ZWCAD 2019 Official

Product Release Note

ZWCAD PRODUCT TEAM

ZWSOFT | 2018/8/10

Thank you for downloading ZWCAD 2019!

Dear Friends,

We are glad to tell you that the long-awaited ZWCAD 2019 Official is available now! After a long time of devoted preparation and development, and thanks for your valuable feedback for the Closed and Open Beta, ZWCAD 2019 finally comes with significant new features and improvements, and notably enhanced efficiency and stability. Now we would like to invite you to take a look at this Official version.

This Release Note mainly introduces the performance of efficiency and stability, new features and improvements, API, new commands and system variables, bug fixes, and limitation and notes in ZWCAD 2019.

Yours sincerely,

The ZWCAD Overseas Team

August 2018

Contents

ZWCAD 2019 Official Release Note

VERNUM= 2018.07.26(35476)

Overview

ZWCAD 2019 Official has the following new features and improvements:

New Features	Description
Create and Modify Dynamic Block Definition	Parameters and Actions can be added to, modified in or removed from Dynamic Blocks.
PDF Underlay	PDF Underlay can be attached and displayed, supporting object snap, layer management, clip, the adjustment of display effect, etc.
Annotative Object	The size of annotation object can be scaled automatically and displayed correctly in the Layout viewports.
DWFx Underlay	DWFx format can be inserted and displayed as underlay.
Smart Plot	Multiple drawings in the model space can be plotted at one time.

Improvements	Description
Layer Properties Manager Palette	Layer Manager is turned into palette, enabling you to draw with Layer Manager on.
Z-Tracking	Z Axis can be tracked automatically.
Custom Color Scheme	Light color scheme is available as another option except for the default Dark scheme.
NLM Combining 15 Language Versions	Network License Managers of 15 different languages are now integrated into one.
Other Improvements	There are many other improvements such as Redefine Blocks, Prompt for the Change of External Xref Files, Add Blocks from Design Center to Tool Palettes, etc.

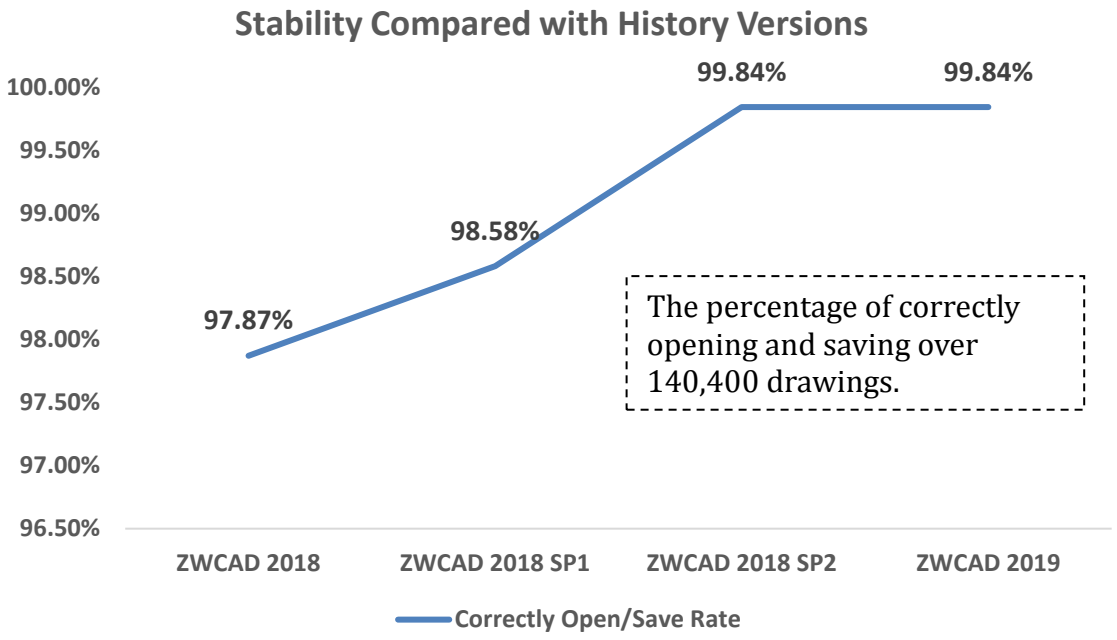
The performance of stability and efficiency, new commands and system variables, bug fixes, limitation and notes will also be introduced.

Stability

The following section describes the stability tests in this release.

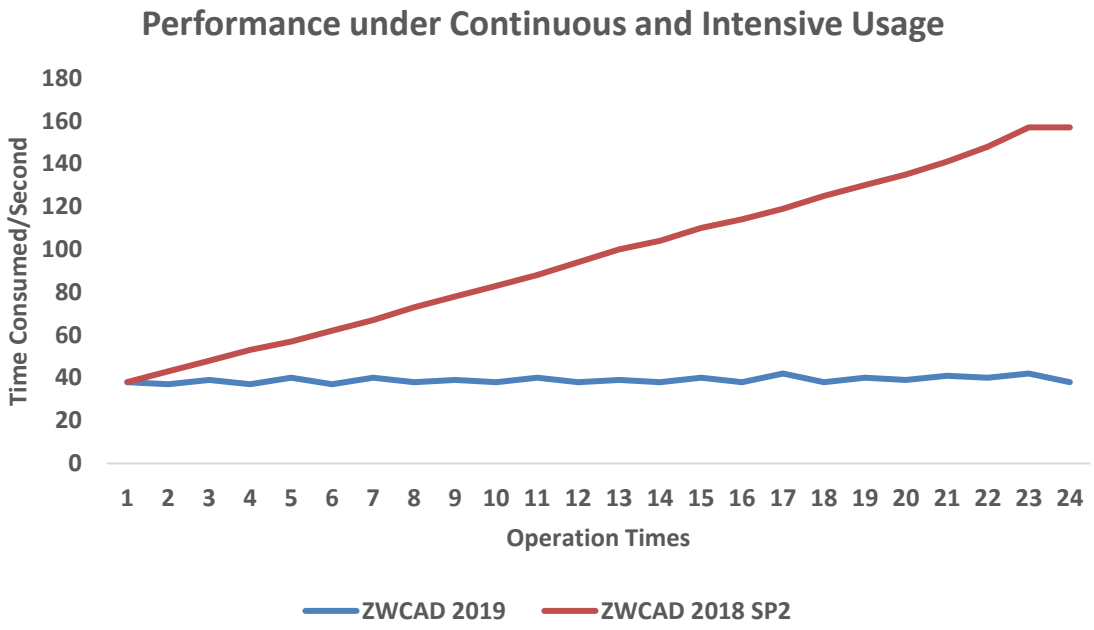
Compare with History Versions

The stability performance of ZWCAD 2019 is tied up with ZWCAD 2018 SP2, and has obvious enhancement compared with other history versions. Through the automatic testing by monitoring the errors during Open/Save operations in more than 140,400 comprehensive drawings, the correctly open rate of ZWCAD 2019 reached 99.84%.



Performance under Continuous and Intensive Usage

Through using ZWCAD continuously and intensively for more than 4 hours automatically, to deal with complicated drawings with a large amount of blocks or polylines, it is proven that ZWCAD 2019 has a significantly stronger capability for long-time design work.

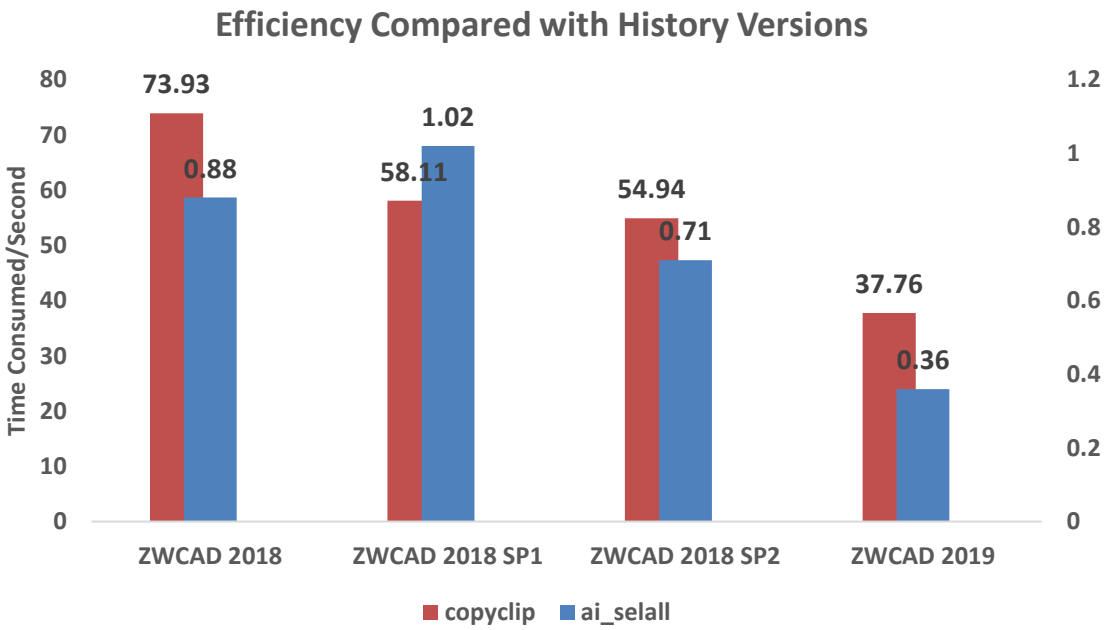

Performance under Continuous and Intensive Usage
Time Consumed/Second
180
160
140
120
100
80
60
40
20
0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Operation Times
ZWCAD 2019
ZWCAD 2018 SP2

Efficiency

The following section describes the efficiency tests in this release.

Compare with History Versions

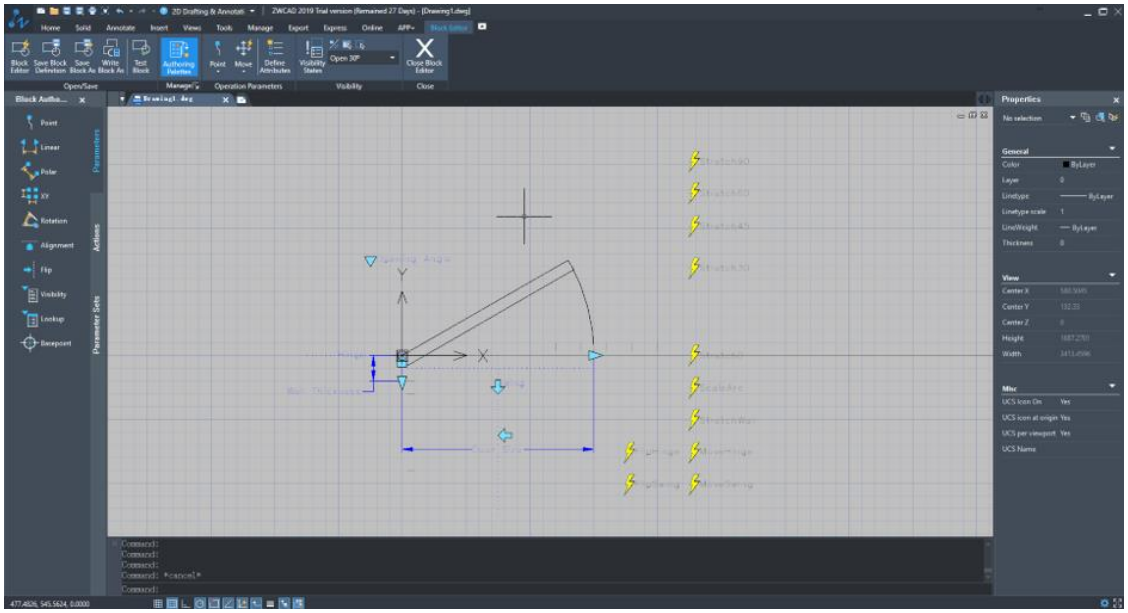
Compared with the previous versions, the efficiency of COPYCLIP/PASTECLIP and AI_SELALL have been greatly improved, and the operation speed of SCALE and ROTATE also increased. However, there is slight decrease in some operations such as layer lock and unlock.



New Features

The following section describes some details of new features in this release.

Create and Modify Dynamic Block Definition



Dynamic Blocks can be created and modified now through entering the BEDIT command, which can also be found in Ribbon/Classic interface, or in the right-click menu of a dynamic block.

As is known, the object to be changed in a Dynamic Block is targeted by Parameters while how it is going to be changed is defined by Actions.

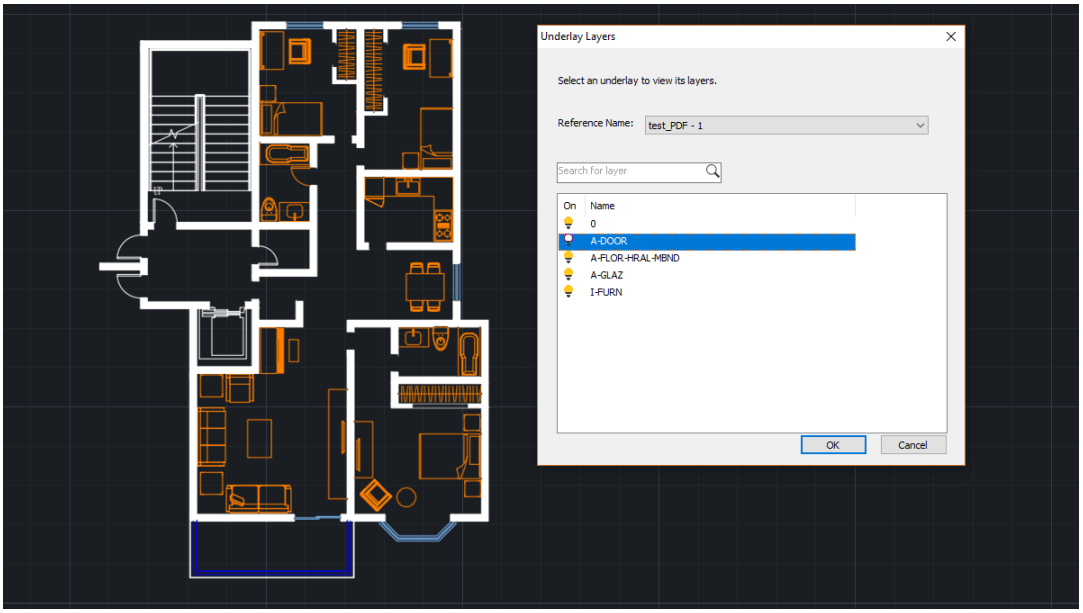
In the previous version, Dynamic Blocks can only be opened and changed by existing Parameters and Actions. But now more can be done -- you can create or modify Dynamic Blocks by adding, modifying or removing their Parameters and Actions. Flexibility is increased especially for complicated design tasks.

Below are the available Parameters and Actions:

Parameters	Point
	Linear
	Polar
	XY

	Rotation
	Alignment
	Flip
	Visibility
	Lookup
	Base Point
Actions	Move
	Scale
	Stretch
	Polar Stretch
	Rotate
	Flip
	Array
	Lookup

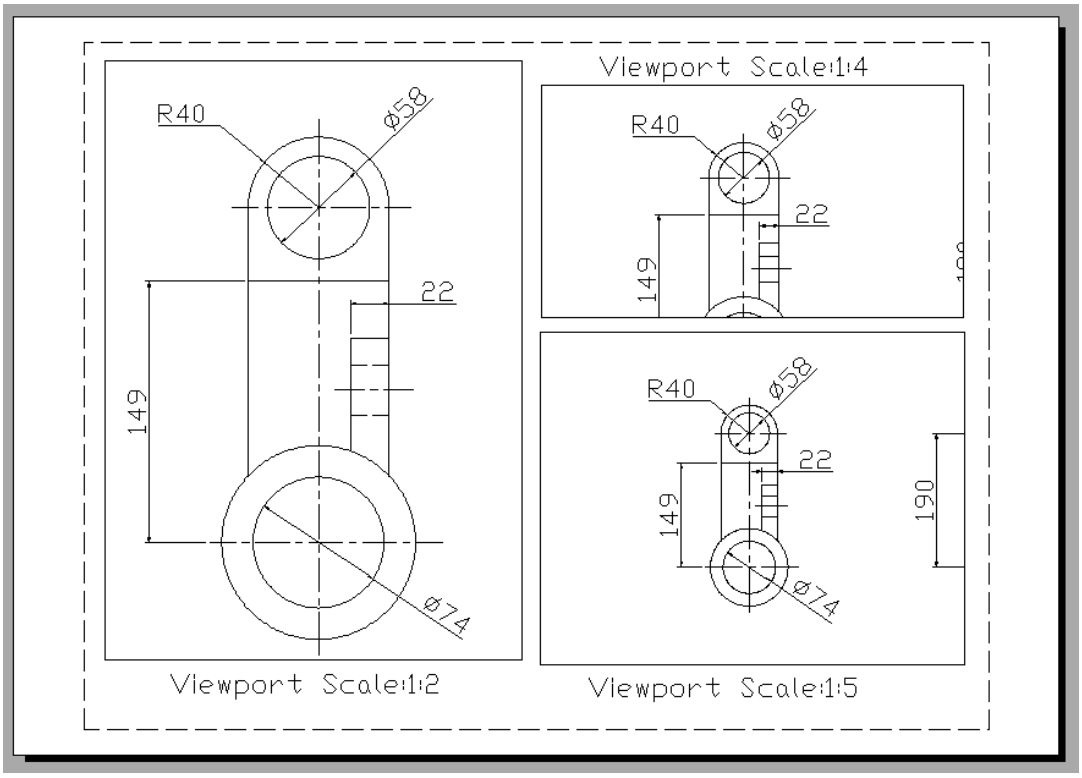
PDF Underlay



PDF Underlay can now be attached and displayed, supporting object snap, layer management, clip, displaying or hiding frames, the adjustment of display effect, etc.

Getting more data, information and drawing reference from PDF Underlay, you are able to make full use of it and apply it to more practical work.

Annotative Object



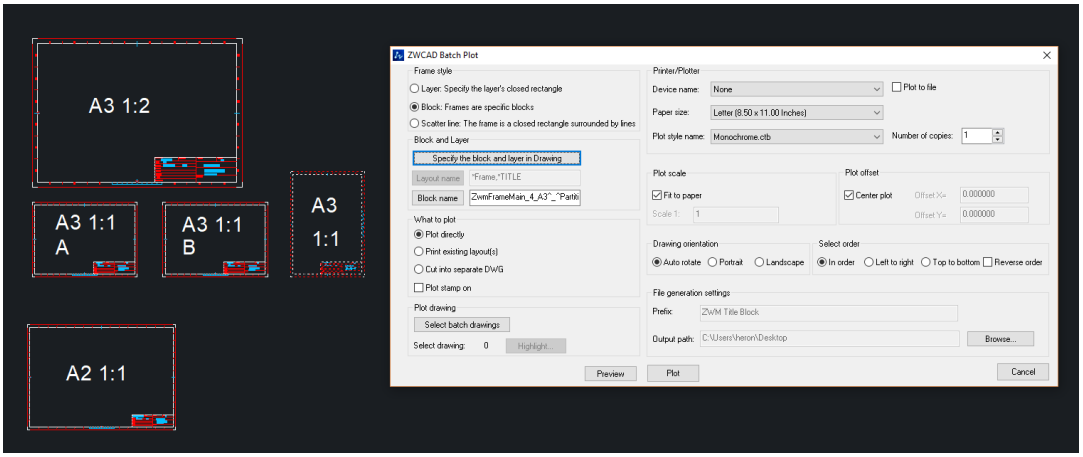
Annotative Object can now be displayed, created and edited. Usually, the size of annotation object changes together with the size of the geometry it annotates, resulting in its failing display in the Layout viewports when plotting to a smaller scale. Now by defining the annotative property to control the way that the annotation object scales, the size of the annotation object can be adjusted automatically according to the specified scale in the Layout viewports and displayed at the correct size, which is especially helpful for plotting drawings with multiple scales in multiple viewports. The annotation objects or object styles that can be set as annotative including:

- Text and Text style
- Attribute Block definition
- Hatch
- Dimension and Dimension style
- Tolerance
- Multileader and Multileader style

DWFx Underlay

DWFx, an advanced format of DWF to protect your drawings, can be inserted and displayed as underlay now. However, only DWFATTACH is available in this version, while other relative commands such as DWFFRAME, DWFCLIP, DWFADJUST, DWFLAYER and DWFOSNAP are not available yet.

Smart Plot



Smart Plot is now available to plot multiple drawings from the model space at one time by using command ZWPLOT.

Sometimes, designers prefer generating several drawings in the model space instead of layout space. If they want to plot the drawings, they need to plot them one by one.

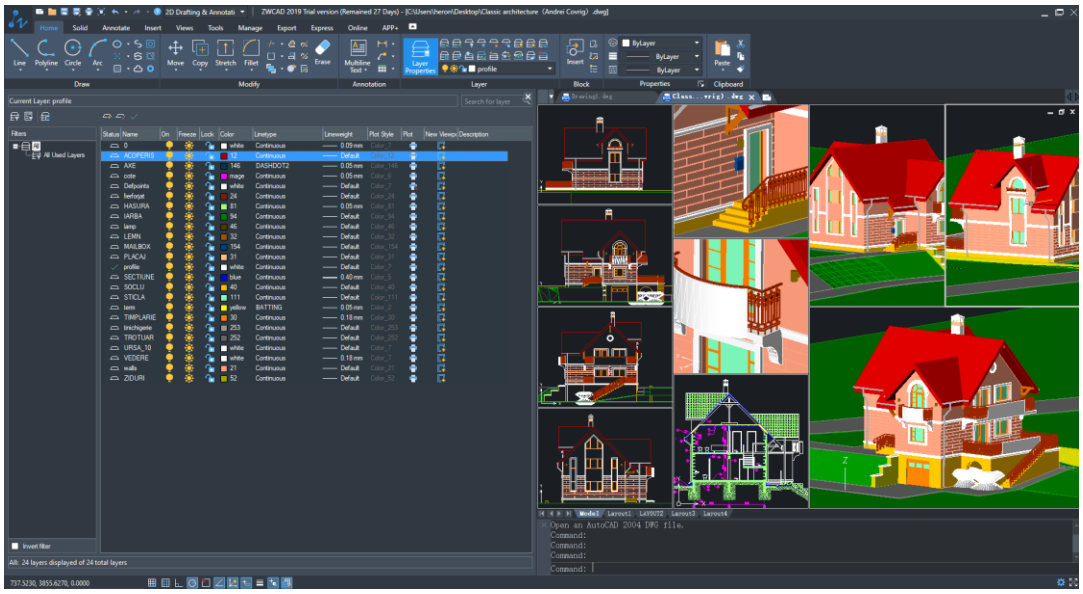
Now with Smart Plot, drawings can be plotted from the model space all at once after defining their borders and selecting the entities to be plotted, enabling more efficient plotting process.

Improvements

The following section describes the improvements in this release.

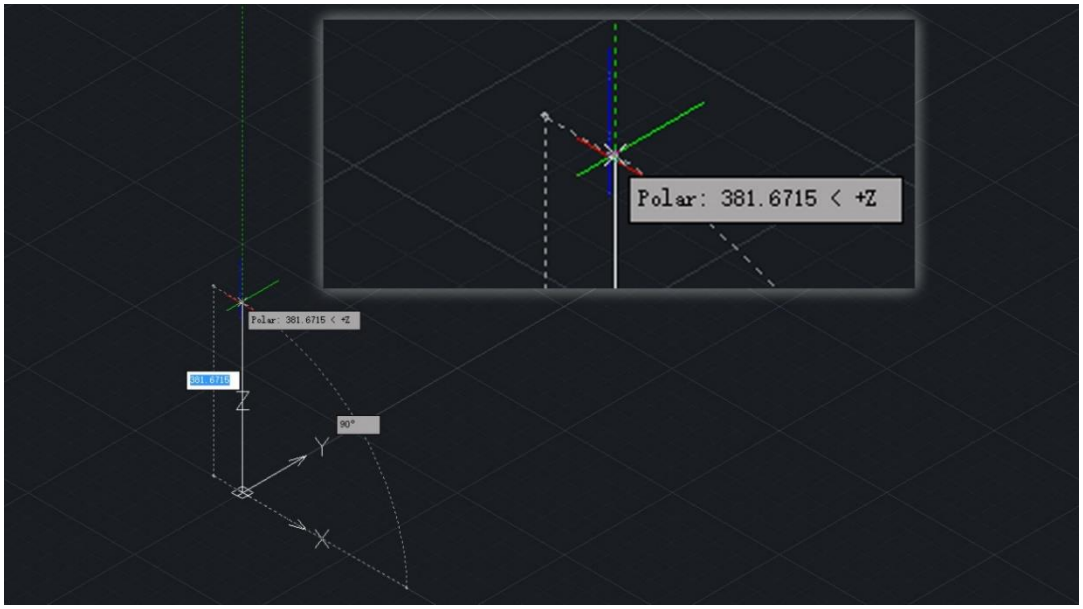
Layer Properties Manager Palette

When you open the Layer Manager before, you can only operate in its dialog box. But now, through turning the dialog box into a palette, you are able to operate in the drawing area with the Layer Manager on, and the adjustments in the Layer Manager can be updated instantly in the drawing area, making it more convenient since you no longer need to open and close the Layer Manager repeatedly.



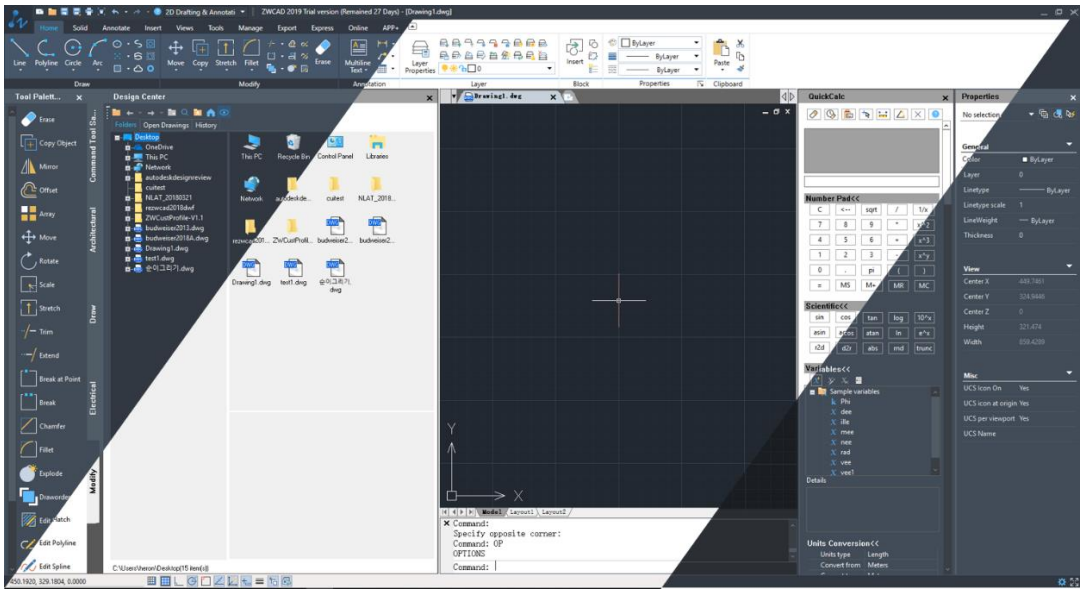
Z-Tracking

Polar tracking on Z-Axis is available now in 3D design. You can draw lines parallel to Z Axis easily without any other construction lines.



Custom Color Scheme

In the former version, Dark is the default color scheme helping reduce visual fatigue. Now Light is also available as another option for those who prefer white menu, which can be switched in Options→Display to satisfy different needs.



NLM Combining 15 Language Versions

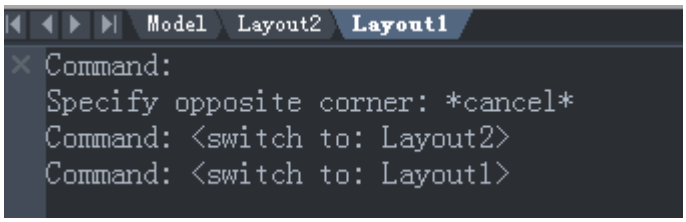
Network License Managers (NLM) of 15 different languages are now integrated into one, which means that you can download the NLM you need conveniently by selecting between 32 bit and 64 bit.

Other Improvements

The following section describes other improvements in this release.

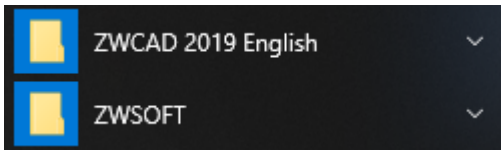
Drag and Drop Layout Tab

You can change the order of the Layout tab by dragging and dropping. What's more, by pressing Ctrl while dragging the Layout tab, it will be copied to the specified location.



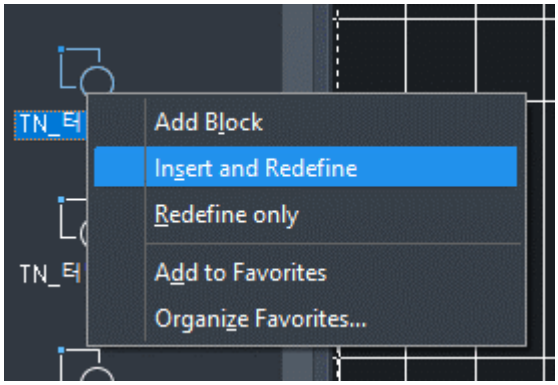
Every Version is Separately Listed in the Menu Bar of Win 8 & 10

From ZWCAD 2019, every annual and language version is listed separately in the menu bar of Win 8 and Win 10 to help you better manage them.



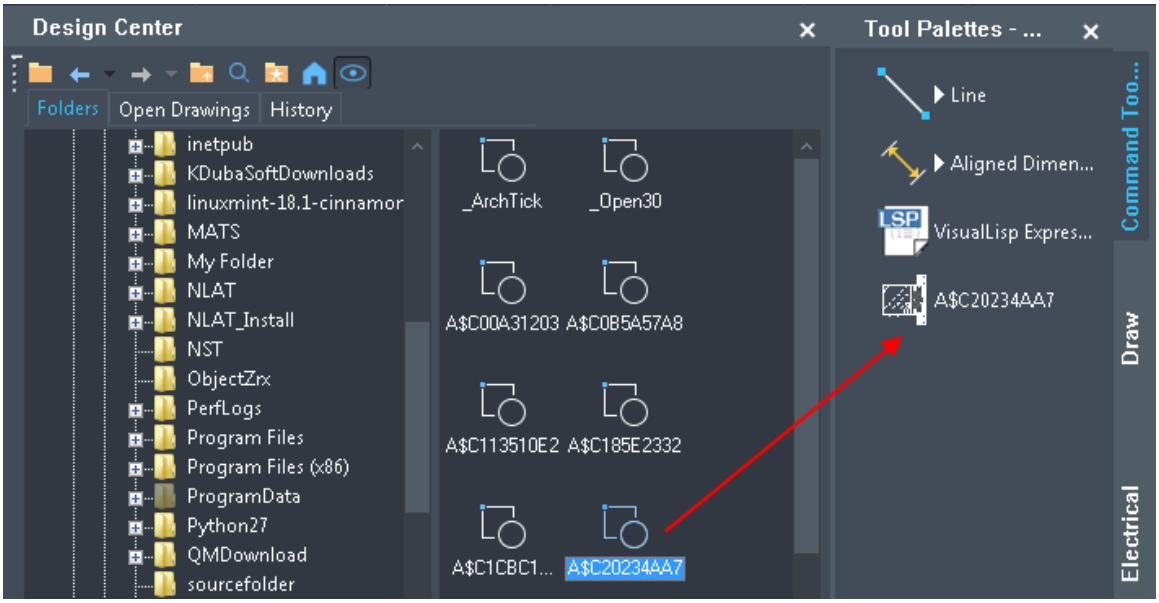
Redefine Blocks

You can now redefine the blocks in Design Center. When inserting the block of the same name from Design Center to the current drawing, you can redefine the block by selecting Insert and Redefine from the right-click menu.



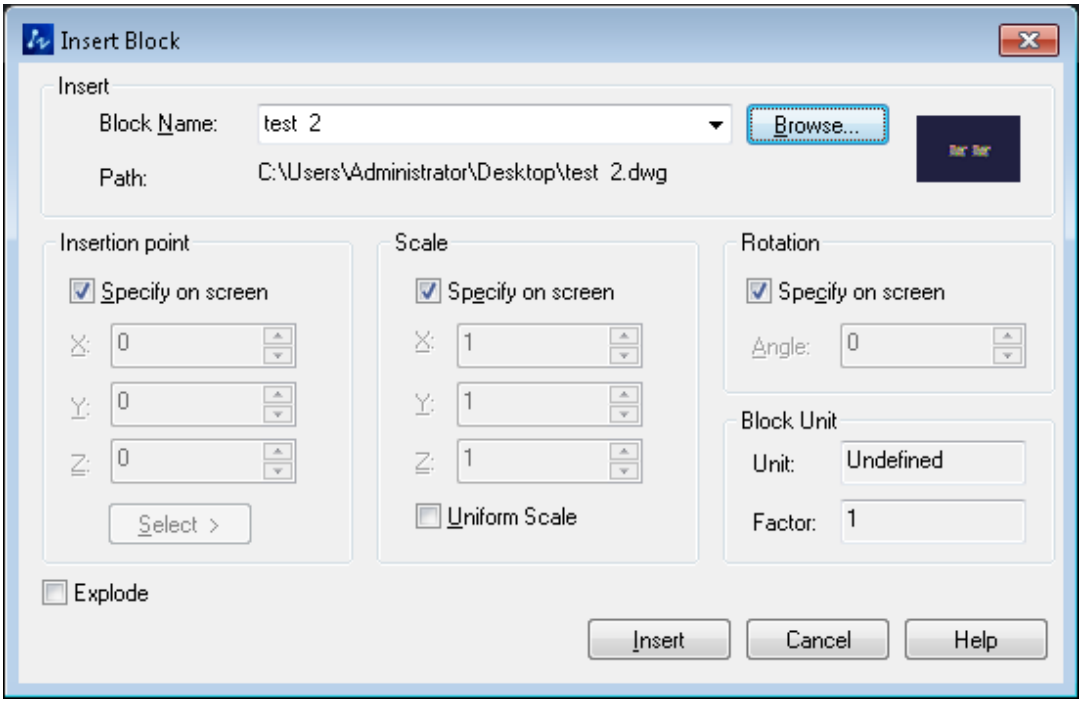
Add Blocks from Design Center to Tool Palettes

You can now add the blocks from Design Center to Tool Palettes simply by dragging and dropping them.



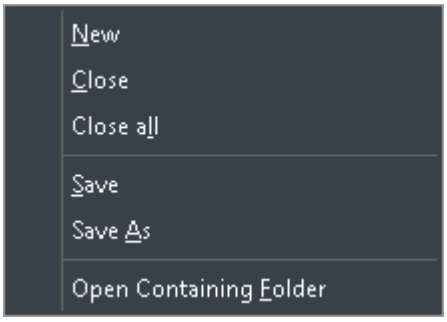
Block Preview

While inserting a block from a DWG file, you can preview it in the Insert Block dialog box



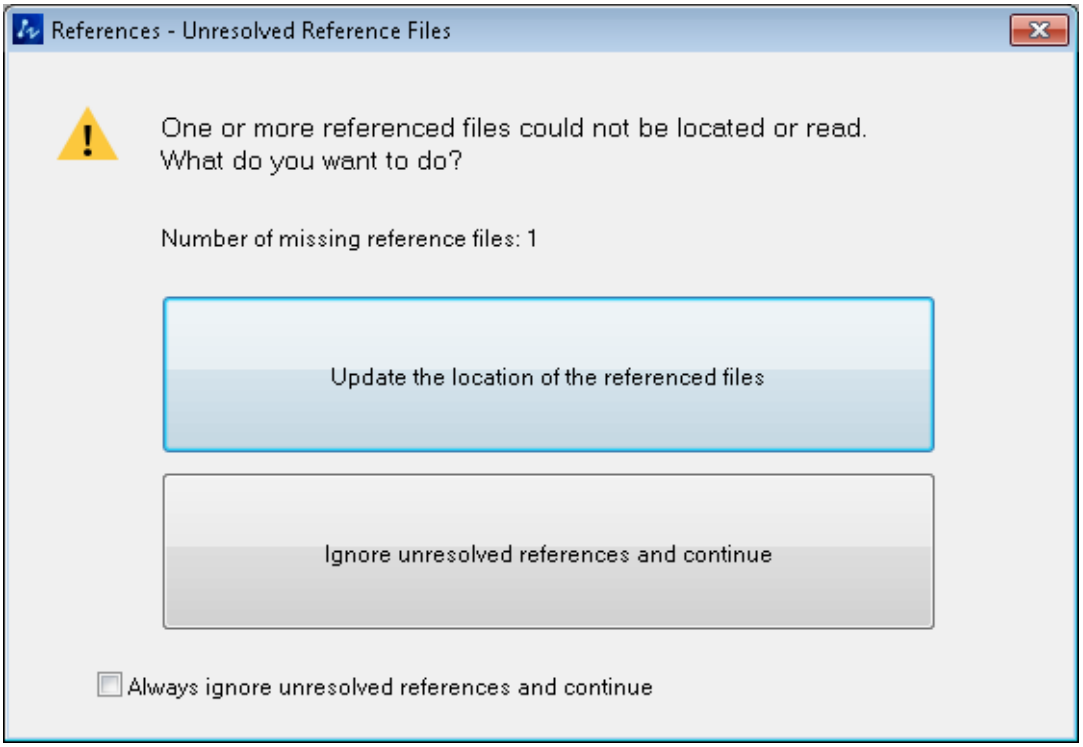
Functions Added in File Tab Menu

Functions including Save, Save As and Open Containing Folder are added to the right-click menu of File Tab.



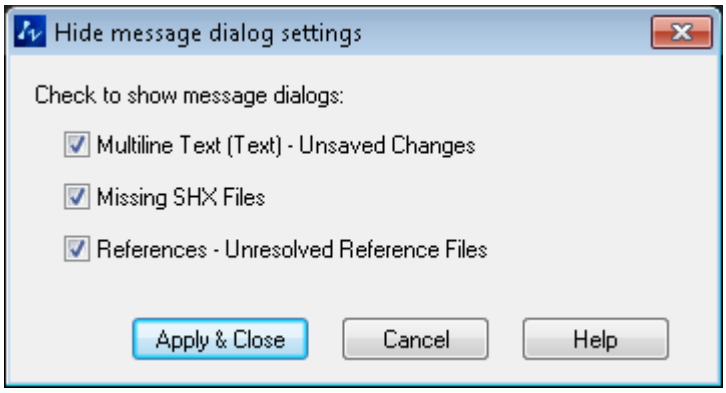
Optional Prompt for Unresolved Reference Files

Usually, if there are Unresolved Reference Files in your drawings, a prompt reminding that the referenced files could not be located or read will appear, and instruct you to choose whether to update or ignore. However, for some designers, they don't need the referenced files, and will be tired of choosing "Ignore" over and over again.



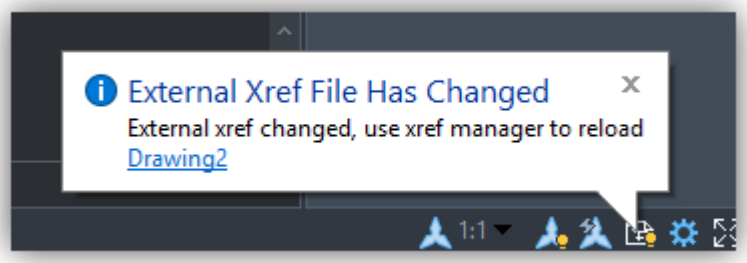
Now they can tick the option at the bottom of the prompt to always ignore the

unresolved reference. Of course, if they want the prompt back, they can set it through Options-->User Preferences-->Hide message dialog settings-->References-Unresolved Reference Files.



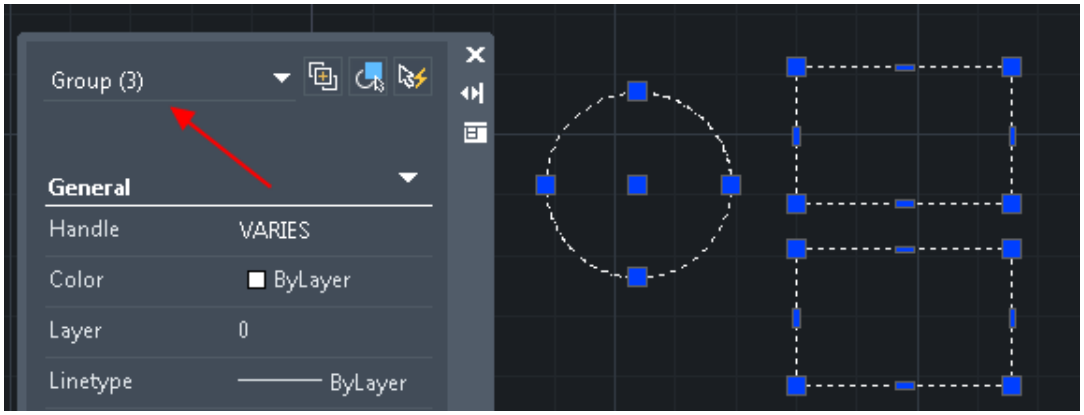
Prompt for the Change of External Xref Files

In the previous version, if you make some adjustments to the External Xref Files, you will not receive any reminder and will probably forget the changes and get confused. Now a prompt will pop up reminding you of the changes, and you can reload the drawing by xref manager.



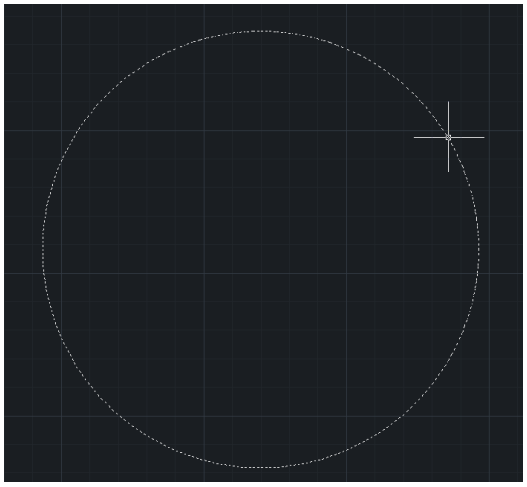
Group Objects in Properties

If you define several objects, like three circles as a Group, they will be marked as a Group in the Properties menu as below, making you clear which objects are Groups.



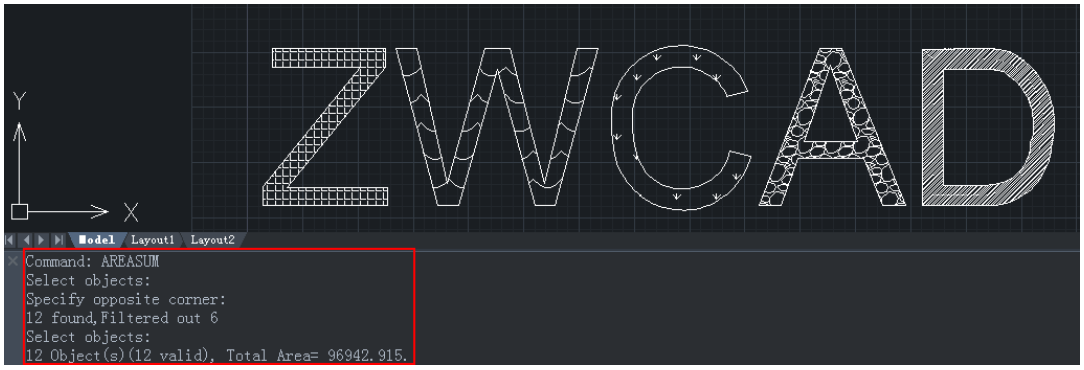
Highlight the Objects with Cursor over it

When you put the cursor on an object in the process of a command, the object will be highlighted to ensure that you have correctly selected it.



Sum Up Hatched Areas

The hatched areas can be summed up by AREASUM command.



Other Optimizations

- The command prompt remains displayed when turning off Dynamic Input.
- Standard version supports loading VLS&ZELX files.
- VPLAYER command is supported in Model Space.
- The size of the output SVG files is reduced.
- The path of External Xref Files can be updated through entering ".\".

API

The following section describes the condition of API in this release.

ZRX

408 were added and 35 were fixed as below. ZRX programs running correctly on ZWCAD 2018 Official/SP1/SP2 can be loaded on ZWCAD 2019 directly. Frequently-used interfaces in Brep library were added to represent topological information of 3D models. However, interfaces relating to Mesh is not realized yet.

Bug ID	Description
13789\13177\ 13175\13035\ 12154\11518	int acedSSGet(const ACHAR * str, const void * pt1, const void * pt2, const struct resbuf * filter, ads_name ss)
13706\12616\ 11451\9741	ACDB_PORT ADESK_SEALED_VIRTUAL Acad::ErrorStatus GetGeomExtents (AcDbExtents& extents) const
13323	AcGeScale3d AcDbBlockReference::scaleFactors() const;
13295	AcDb3PointAngularDimension::AcDb3PointAngul arDimensi on(const AcGePoint3d& centerPoint, const AcGePoint3d& xLine1Point, const AcGePoint3d& xLine2Point, const AcGePoint3d& arcPoint, AcDbObjectId dimStyle = AcDbObjectId::kNull)
13187	virtual void AcEditorReactor::endDeepClone(AcDbIdMapping &)
13157	IOPMPropertyExtensionImpl::ShowProperty
12942	AcGeMatrix3d& AcGeMatrix3d::setToPlaneToWorld(const AcGePlane& plane)
12884	AcDb2dPolyline::insertVertexAt(const AcDb2dVertex* pIndexVert, AcDb2dVertex* pNewVertex)
12776	Int acdbEntNext (const ads_name ent, ads_name

	result)
12738	Adesk::Int16 AcDbViewportTableRecord::number() const
12668	Adesk::Boolean AcGeCircArc3d::intersectWith(const AcGePlanarEnt& plane, int& numOfIntersect, AcGePoint3d& p1, AcGePoint3d& p2, const AcGeTol& tol = AcGeContext::gTol) const
12610	CWnd* acedGetAcadTextCmdLine()
12586	virtual Acad::ErrorStatus AcDbBlockReference::setScaleFactors(constAcGeScale3d& scale)
12450	virtual void AcDbEntity::dragStatus(const AcDb::DragStat status)
12427	static AcGeMatrix3d AcGeMatrix3d::worldToPlane(const AcGeVector3d& normal)
12227	int acedGetPoint(const ads_point pt, const ACHAR * prompt, ads_point result)
12201	int acedGetAngle(const ads_point pt, const ACHAR * prompt, ads_real * result)
12189	int acedGetDist(const ads_point pt, const ACHAR * prompt, ads_real * result)
12137	double AcDbMText::actualWidth() const
11482	int acedGrRead(int track,int * type,struct resbuf *result)
11477	static ACPL_PORT Acad::ErrorStatus AcPlPlotFactory::createPreviewEngine(AcPlPlotEngine *& pPreview,long nPreviewFlags= kShowPlot)
11463	virtual Acad::ErrorStatus AcPlPlotEngine::beginPlot(AcPlPlotProgress* pPlotProgress,void* pParams = NULL)
11373	int acedInitGet(int val,const ACHAR * kwl)
11158	int acedGetFunCode()

10704	#define acrxDynamicLinker \ AcRxDynamicLinker::cast(acrxSysRegistry()->a t(ACRX_D YNAMIC_LINKER))
10628\9725	int acedGetFileNavDialog(const ACHAR * title,const ACHAR * defawlt,const ACHAR * ext,const ACHAR * dlgname,int flags,struct resbuf ** result)
10052	static ACPL_PORT Acad::ErrorStatus AcPlPlotFactory::createPublishEngine(AcPlPlot Engine *& pEngine)
9361	int acedGetCName(const ACHAR * cmd,ACHAR ** result)
9332	virtual Acad::ErrorStatus AcDbCurve::getParamAtPoint(const AcGePoint3d&,double&) const
9315	int acedTextBox(const struct resbuf * args,ads_point pt1,ads_point pt2)
8729	BOOL acedRegisterFilterWinMsg(const AcedFilterWinMsgFn pfn)
8213	Acad::ErrorStatus getDimstyleData(AcDbDimStyleTableRecord*& pRec) const
4648	AcGeBoundBlock2d AcGeCurve2d::boundBlock(const AcGeInterval& range) const
608	int acedGetCorner(const ads_point pt,const ACHAR * prompt,ads_point result)

.NET

2 were added and 16 were fixed as below.

Bug ID	Description
11673	DataColumn.GetIndexAtCell (Newly-added)

11535	DataCellCollection.Add (Newly-added)
13372	Application.ActiveDocument.ModelSpace.AddPolyline
12593	IZcadEntity.Hyperlinks.Add
12385	PlotEngine.BeginGenerateGraphics
12384	DBPoint.DBPoint(Point3d)
12769	public ObjectId SetAt(string searchKey, [CallerMustClose] DBObject newValue)
11709	AcadSortentsTable.MoveToBottom
11681	DataColumn.InsertCellAt
11538	DataTable.GetCellAt
11536	DataCellCollection.IndexOf
11536	DataCellCollection.Insert
11536	DataCellCollection.Remove
11536	DataCellCollection.Item.get
11536	DataCellCollection.Item.set
11536	DataColumn.AppendCell
11536	DataColumn.InsertCellAt
11536	DataColumn.SetCellAt

VBA

20 were fixed as below.

Bug ID	Description
12402	3Dsolid.SliceSolid Method
12855	Document.Add Method
11217	Document.SaveAs Method
10871	Document.SetVariable Method
13153	Group. AppendItems Method
12514	Hyperlinks.Add Method
12302	object.AddMLine Method

11134\12546\12612	PaperSpace. AddPViewport Method
10362\12329\13215	Plot.PlotToDevice Method
12142\12893	Plot.PlotToFile Method
12129\12719\12723	PopupMenu. AddMenuItem Method
8718	PopupMenu. AddSubMenu Method
12856\12858	SelectionSet.Select Method
12877	SelectionSet. AddItems Method
12680	BlockRef.XScaleFactor Property
12787	Document. ActiveLayout Property
11035	Document.PlotConfigurations Property
12638	LightweightPolyline.Coordinates Property
3863	PlotConfiguration.StandardScale Property
12700	Polyline.Coordinates Property

LISP

5 were added and 30 were fixed as below.

Bug ID	Description
9193	_vl-times (Newly-added)
9194\12170\12665	acet-ss-zoom-extents (Newly-added)
9195	acet-list-remove-adjacent-dups (Newly-added)
11768	vports (Newly-added)
12288	rotate3d (Newly-added)
3701, 8909	getcname
4284	acad_truecolorcli
5296	dictremove
7018	entupd
7706	getfiled
8187\ 12253	initget
9160	textbox
9210	setenv\getenv

9280\12365\13293	entget
9699	vl-catch-all-apply
11118	tblsearch
11141\11157	slide_image
11142	eq\equal
11412\12223	read
11532\12116	vl-registry-read
11620	vlr-objectmodified
11636	vlr-editor-reactor
11657	done_dialog
11669	action_tile
12079\12177	ssget
12125	dos_copy
12205	dictrename
12238	grread
12343	dos_serialno
12446	getdist
12732	vl-string-position
12760	set_tile
13068	type
13107	getpoint
12952\12953	entmod

New Commands

The following section describes the new commands in this release.

- Create and Modify Dynamic Block Definition

Name	Description
BACTION	Add actions to dynamic block definition.
BACTIONSET	Create new selection set for the action object, or modify the selection set associated with the action object in the dynamic block definition.
BACTIONTOOL	Add an action to a dynamic block definition.
BASSOCIATE	Associate an action with a parameter in the dynamic block definition.
BAUTHORPALETTE	Display Block Authoring Palettes window, including the Parameters tab, Actions tab and Parameter Sets tab.
BAUTHORPALETTECLOSE	Close Block Authoring Palettes window.
BCYCLEORDER	Set the cycling order for the grips in a dynamic block definition.
BESETTINGS	Set the display settings for the Block Editor, to change the display color, object, grip, text, etc.
BGRIPSET	Create, delete or modify the number of grips associated with the specified parameter, or restore the grips to its default position.
BLOOKUPTABLE	Define, modify or display the lookup table for the block definition.
BPARAMETER	Add the parameter with grips to dynamic block definition in block editor, to define the custom properties for dynamic block reference.
BTESTBLOCK	Open the current block definition in "Test Block Window" to test dynamic blocks.
BVHIDE	Hide the selected objects in the current visibility state or in all visibility states in the dynamic block definition.
BVSHOW	Show the selected objects in the current visibility

	state or in all visibility states in the dynamic block definition.
BVSTATE	Set the visibility state for a dynamic block.

- PDF Underlay

Name	Description
PDFADJUST	Adjust the settings for the PDF underlay, such as Fade, Contrast and Monochrome.
PDFATTACH	Insert a PDF file into a drawing as an underlay.
PDFCLIP	Modify the display of the PDF underlay with the specified clipping boundary.
PDFLAYERS	View and set the display of the layers in PDF underlay.

- Annotative Object

Name	Description
ANNOUPDATE	Update selected annotative objects, to make the annotation property of the objects matches the current properties of their styles.
OBJECTSCALE	Add or delete supported scales for specified annotative text objects.

- Layer Properties Manager Palette

Name	Description
CLASSICLAYER	Display the classic Layer Manager as modal dialog box
LAYERCLOSE	Close the Layer Manger as palette or modeless dialog box.
LAYERPALETTE	Display the Layer Manger as palette or modeless dialog box.

- Sub Commands

Commands	Sub Commands	Description

OFFSET	Erase(E)	Control whether to delete the original object after offset.
	Layers(L)	Control whether to place the offset object in the current layer, or the layer on which the original object lies.
	MULTIPLE	Repeat the offset operation using the current offset distance.
QDIM	Edit(E)	Edit a series of dimensions and specify whether to remove or add a dimension point.
	Setting(S)	Set the default object snap mode for specifying the origin of extension lines.
OFFSET under XLINE\RAY	Through(T)	Draw an xline passing through a specified point after selecting the offset line.
	Erase(E)	Control whether to delete the origin object after offset.
	Layers(L)	Control whether to place the offset object in the current layer, or the layer on which the original object lies.
HATCH	GRATE	A new hatch pattern GRATE is added.
Windows under ZOOM	Snap	Objects in a specified rectangular window after zooming can be snapped.
LAYDEL	Name	Through entering “N” or “Name”, a list containing the names of all layers (except for the selected one) will be shown and you can choose one or more layers to delete.

New System Variables

The following section describes the new system variables in this release.

- Create and Modify Dynamic Block Definition

Name	Description
BACTIONCOLOR	Set the display color for the action object in Block Editor. BYLAYER, BYBLOCK, index color and true color are all available for the color of action object.
BDEPENDENCYHIGHLIGHT	Control whether to highlight the object which is dependent on the selected object.
BGRIPOBJCOLOR	Set the display color for the grip object in Block Editor. BYLAYER, BYBLOCK, index color and true color are all available for the color of grip object.
BPARAMETERCOLOR	Set the display color for the parameter in Block Editor. BYLAYER, BYBLOCK, index color and true color are all available for the color of parameter.
BPARAMETERFONT	Set the font for the text of parameters and actions in Block Editor.
BACTIONBARMODE	Set whether to display the action bar or the separate action symbols.
BPTEXTHORIZONTAL	Set the align orientation for the parameter text in the Block Editor, to decide whether to always display the text horizontally or align the text with the dimension text of the parameter.
BVMODE	Control how to display the invisible objects under the current visibility state in Block Editor.

- PDF Underlay

Name	Description
PDFOSNAP	Control whether to enable the object snapping for the geometry in PDF underlay.
PDFFRAME	Control whether to display and plot the frame in PDF underlay.

- Annotative Object

Name	Description
MSOLESCALE	Control the initial size of an OLE object with text which is pasted on the Model space.
ANNOALLVISIBLE	Control the display of the annotative objects which do not support the current annotation scale.
ANNOAUTOSCALE	Control whether annotative objects are updated to support the annotation scale when you change it.
ANNOTATIVEDWG	Control whether the drawing is inserted into another drawing as an annotative block.
CANNOSCALEVALUE	Display the value of the current annotation scale.
CANNOSCALE	Set the name of the annotation scale for the current space.
DIMANNO	Indicate whether the current dimension style is an annotative style.
HPANNOTATIVE	Control whether a newly created hatch pattern is annotative.

- Layer Properties Manager Palette

Name	Description
LAYERDLGMODE	Control whether to display the modal dialog box or modeless dialog box (palette) of the Layer Manager.
LAYERMANAGERSTATE	Control whether to display or close the Layer Manager.

- Others

Name	Description
WORKSPACELABEL	Controls whether the name of the current workspace is displayed in the status bar.
GRIPADSORB	Control the display range that grips can adsorb.

DWFDELMODE	Control whether a block reference that generated from a DWF/DWFx file can be deleted.
LENSLENGTH	Store the length of the lens used in the active viewport, and the unit is millimeter.

Bug Fixes

There are 563 bug fixes in ZWCAD 2019 Official from overseas customers. The following list contains parts of them in this release.

Bug ID	Description
Open and Save	
12377	Open: The prompt that fonts are lacked should not occur when the fonts are already under the search path.
11675	Open\Menu: When opening drawing in server, if the storage path is long, the menu will drop down slowly.
User Interface	
17135	CUI\WIN32: Icons of commands cannot be dragged to specific locations in the toolbar on WIN32.
10771	CUI\XP: Icons of commands cannot be moved to specific locations in the toolbar on XP.
9749	Skin: The toolbars is displayed incorrectly in Windows Classic theme.
Design	
12161	xref\ucs: xrefs are always attached in WCS instead of UCS.
8354	Osnap\Parallel: It is impossible to draw lines or polylines parallel to another polyline.
11858	Explode\Hatch: The result is incorrect after exploding hatched patterns.
API	
12105	Fail to Redo after executing Undo in lisp program.
8729	Display is not updated after modifying entities in the call back function of zcedRegisterFilterWinMsg.
13789	There is performance problem when creating selection se t with zcedSSGet by specifying multiple values on DXF gr oup code.

For the complete list of Bug Fixes, you can visit:
https://zwcad.freshdesk.com/support/solutions/articles/24000028976--what-s-fixed-in-zwcad-2019-official

Limitation and Notes

The following section describes some details of limitation and notes in this release.

Bug ID	Description
13611	The preview of Annotative Objects fail to be displayed.
13550	When dragging annotative blocks to the current drawing, the annotative properties will lose.
13472 13473 13475	When the annotative objects of different scales are added to an entity, their positions will be displayed incorrectly.
13618	When changing the scale of the annotative rotated dimension, the rotated effect will lose.
13580	The Super Hatch for annotative blocks is displayed incorrectly.
13576	Annotative marks cannot be displayed in the annotative styles.
12911	Dynamic Blocks containing parameterized objects cannot be edited in Block Editor.
13055	BCYCLEORDER/insert: When inserting Dynamic Blocks, the inserting point cannot be changed by pressing Ctrl.
13972	bedit/blookuptable: Only single value can be entered into the lookup table, while multiple values or range values are not supported.
13043	pdfosnap: Some objects in the PDF Underlay cannot be snapped correctly.
12908	NewUI\toolbar: Toolbar input box shows extra lines after turning the icons into big ones.
11803	copyclip/pasteclip: If specific drawings are copied incorrectly, there is hang-up and no response when being pasted.
13401	Xref/efficiency: It is slow when binding a specific xref in some drawings.
13375	layout: It is slow to switch the layouts of specific drawings.
14036	block/zwcad.dwt/units: In the new drawings created in zwcad.dwt mode, the coordinates in the Block dialog is incorrect.