

TextMan macro v1.0.1

(for DataCAD)

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Whilst it is free (or because of this), I would like and expect that if you can think of any improvements or spot any bugs (or even spelling or formatting errors in the documentation) that you would let me know. Your feedback will help with future development of the macro.

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1 General Description

This macro will allow you to search for and manipulate text in DataCAD's Text Entities. Possible manipulations include replacing searched text with replacement text, changing the case of matching text entities, or incrementing (or decrementing) numbers contained in matching text entities.

Although the macro can search MText and PText entities, it *cannot* actually change the text in those entities (it will report that such matching entities were found, and optionally add them to a Selection Set to facilitate your subsequent manual editing of those entities).

1.1 Compatibility

This macro is compatible with DataCAD version 23.00.03.01 and later. It is not compatible with earlier versions, nor is it compatible with Spirit.

2 Using the macro

Some options are available that will effect the use of the macro. These are in the macro's Settings menu (select **S8 Settings** from the Main Menu) described below.

2.1 Settings Menu

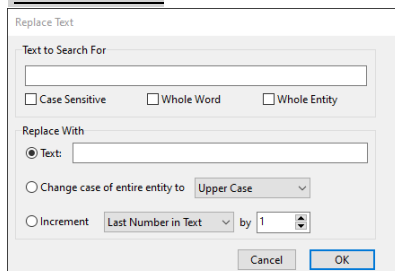
F1 Get Txt At Start

If this option is enabled then you will be prompted to enter the search and replacement text when the macro starts (before the main menu is displayed). If disabled then the main menu will be displayed immediately when you start the macro.

F2 Dflt Previous

If this option is enabled then the search and replace options in use last time you exited the macro will be defaulted the next time you start the macro. If disabled then the search and replace options will be blank when the macro is started.

F3 Use Form



Enabling this option will cause the form shown at left to display when you select the search/replace options.

If this option is disabled then the traditional text input in the message tool bar is used to accept the search and replacement text, and submenus are displayed when specifying the case change or increment options.

F5 Draw Off Lyr

When choosing to process text on complete layers it is possible to modify entities that are on layers that are currently off (i.e. not displayed). If this option is toggled on then any such entities that are changed will be drawn on the screen by the macro (if they are within the current view). Although these entities are drawn they are not added to the display list (so can be dismissed by simply pressing the <Esc> key). If toggled off then these entities will not be drawn.

F0 Show Chng Rpt

If this option is enabled then a report will be displayed after each use of the macro that results in text entities being changed. This report will show the previous text of each entity in red, followed by the new text in green. If this option is disabled then a report of changes can still be viewed by selecting S1 Last Chg Rpt from the Setting menu afterwards (but before exiting the macro).

S3 Hilite Clr

The macro will draw a box around selected entities in some scenarios. Use the option to set the colour of this box (default when the macro is first used is yellow, but any change made using this option will be saved for future use of the macro). This same option is also displayed on some other menus at the time an entity is being hilited.

S8 Confirm Each

If this option is enabled a confirmation dialog will be displayed before replacing each matching entity found. If this option is disabled then a confirmation dialog will not normally be displayed, but will still be displayed in some circumstances (e.g. where replacement would exceed DataCAD's maximum text length - see Section 3.1 below).

During the confirmation dialog, the applicable entity will be 'hilited' by drawing a box around it (box colour can be set using the S3 option on this settings menu – see details above). There may be cases when the entity is not shown in the current view window – a left click in the drawing window will move the view so that the hilited entity is positioned with its top left corner is at the cursor position.

2.2 Main Menu Options

F9 Search For

You can enter text that will be used to find matching entities in your selection. This can be left blank if you are using the 'Change Case' or 'Inc Number' options (in which case all text entities in your selection will be processed). If it is non-blank then only entities that contain the specified text will be processed (subject to satisfying the 'Case Sensitive', 'Whole Word' and 'Whole Entity' conditions below).

When using the Replace option the matching part of the text will be deleted and replaced with the 'Replace Text' (which can be blank).

F0 Case Sensitive

If this option is enabled then any match with the 'Search For' text must be exact (including capitalisation, e.g. 'DataCAD' would not match 'Datacad'). If disabled the match is not case sensitive (e.g. 'DataCAD' would match 'Datacad', 'DATAcad', 'datacad' or any other capitalisation variation of the word).

S1 Whole Word

If this option is enabled then only whole words will be matched. Whole words are defined as words immediately preceded or followed by either the beginning or end of the text or by non-alphabetic or non-numeric characters (e.g. 'Whole-word', 'Whole.word' and 'Whole word' would match 'Whole', but 'WholeWord' or 'Whole8' would not match).

Note that this setting has no effect if the 'Search For' text is blank.

S2 Whole Entity

If this option is enabled only entities where the complete entity text matches the 'Search For' text. This setting also has no effect if the 'Search For' text is blank.

S3 Replace With

Either 'Replace With', 'Change Case' or 'Inc Number' can be selected. If 'Replace With' text is selected then any matching text in selected text entities will be deleted and replaced with the specified text (if the specified text is blank then the search for text will simply be deleted).

S5 Change Case

If this option is chosen then a sub-menu (or form if the 'Use Form' option is enabled on the Settings Menu) will be displayed where you can choose one of the following options:

'To Upper' will convert all characters in matching text entities to upper case.

'To Lower' will convert all characters to lower case.

'To Sentence' will convert the first characters of sentences to upper case and all other characters to lower case (note that it does not take into account any special words or acronyms, so for example 'AIA' would be converted to 'aia' unless it starts a sentence in which case it would become 'Aia').

S6 Inc Number

Use this option to increment (or decrement) numbers in matching text entities. This logic relates to whole numbers only (e.g. a full stop between 2 groups of numerals will be treated as separating them into separate numbers and not as a decimal point). Numbers will be incremented by the specified increment (which can be positive or negative, but may not be zero). There are a number of options to define which numbers will be processed (these will either be displayed on a sub-menu or on a form if the 'Use Form' option is enabled on the Settings Menu):

'Inc 1st Num' will increment the first number in the text (e.g. 'num 1 of 5' would be converted to 'num 2 of 5' if incremented by 1).

'Inc 2nd Num' will increment the second number in the text (e.g. 'num 1 of 5' would be converted to 'num 1 of 6', '1.2' would become '1.3' if incremented by 1).

'Inc Last Num' will increment the last number in the text (e.g. 'num 1' would become 'num 2', 'num 1 of 5' would become 'num 1 of 6', and '1 of 5 doors (3' wide) would become '1 of 5 doors (4' wide)' if incremented by 1).

'Inc Start Num' will increment a number that occurs at the very start of the text only (e.g. '1.2 Office' would become '2.2 Office', but 'Office 1.2' would be unchanged if incremented by 1).

'Inc End Num' will increment a number that occurs at the very end of the text only (e.g. 'Office 1.2' would become 'Office 1.3' but '1.2 Office' would be unchanged if incremented by 1).

2.3 Selecting Entities for Processing

Entities can be selected using the normal Entity/Group/Area/Fence/Mask/Layer Search options from the main menu.

Additionally you can select to process a whole layer(s) using the **F7 Whole Layer(s)** option. This option will display the form shown at left (which also includes all the search and replacement options).

By default the current layer will be selected if Layer Search is off, or all on (and unlocked) layers will be selected if Layer Search is on. Selected/deselected layers using the keyboard or mouse. Use the keyboard up/down arrows to move through the list and the space bar to select/deselect layers, or left click to select layers ... the shift and ctrl keys can be used in conjunction with the mouse or arrow keys to select ranges or toggle individual layers without effecting other selections.

Use the buttons to the left of the list to select the active layer only, all unlocked on layers, all unlocked layers, or no layers respectively (when the list has focus you can also use the 'v', 'o', 'a' or 'c' keys to change the selection).

Note that locked layers can be selected. Entities on locked layers can be found (using the Find Only button on this form as describe in section 2.4 below), but replacements, case changes or number increments will NOT be processed for entities on locked layers.

2.4 Finding Entities Only

If you wish to find entities only (without automatically changing them) you can select the [Find Only] button located in the bottom left corner of the Layer Selection dialog (this option is only available on this form – it is not available from the macro's other menus).

Once this option is invoked each matching entity will be highlighted (with a coloured box drawn around it), a form will be displayed showing the selected text (and the layer it is on in the title bar), and the menu shown at left will be displayed (press F1 to proceed to the next matching entity, F5 to manually edit the text in the selected entity, S3 to change the hilite box colour, or S0 to halt the find processing). Note that although the coloured box will be drawn around the entity, the macro will not automatically change the view, so there is the possibility that the entity may be outside the current viewing window – left click in the drawing window to reposition the view.

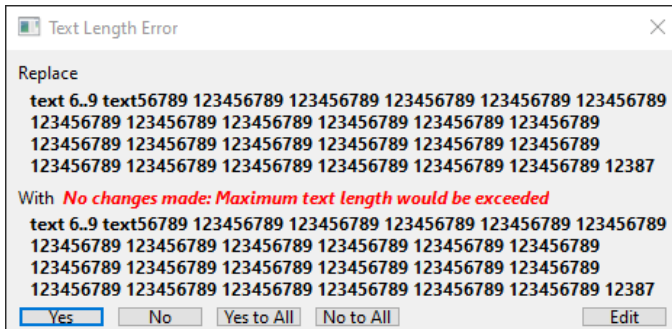
The form showing the text can be repositioned or resized in the normal way (width can be changed, but height of the form is automatically calculated and cannot be changed by the user).

3 Entities that Cannot be Processed

There are scenarios where the macro may not be able to process entities as outlined below:

3.1 Long Text Entities

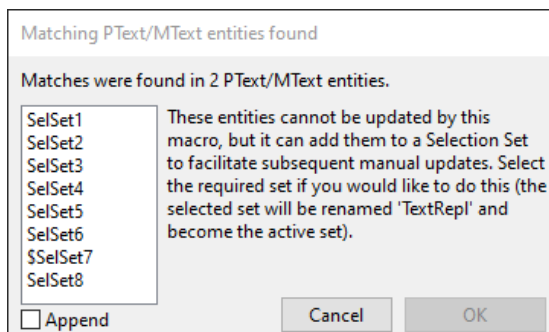
DataCAD text entities can have a maximum of 255 characters. It would be quite rare for a text entity to have anything approaching this number of characters, but some changes that the macro makes could increase the length of the text (e.g. replacing a word with a longer one, or incrementing numbers that results in extra digits).



When a change would cause the text to exceed 255 characters then the macro will not be able to make that change and instead will display a confirmation dialog such as that shown at left. If you wish to manually change the text then you can press the [Edit] button at the bottom right of the dialog - this will enable you to manually make changes to the text (which you then need to confirm by pressing the [Yes] button). Manual changes can not exceed the 255 character limit.

3.1 MText/PText Entities

DCAL (the DataCAD Applications Language) does not currently allow a macro to make changes to MText or PText entities. This macro can detect matches in MText/PText entities¹, but is unable to change the text.



In these cases the macro will report that matches have been found and will give you the opportunity to add them to a Selection Set using the dialog shown at left. Select the required set and then press OK. This allows you to easily change them manually after exiting the macro (i.e. after exiting the macro go to DataCAD's Edit menu and select Change/Text/Contents/Mask and then the Selection Set).

Unless the Append box is checked the selection set will be cleared before adding the MText/PText entities. If Append is checked then the entities will be added to any entities already in the Selection Set.

¹ If the search string contains space(s) there may be rare occasions when an unexpected match or non-match with an MText or PText entity occurs. This can happen if the matching text spans multiple lines in the MText/PText entity, and is because the macro cannot tell if lines in these entities have wrapped on a space (or spaces) or because of a carriage return – the macro will always assume there is a single space between the end of a line and the start of the next line of text.