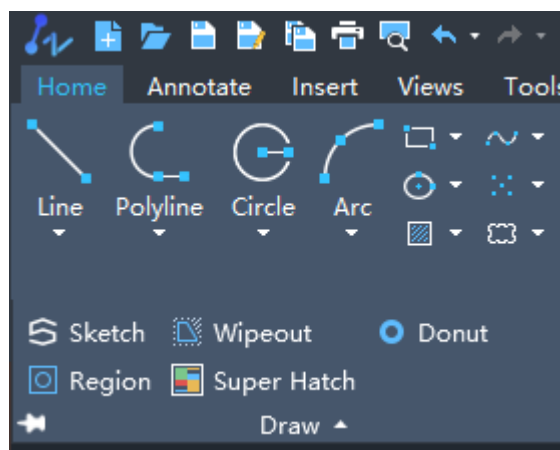


Figure 21. Slide-out ribbon panel

## Dragging Panel

You can change the location of panels under the current tab on the Ribbon by clicking on the panel (skipping function icons) and dragging it to the desired location.

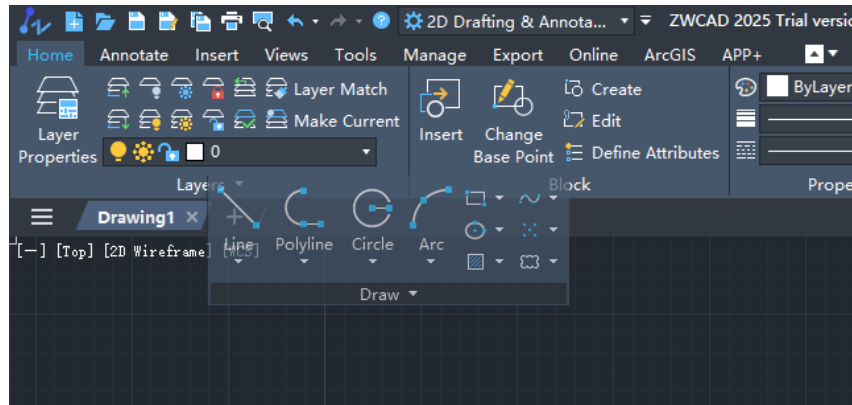


Figure 22. Dragging ribbon panel

## Floating Panel

You can drag the panel outside the Ribbon by clicking on the panel (avoiding function icons) and dragging it to the desired location. The floated panel can be grouped with others or collapsed.

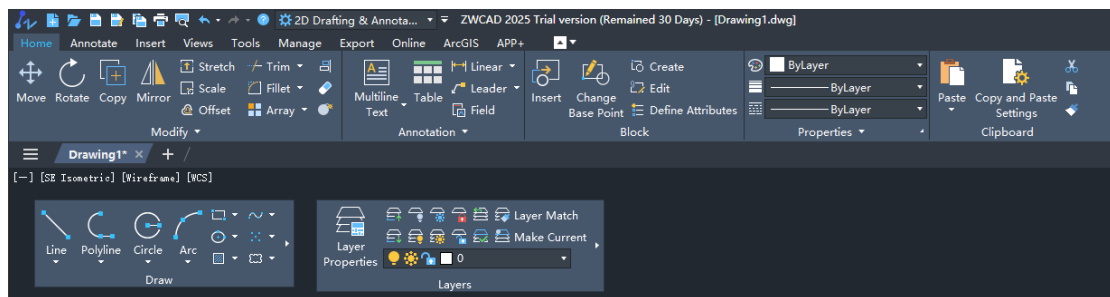


Figure 23. Floating ribbon panel

## 2.3.2 Panel Redesign

Panels can be stacked and hidden automatically, including Properties Panel, Layer Properties Manager, External Reference panel, Design Centre, Tool Palette, Calculator, helping users expand the drawing area.

## Panel Stacking

When you drag one panel onto another, these panels can be stacked together. Whether the panel is floated or docked, it can be combined with another panel in four directions: top, bottom, left, and right.

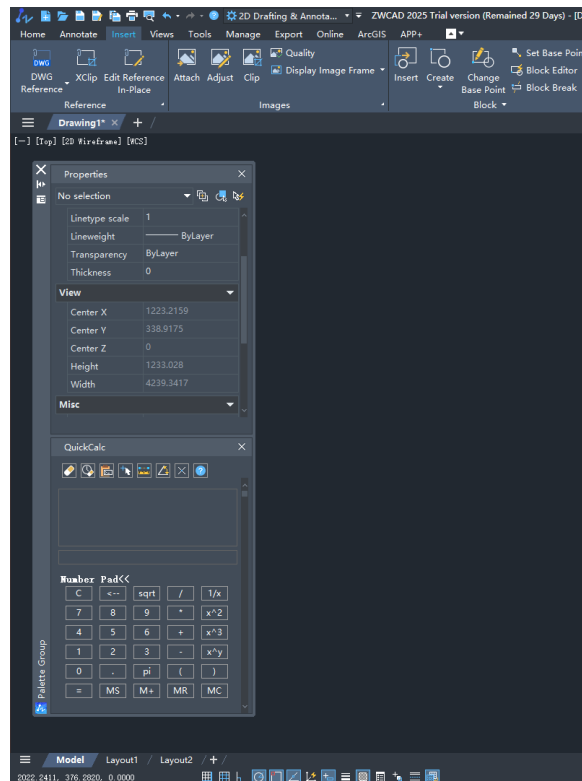
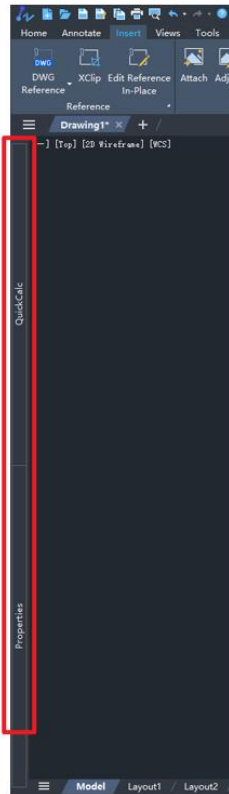


Figure 24. panels stack together

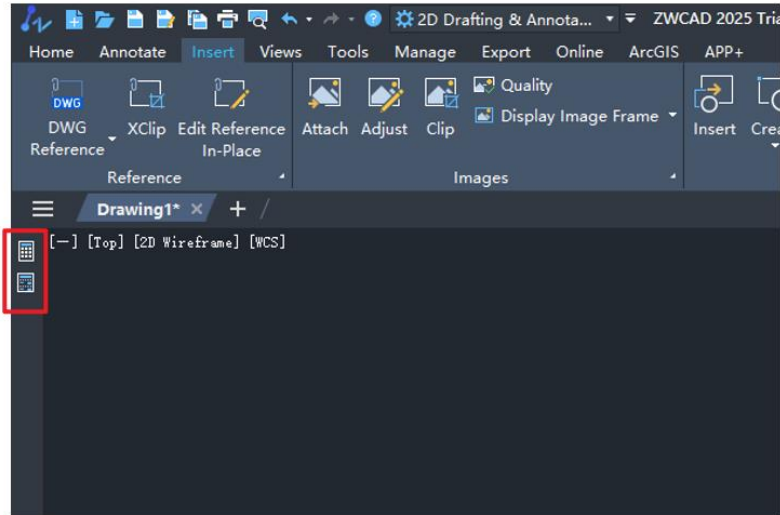
## Panel Auto-Hide

When the panel is docked on the side of ZWCAD, click the "Auto-Hide" button in the top right corner of the panel, and the panel will be hidden.

You can choose to hide it as text or icon.



Hide as text



Hide as icon

Figure 25. Different hiding methods

## Navigator

When you drag the title bar of a panel, it will trigger the navigator between the panel and the ZWCAD program. When you drag the panel to another panel, it will trigger the navigator between them. The navigator can provide you with a more intuitive preview effect.



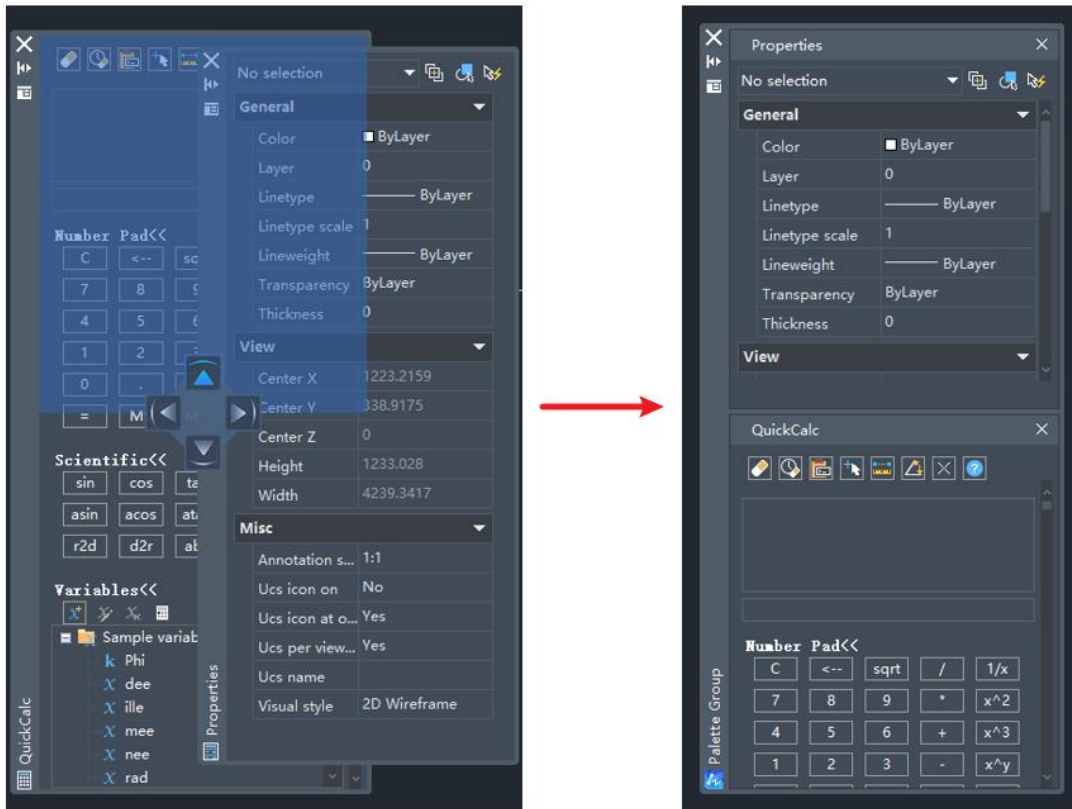


Figure 26. Stacking Navigator

### 2.3.2 Floating Document Window

Document windows can be dragged out of the program, so users can open one drawing on another monitor as a reference drawing. When opening two or more drawings in ZWCAD, users can drag any document out of the program by clicking on the document tab and dragging it to the desired location.

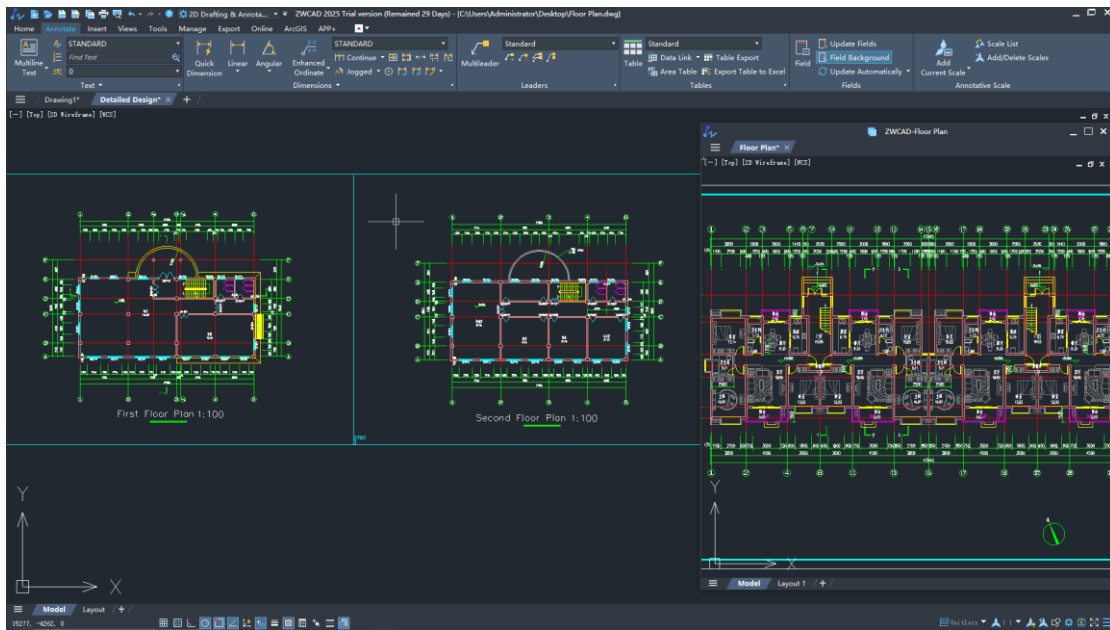


Figure 27. Drag a drawing out as a new window

### 2.3.4 Help Document Redesign

It added an online help document and optimized the search engine for the offline help document so users can access the help documentation service more conveniently.

#### New Online Help Document

Online help document enables users to access the help document anytime, anywhere, on any device, without the need to open the program (Supported languages: including Simplified Chinese, Traditional Chinese, English, Russian, German, Spanish, French, Japanese, Korean).

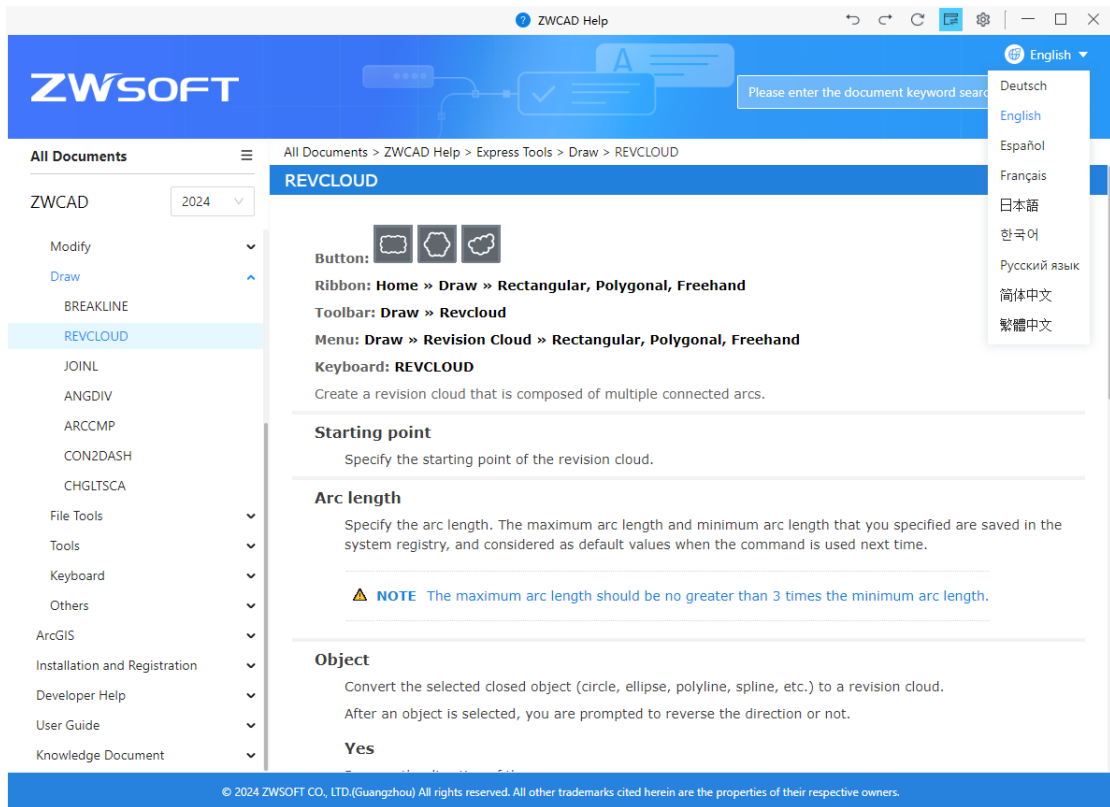


Figure 28. Online help document homepage

## Offline Help Document Improvement

Offline help documentation supports filtering, enhancing the convenience and efficiency of searching.

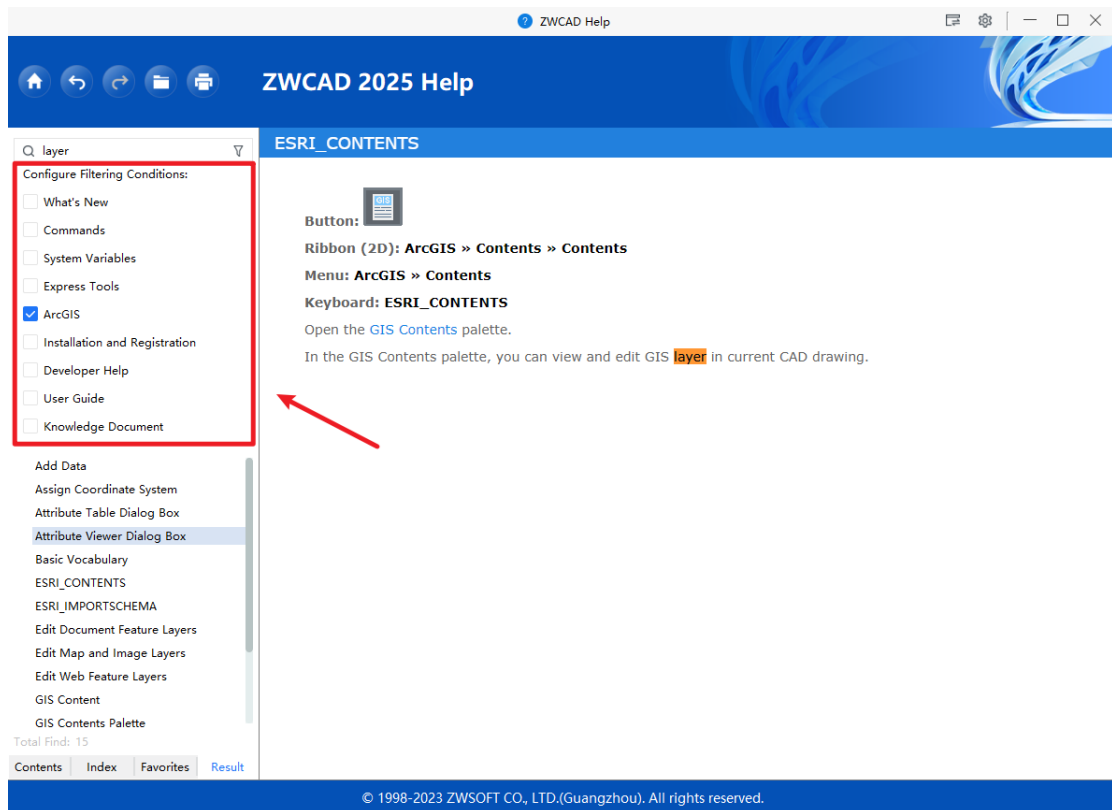


Figure 29. Search criteria help users more accuracy to find the content

### 2.3.5 Command Matching Improvement

The command matching mechanism has been improved to provide users with a more intelligent command interaction experience.

#### Command Match Improvement

In the previous version, it had prefix matching only. In this version, it added substring matching, wildcard matching and fuzzy matching. Users can quickly locate the required commands by entering certain characters or keywords of the command without having to enter the full name of the command accurately.

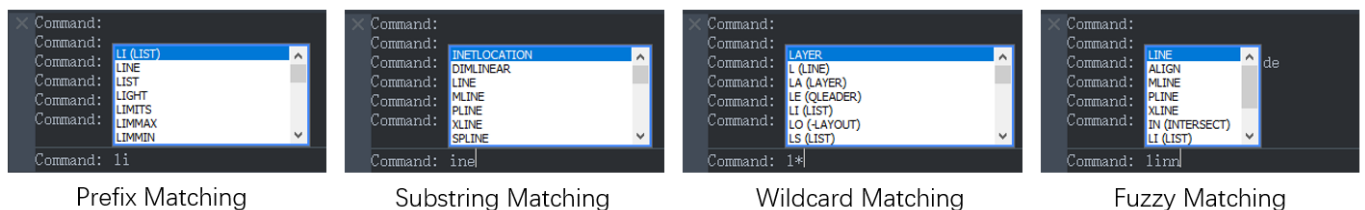


Figure 30. Four Match Types

## Intelligent Sorting

When users input a string, the commands will be sorted by the frequency of usage.

## 2.4 Industry Application Improvement

### 2.4.1 Point Cloud Module Improvement

#### New Visualization Styles

It added 3 new visualization styles including “Intensity”, “Elevation”, and “Classification”. Also, users can configure point cloud colors.

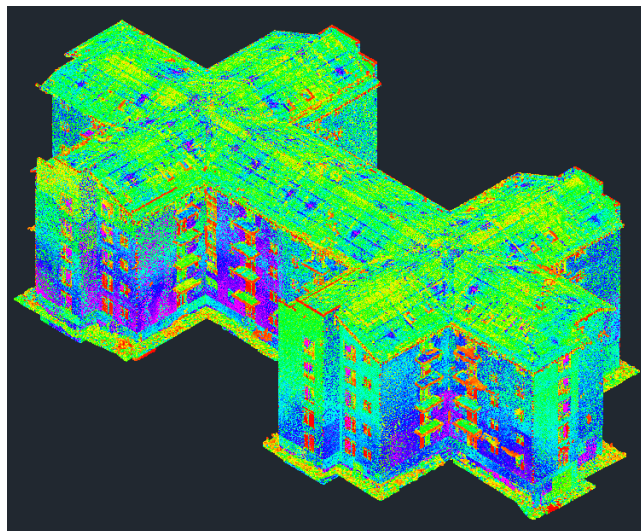


Figure 31. Intensity visualization style

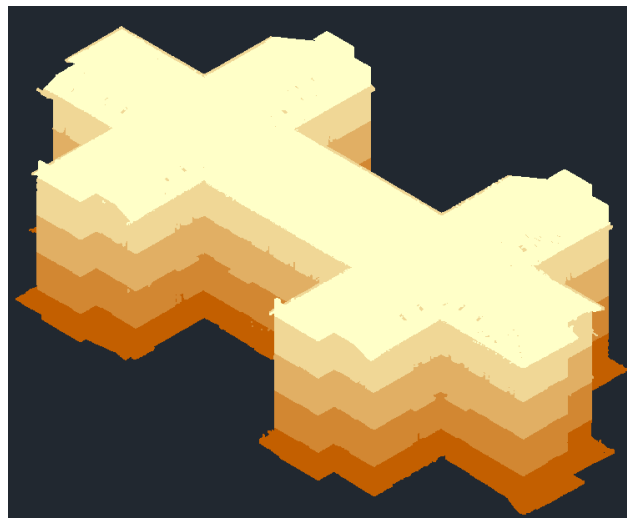


Figure 32. Elevation visualization style

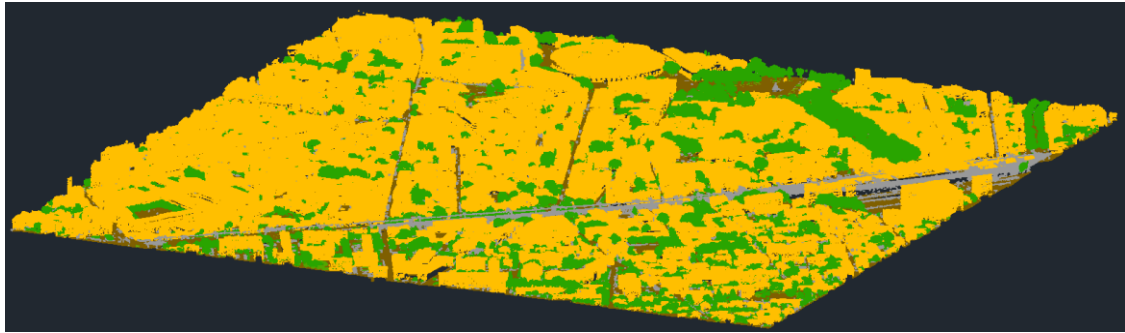


Figure 33. Classification visualization style

## Navigate to Scan View

In the Point Cloud Manager, right-clicking a subset will trigger a context menu. Through the "Navigate to Scan View" function, and users can quickly locate the corresponding view.

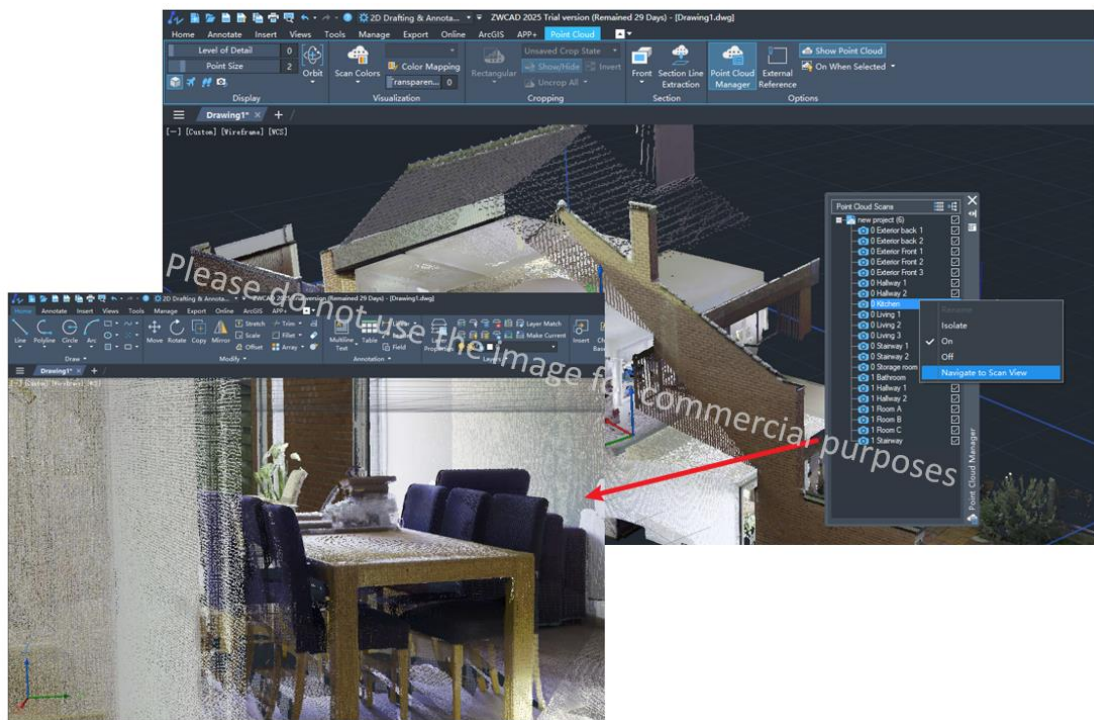


Figure 34. Navigate to the scan view to observe the interior of the building.

## 2.4.2 GIS Module Improvement

This module has replaced the original ArcGIS module to import maps and represent geographic features in ZWCAD.

## Map Service Import

It provides multiple map services including Bing Maps. Users can add map services compliant with the OGC protocol.

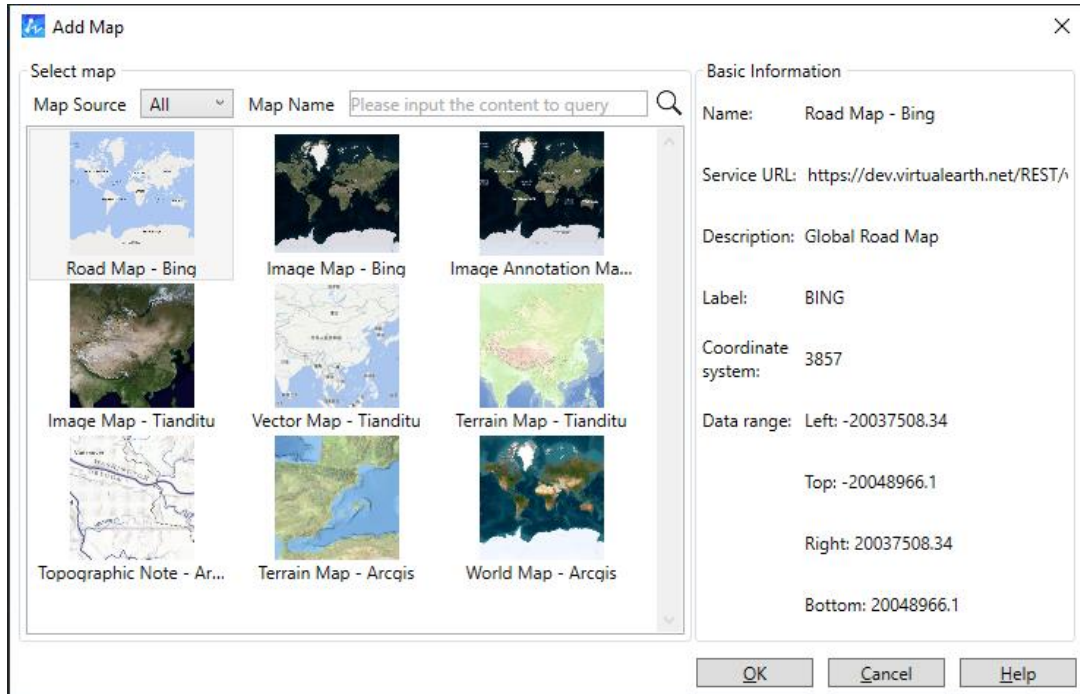


Figure 35. "Add Map" dialog box

## Locating Function

You can match the geographic marker with the insertion point specified in the drawing by specifying the latitude and longitude.

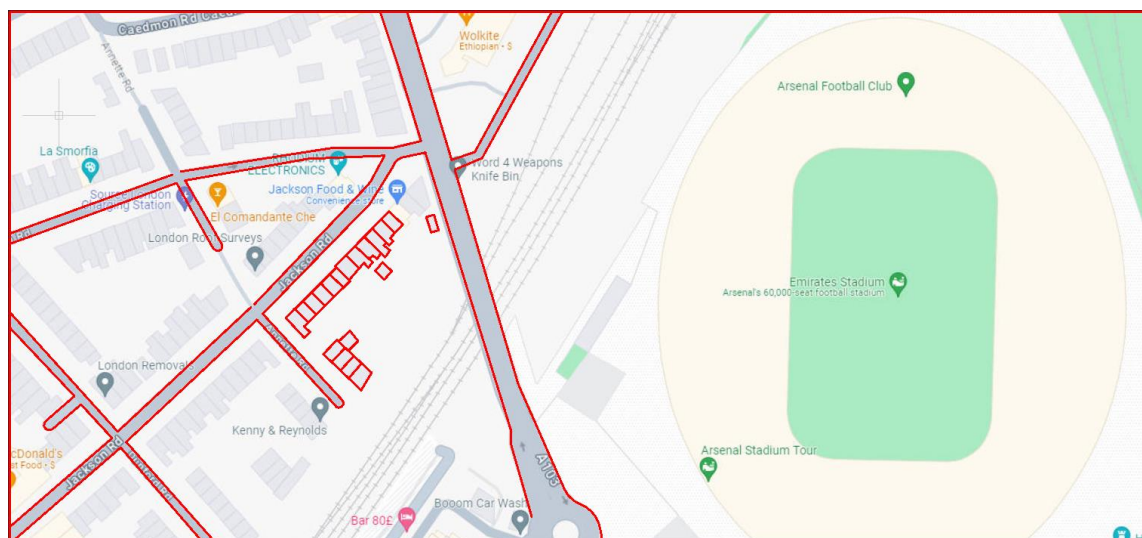


Figure 36. Visual representation of map and drawing matching

### 2.4.3 Raster Image to DWG Conversion

It supports converting raster images into CAD entities, allowing users to directly edit and modify the converted drawings. This feature helps users reuse historic hand-drawn drawings or scanned drawings, reducing the workload and cost of converting them to CAD drawings manually.

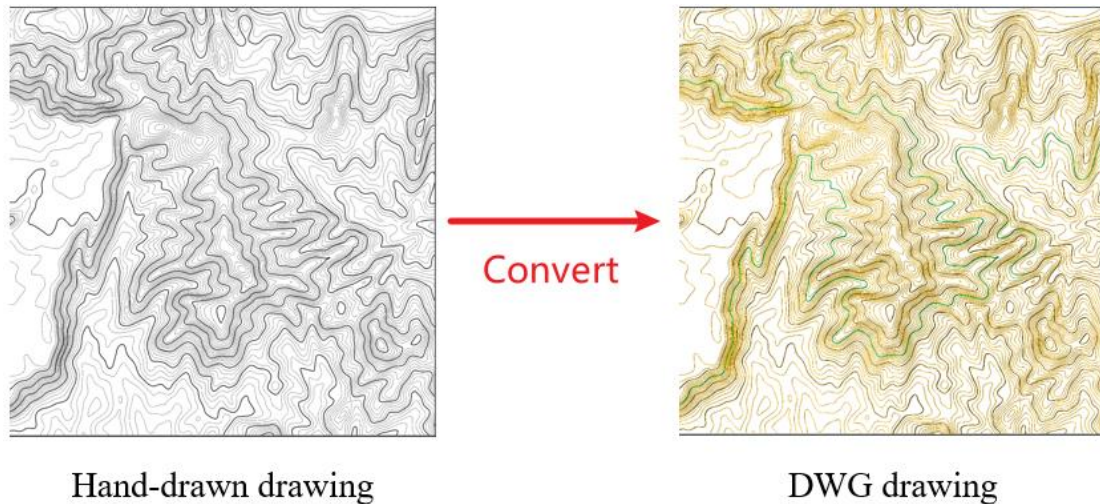


Figure 37. Convert raster image to DWG drawing

ZWCAD has made significant improvements to its API modules, including SDK upgrades, Ribbon API enhancements, .NET API enhancements, and more. For detailed information, please refer to the [<ZWCAD 2025 API Improvement>](#).