



# ZWCAD 2020 Open Beta

Product Release Notes  
ZWCAD PRODUCT TEAM

ZWSOFT | 2019/4/22

## **Welcome to try ZWCAD 2020 Open Beta!**

Dear friends,

We are glad to introduce to you ZWCAD 2020 Open Beta, the latest ZWCAD version. It comes with significant new features and improvements, as well as the impressively enhanced efficiency thanks to the multi-core processing technology. We would like to invite you to take a look at it. Please feel free to contact us if you have any suggestion.

Yours sincerely,  
ZWCAD Product Team

April 2019

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# ZWCAD 2020 Open Beta Release Notes

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## Overview

ZWCAD 2020 Open Beta has the following new features and improvements:

New Features	Description
<a href="#">Annotation Scale List Reset</a>	If the drawing includes too many scales, a prompt will pop up to remind users to reset scale list when opening drawing.
<a href="#">PDF Underlay Manager</a>	All attached PDF Underlays can be managed in a dialog box.
<a href="#">Data Extraction</a>	Information and data of different objects can be extracted and exported to a table or a .csv/.xls file.
<a href="#">Lisp Debugger</a>	Lisp programs can be debugged.

Improvements	Description
<a href="#">TK Tracking</a>	It is a new tracking method for users to locate a special point without drawing auxiliary lines.
<a href="#">Selection Set for Overlapped Objects</a>	A dialog box will pop up to help users select overlapped objects.
<a href="#">Smoother Text Explosion</a>	More grips have been added to the 2D polylines after exploding text/mtext, making it more accurate.
<a href="#">Resizable Toolbar</a>	The size of Toolbar can now be adjusted freely.
<a href="#">Block Properties in Properties Panel</a>	Properties of a block are now displayed in the Properties panel in the Block Editor mode.
<a href="#">Find &amp; Replace Text</a>	Users can find and replace letters or words when inputting in the Text box.
<a href="#">More Block Properties in Field</a>	More properties of Dynamic Block have been added to Field.

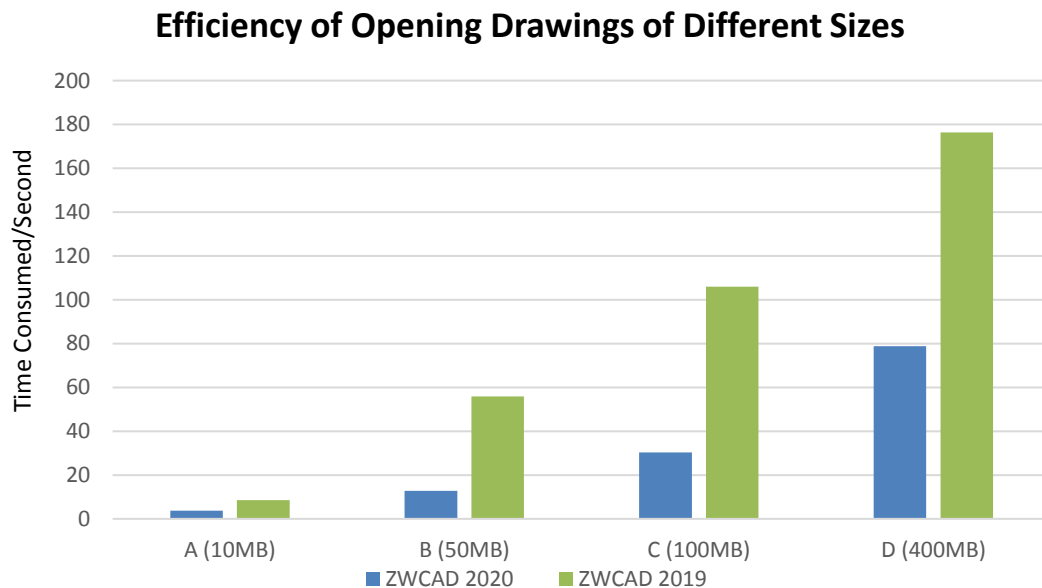
What's more, the tests for efficiency, as well as new commands and system variables will also be introduced. However, API, bug fixes and limitation and notes will be included in the official release notes.

## Efficiency

The following section describes the efficiency tests in this release.

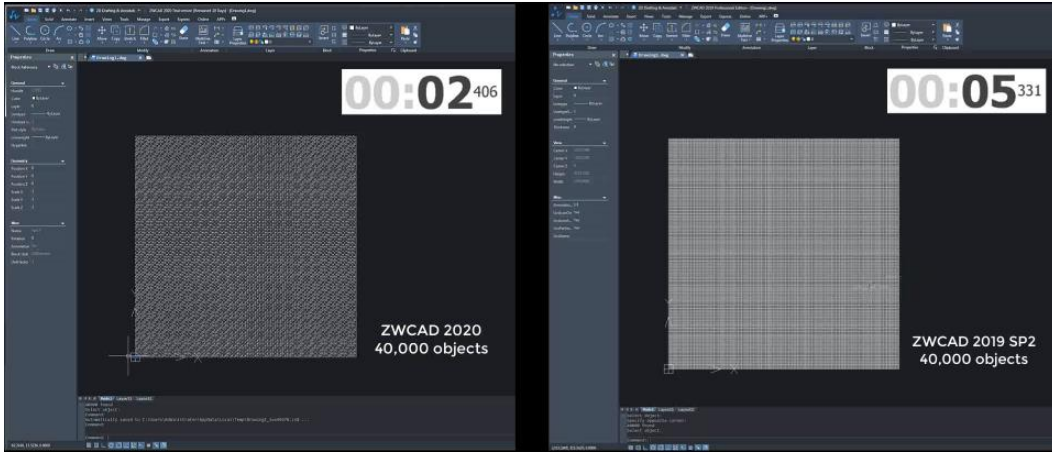
### Open Drawing

With multi-core processing technology, the speed of opening drawing has been greatly improved compared with the previous version. From the chart below we can find that the efficiency rose obviously with the increasing size of drawings, especially for the ones around 50MB to 100MB, the speed is almost 4 times faster than before.



### Create Block

Creating block is one of the most frequently-used operations in daily CAD using. To better increase user experience, we have improved its efficiency. The time for creating a block with a large number of objects has been reduced by over 50%.



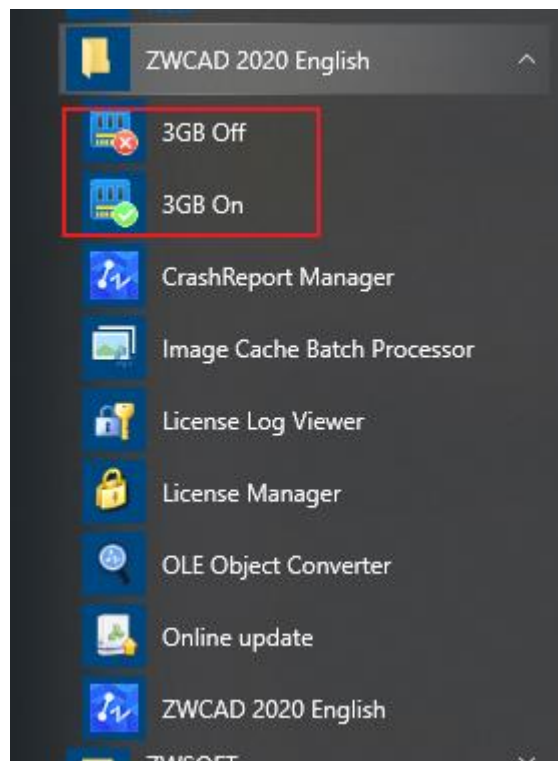
ZWCAD 2020

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The time for creating a block with 40,000 objects

### Large Memory Switch for 32-bit System

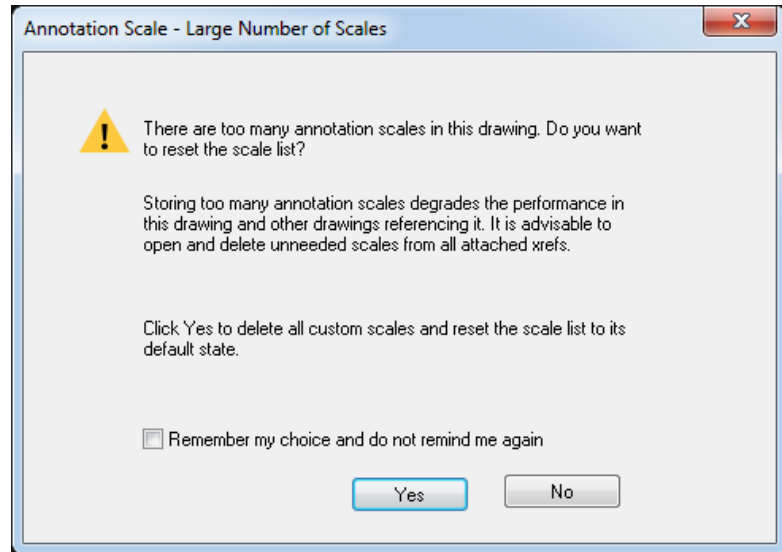
Sometimes when you open large drawings in 32-bit Operation System, crash will happen because the memory is not enough to support the drawing. Now, up to 2.6GB (formerly it is 1.5GB) memory can be released by turning on the Large Memory Switch as below, so that you can open some large drawings with ease.



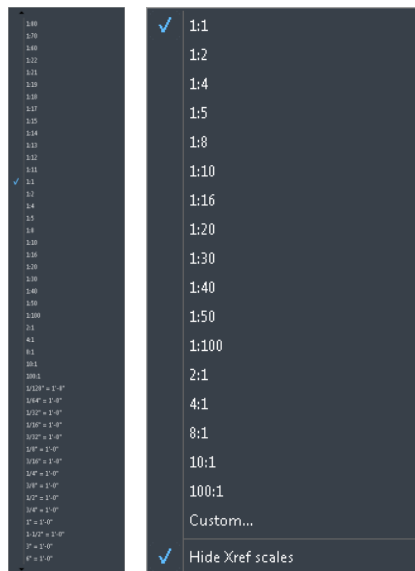
## New Features

The following section describes the new features in this release.

### Annotation Scale List Reset

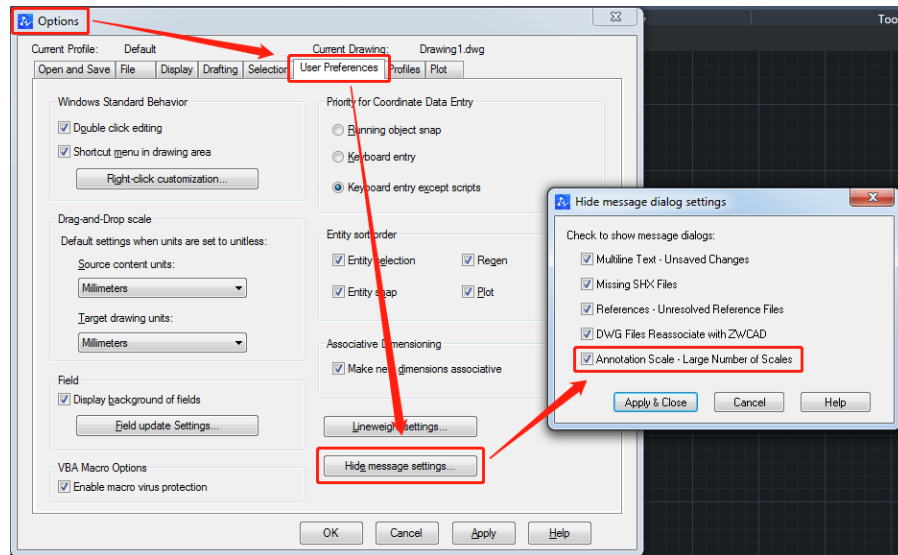


Storing too many annotation scales will spoil the performance of the drawing and its referenced drawings. Now, a prompt will pop up when opening a drawing with lots of annotation scales. It will remind the users to reset scale list to the default state by removing unneeded custom scales, improving the performance when dealing with annotative objects.



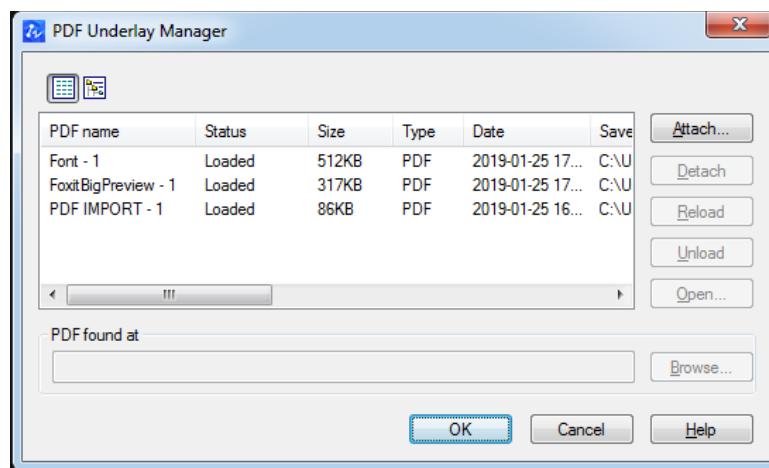
Before and after resetting

If you click *Remember my choice and do not remind me again*, this prompt will never pop up again unless you change the setting in *Option → Users Preferences → Hide message settings → Annotation Scale – Large Number of Scales*.



## PDF Underlay Manager

To better manage the attached PDF Underlays, PDF Underlay Manager is now ready for our users in this version. After attaching PDF Underlays, input *PDFATTACH* again, then the dialog box of *PDF Underlay Manager* will pop up for users to check the status, size, type, date, saving path, etc. of all the PDF Underlays.

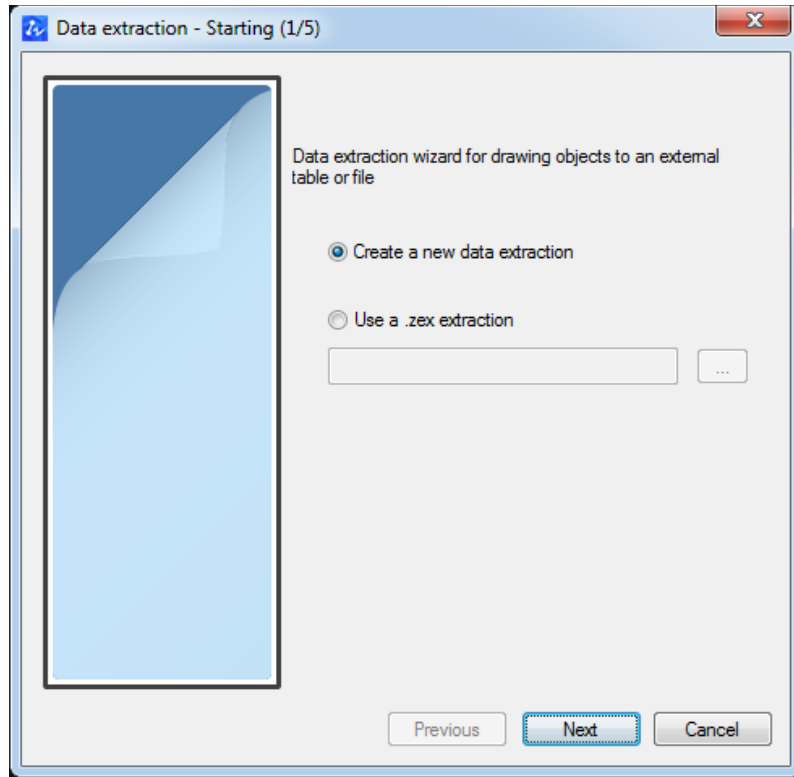


Users can also attach a new PDF Underlay in this dialog box, and detach, reload, unload or open an existing one, enabling them to manage all the PDF Underlays in the drawing more conveniently.



## Data Extraction

Data Extraction enables users to extract various data from objects by filters. There are dozens of different types of data including length, angle, color, layer, area, radius, etc. All these extracted data will be shown in a table or be exported to a file in .csv or .xls format.

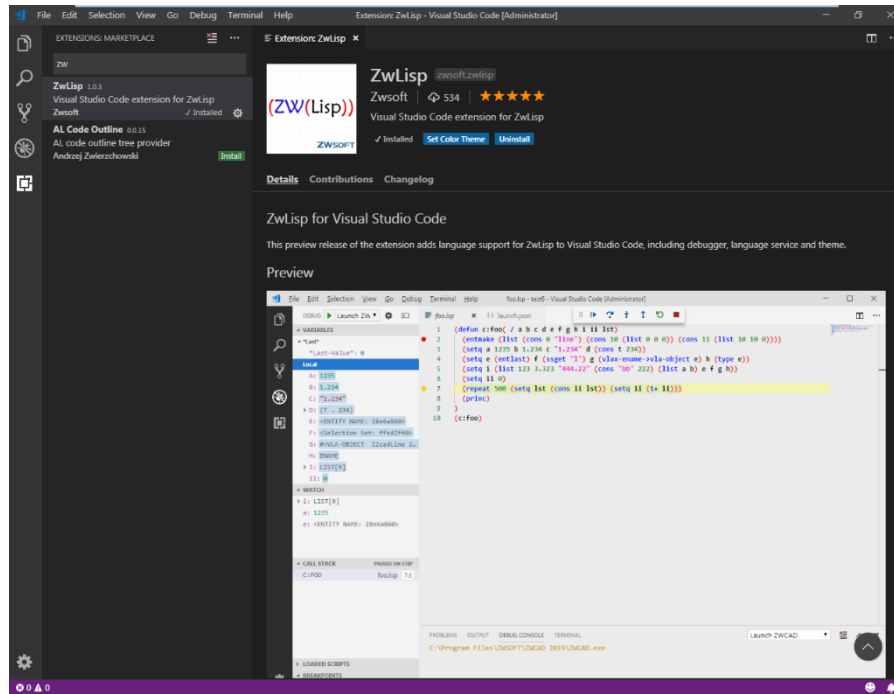


With this feature users can easily acquire the data they need from the drawing. It is especially useful in the situation that numerous data need to be extracted at one time.

## Lisp Debugger

Activated by command *VLIDE* or *VLISP*, Lisp Debugger is used to debug lisp programs. Developed based on Visual Studio Code from Microsoft™, it enables developers to debug their lisp programs with breakpoint inspection and modify it easily.

What's more, if users have already installed the Visual Studio Code, they can directly download ZwLisp in Microsoft Extensions Marketplace.



## Improvements

The following section describes the improvements in this release.

### TK Tracking

Previously, if the users want to locate a special point, they need to draw some auxiliary lines. Now, with TK Tracking, they can locate it with a virtual auxiliary line. Thus, drawing efficiency has been greatly improved.

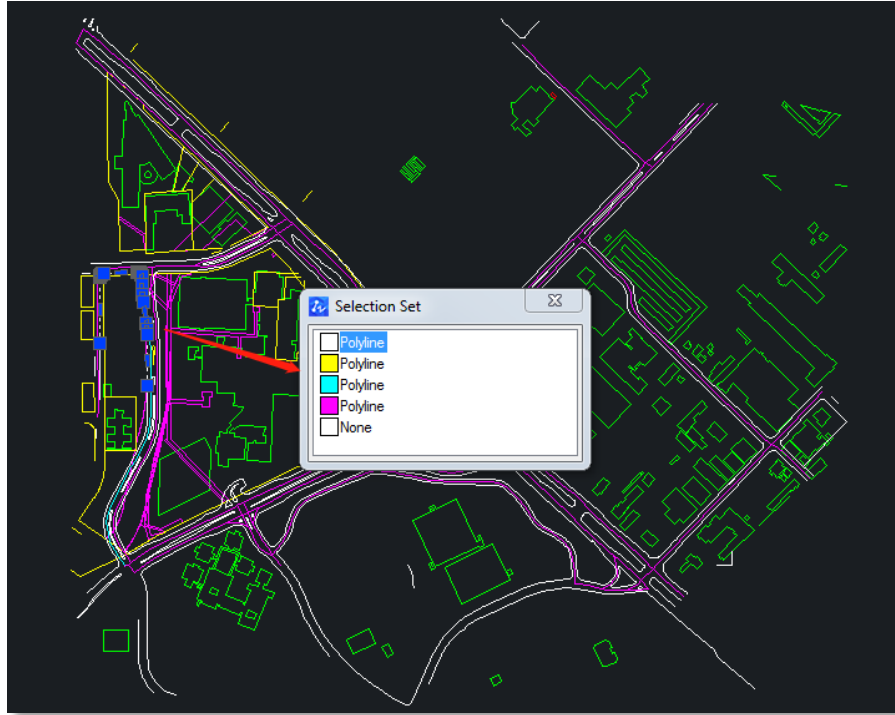
It should be noted that TK Tracking is a kind of in-command object tracking, which means that it can only be used in the middle of drawing or an editing command. For example, you can only use the TK Tracking after activating the Circle command.

```
CIRCLE
Specify the center point of circle or [3P/2P/Ttr (tangency tangency radius)]: tk
First tracking point:
Next point (press ENTER to end tracking):
Next point (press ENTER to end tracking):
Specify circle radius or [Diameter] <120.5215>:70
```

### Selection Set for Overlapped Objects

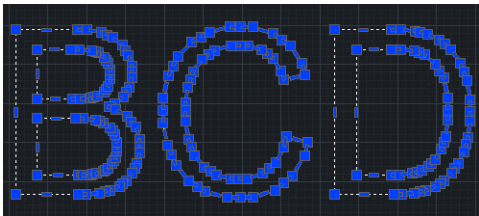
A dialog box called *Selection Set* will pop out when users click the overlapped objects. The color and type of each overlapped object will be displayed in that dialog box, so that users can easily and quickly select the one they want.

It is particularly useful for some complicated drawings, where dozens of objects are overlapped with each other.

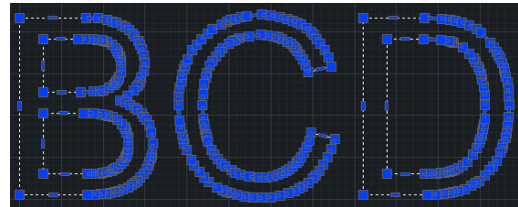


## Smoother Text Explosion

By command *TXTEXP*, we can explode text or mtext into 2D polylines with multiple grips. Now more grips have been added, making the 2D polylines smoother and improving the accuracy of text explosion. It will benefit the users who want a more precise laser cutting for text.



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## Resizable Toolbar

The Toolbar can be resized now. Users can adjust it to different sizes, rows and shapes according to their habits.



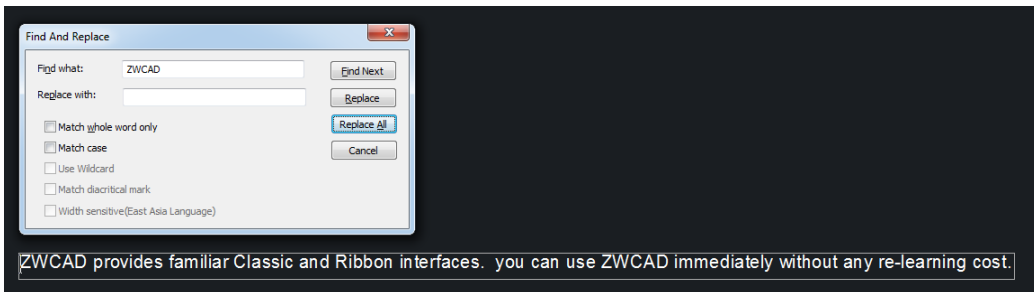
## Block Properties in Properties Panel

When operating in the Block Editor, relevant properties of the block can now be displayed in the Properties palette. Users can easily modify the block properties in it, such as Block name, Annotative scale, Match orientation, Scale uniformly, Allow exploding and Units, and can also add Description and Hyperlink.

Block	
Block name	Window
Annotative	No
Match ori...	No
Scale unif...	No
Allow exp...	Yes
Units	Millimeters
Description	
Hyperlink	

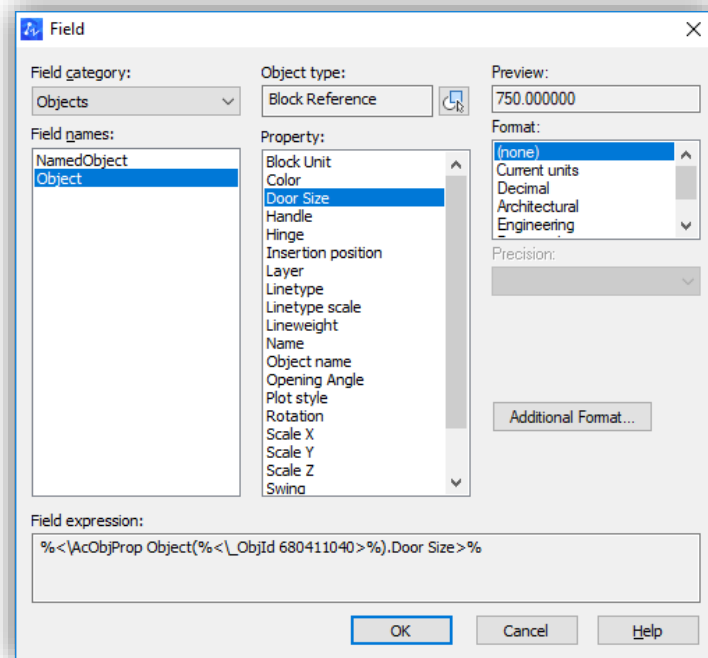
## Find & Replace Dialog in Texting

When inputting in the text box, users can find and replace letters or words in the *Find And Replace* dialog box, which appears by pressing *Ctrl + R*.



## More Block Properties in Field

More properties of Dynamic Block have been added to Field, giving users more choices to associate with fields and thus making their design more efficient.



## New Commands & System Variables

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

New Commands	Description
ALIGNSPACE	Adjust the scale and location of drawings in Layout viewport according to the alignment points which have been specified in Model space and Paper space.
VLIDE	Turn on Lisp Debugger
VLISP	Turn on Lisp Debugger, the same as VLIDE

New System Variables	Description
INPUTSEARCHOPTIONFLAGS	Control whether to display a list of commands with similar names while inputting the first few letters in the command line.
SELECTIONCYCLING	Control whether to display the <i>Selection Set</i> dialog box for the overlapping objects.
LAYOUTTAB	Control whether to show or hide the Layout tab.