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KISSsys Instructions:

Output of Text

1 Introduction

Sometimes it is helpful to export text – for example as a summary of important parameters – from KISSsys to a text file. The text from this example should contain variables of the model (e.g. rotation speed and safety factors) and comments.

2 Solution

The whole text is saved in one variable of the type text, which is created using a function. This function contains pieces of text – comments, contents of variables or breaks. It is possible with two KISSsys orders – one for the creation of a message and the other for the creation of a text file – to show the contents of the variable and to export the text.

3 Way to the Solution

3.1 Definition of the Text Writing Function

The function “*GeneralReport*” as an example is saved under “*System*”. Right click on “*System*”, new variable, *Type = Function*, *Name = GeneralReport*. Then right click again on “*System*”, “*Properties*” and another right click on the variable “*GeneralReport*”, choose “*Edit*”. The empty text editor appears now. The contents have to be included as showed below for the programming of the function.

An example for a function which writes a text:

After the inclusion of the text, press “*Compile*”, “*Save*” and either “*Execute*” or “*Quit*”.

```

System.GeneralReport
Compile Save Execute Quit
UAR results,n,freqtot;
results="";
results=results+"Units: speed in [rpm], torque in [Nm], power in [kW]"+"\n"+"\\n"+"\\n";
results=results+"Input torque: "+CADH_ValToStr(CADH_Round(Input.torque,2))+"\n";
results=results+"Input speed: "+CADH_ValToStr(CADH_Round(Input.speed,2))+"\n";
results=results+"Input power: "+CADH_ValToStr(CADH_Round(Input.power,2))+"\n";
results=results+"\\n";
results=results+"Output torque: "+CADH_ValToStr(CADH_Round(Output.torque,2))+"\n";
results=results+"Output speed: "+CADH_ValToStr(CADH_Round(Output.speed,2))+"\n";
results=results+"Output power: "+CADH_ValToStr(CADH_Round(Output.power,2))+"\n";
results=results+"\\n";
results=results+"Reduction 1: "+CADH_ValToStr(CADH_Round(Input.speed/Output.speed,2))+"\n";
results=results+"\\n";
results=results+"Resulting efficiency: "+CADH_ValToStr(CADH_Round((Output.power)/Input.power,2))+"\n";
results=results+"\\n";
results=results+"Speed of first sun shaft: "+CADH_ValToStr(CADH_Round(Stage1.SunShaft.speed,0))+"\n";
results=results+"Speed of second sun shaft: "+CADH_ValToStr(CADH_Round(Stage2.SunShaft.speed,0))+"\n";
results=results+"Speed of third sun shaft: "+CADH_ValToStr(CADH_Round(Stage3.SunShaft.speed,0))+"\n";
results=results+"Speed of fourth sun shaft: "+CADH_ValToStr(CADH_Round(Stage4.SunShaft.speed,0))+"\n";

CADH_WriteToFile(kSoft_GetDir("*.W10")+ "\\kinematics.txt",results);
CADH_Message(results);
    
```

Figure 3-1 Example for a Textfunction

3.2 Composing Text

3.2.1 Creating Comments

The entire text is constructed in a local defined variable (here it is results). The variable of the type text is initialized at first (second line in the Figure above). Afterwards the variable is extended with comments, which must in hyphens. Breaks are created with +”\n”. At the end the big variable results contains every text item and is shown with the order *CADH_Message(results)*.

3.2.2 Inclusion of Values created out of Variables

For the use of value from a KISSsoft variable, it has to be converted from a real value into a string value. This is done with the order *CADH_ValToStr(variable)*. It is possible to round these variables with *CADH_Round(Variable, n-digits)*.

3.3 Text Output

3.3.1 Output as a Message

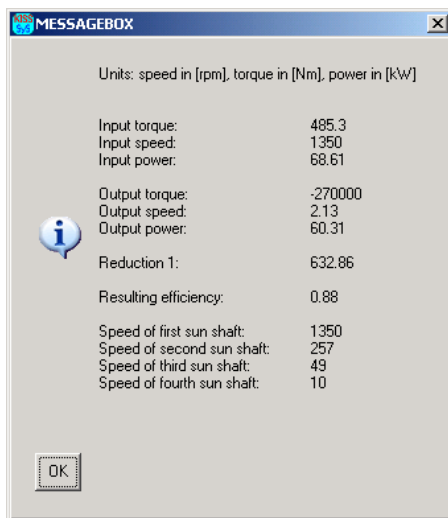


Figure 3-2 Example of an Output Message

The order *CADH_Message(, Message“)* shows a “Message” in a window as a popup window. The contents of a variable can be shown as an alternative. In the example *CADH_Message(results)* shows:

3.3.2 Output in a Text File

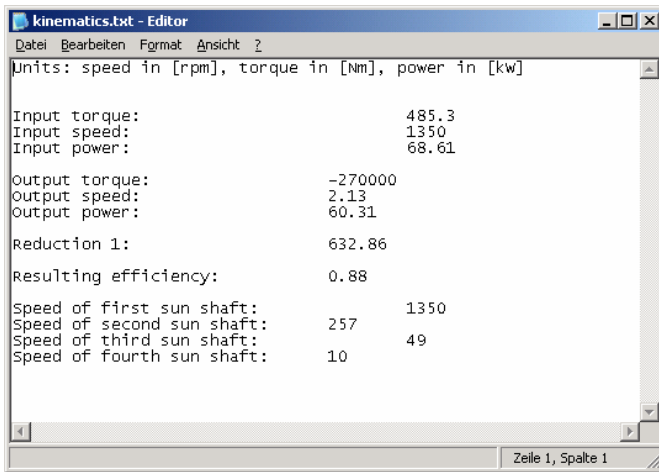
The command *CADH_WriteToFile(, C:\test.txt“ , “text“)* creates the file *test.txt* with the content *text* on the drive C:.

In the example from above:

```
CADH_WriteToFile(kSoft_GetDir(, +.W10“)+ “\kinematics.txt“, results);
```

<i>CADH_WriteToFile</i>	: Order for the output of the text in a file.
<i>KSoft_GetDir</i>	: The name of the project is read (path).
<i>„, +\kinematics.txt“</i>	: The filename is given.
<i>results</i>	: The name of the output variable.

It is possible to see the file *kinematics.txt* in a text editor after the execution of the function:



```
kinematics.txt - Editor
Datei Bearbeiten Format Ansicht ?
Units: speed in [rpm], torque in [Nm], power in [kw]

Input torque:                485.3
Input speed:                  1350
Input power:                   68.61

Output torque:                -270000
Output speed:                  2.13
Output power:                   60.31

Reduction 1:                   632.86

Resulting efficiency:          0.88

Speed of first sun shaft:      1350
Speed of second sun shaft:     257
Speed of third sun shaft:      49
Speed of fourth sun shaft:     10

Zeile 1, Spalte 1
```

Figure 3-3 Textfile Created by the Function

4 Remark

Of course it is possible to guide the text with other parameters by the functions *IF THEN* and *ELSE*. The function “*GeneralReport*” can now be executed either by right click on System or with a function field in the “*UserInterface*”.