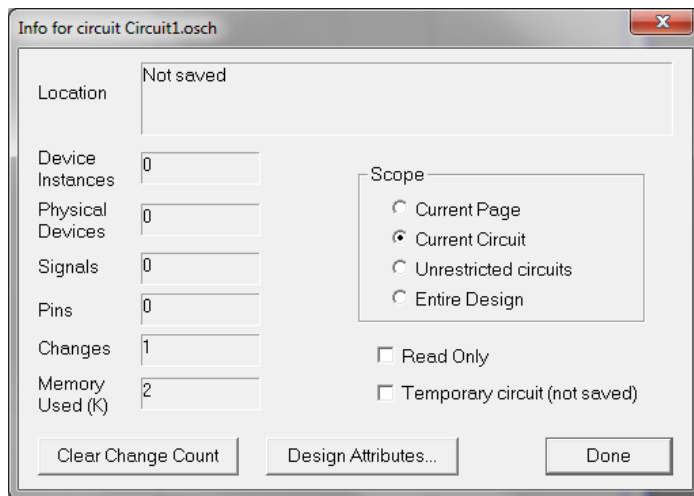


## **Update procedure for OptiSPICE 5.1 Setup Parameters (3 Jul 2015)**

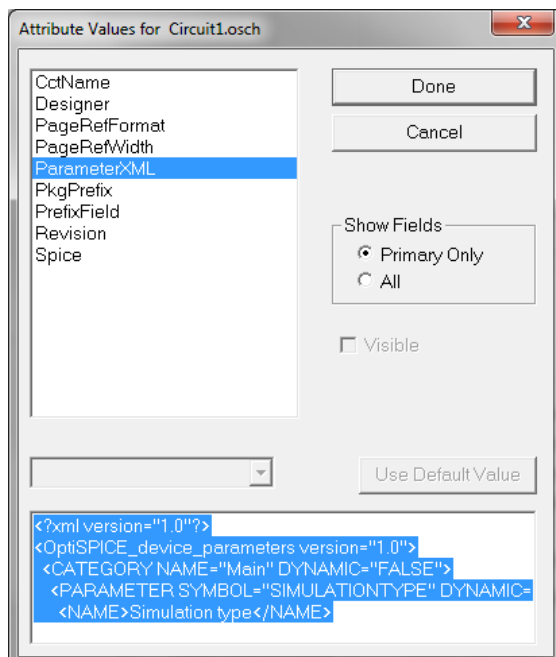
In order for a schematic design, saved in version 5.0 of OptiSPICE, to run correctly in OptiSPICE 5.1 the following procedure must be performed for each schematic.

### ***Procedure***

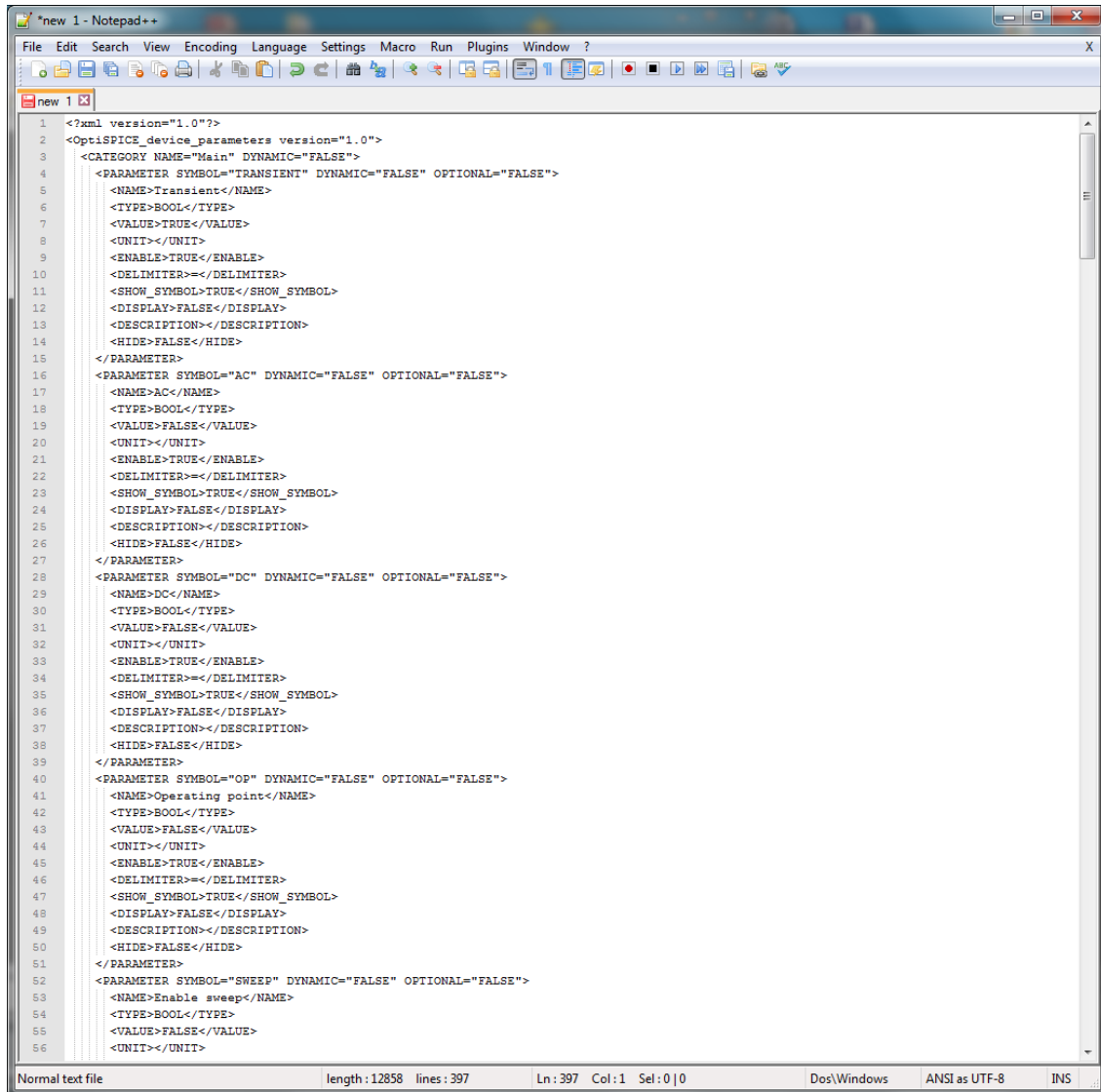
1. After installing OptiSPICE 5.1, open a schematic design that was saved in Version 5.0 of OptiSPICE
2. Right-click anywhere on the canvas where there are no devices present and select “Properties” from the pull down menu. The following dialog box will appear:



3. Select the “Design Attributes” button
4. Scroll to the “ParameterXML” attribute field and left-click to select this attribute (see below)



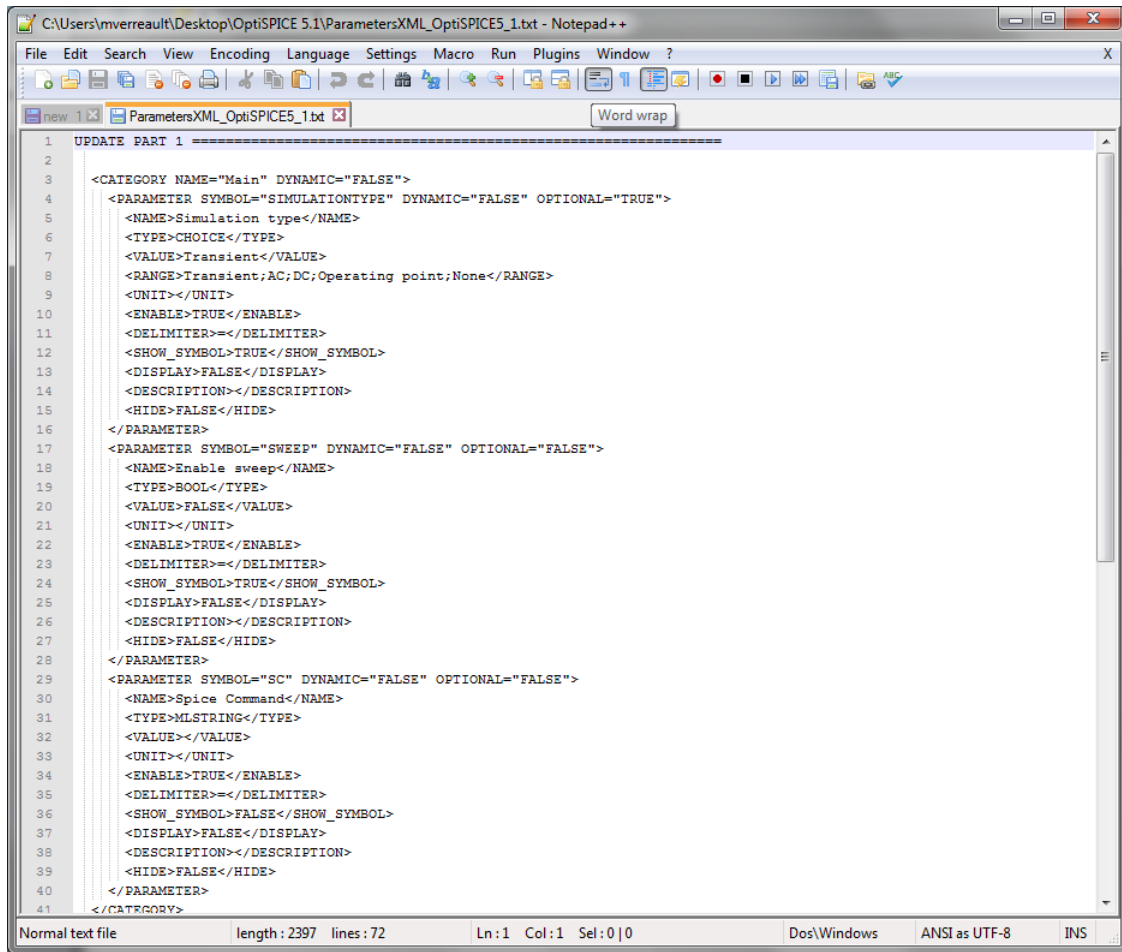
5. Proceed to the lower window (which contains the XML script) and right-click and select “Select all” from the drop down menu (the XML script should be highlighted in BLUE font – as shown at Step 4)
6. Right-click again and select “Copy”
7. Open a text editor such as Notepad ++ ( <https://notepad-plus-plus.org/>) or Microsoft Notepad
8. Within the text editor, paste the contents of the XML script file (see below)



```
1 <?xml version="1.0"?>
2 <OptiSPICE_device_parameters version="1.0">
3   <CATEGORY NAME="Main" DYNAMIC="FALSE">
4     <PARAMETER SYMBOL="TRANSIENT" DYNAMIC="FALSE" OPTIONAL="FALSE">
5       <NAME>Transient</NAME>
6       <TYPE>BOOL</TYPE>
7       <VALUE>TRUE</VALUE>
8       <UNIT></UNIT>
9       <ENABLE>TRUE</ENABLE>
10      <DELIMITER>=</DELIMITER>
11      <SHOW_SYMBOL>TRUE</SHOW_SYMBOL>
12      <DISPLAY>FALSE</DISPLAY>
13      <DESCRIPTION></DESCRIPTION>
14      <HIDE>FALSE</HIDE>
15    </PARAMETER>
16    <PARAMETER SYMBOL="AC" DYNAMIC="FALSE" OPTIONAL="FALSE">
17      <NAME>AC</NAME>
18      <TYPE>BOOL</TYPE>
19      <VALUE>FALSE</VALUE>
20      <UNIT></UNIT>
21      <ENABLE>TRUE</ENABLE>
22      <DELIMITER>=</DELIMITER>
23      <SHOW_SYMBOL>TRUE</SHOW_SYMBOL>
24      <DISPLAY>FALSE</DISPLAY>
25      <DESCRIPTION></DESCRIPTION>
26      <HIDE>FALSE</HIDE>
27    </PARAMETER>
28    <PARAMETER SYMBOL="DC" DYNAMIC="FALSE" OPTIONAL="FALSE">
29      <NAME>DC</NAME>
30      <TYPE>BOOL</TYPE>
31      <VALUE>FALSE</VALUE>
32      <UNIT></UNIT>
33      <ENABLE>TRUE</ENABLE>
34      <DELIMITER>=</DELIMITER>
35      <SHOW_SYMBOL>TRUE</SHOW_SYMBOL>
36      <DISPLAY>FALSE</DISPLAY>
37      <DESCRIPTION></DESCRIPTION>
38      <HIDE>FALSE</HIDE>
39    </PARAMETER>
40    <PARAMETER SYMBOL="OP" DYNAMIC="FALSE" OPTIONAL="FALSE">
41      <NAME>Operating point</NAME>
42      <TYPE>BOOL</TYPE>
43      <VALUE>FALSE</VALUE>
44      <UNIT></UNIT>
45      <ENABLE>TRUE</ENABLE>
46      <DELIMITER>=</DELIMITER>
47      <SHOW_SYMBOL>TRUE</SHOW_SYMBOL>
48      <DISPLAY>FALSE</DISPLAY>
49      <DESCRIPTION></DESCRIPTION>
50      <HIDE>FALSE</HIDE>
51    </PARAMETER>
52    <PARAMETER SYMBOL="SWEEP" DYNAMIC="FALSE" OPTIONAL="FALSE">
53      <NAME>Enable sweep</NAME>
54      <TYPE>BOOL</TYPE>
55      <VALUE>FALSE</VALUE>
56      <UNIT></UNIT>
```

Normal text file      length: 12858   lines: 397      Ln: 397   Col: 1   Sel: 0 | 0      Dos\Windows   ANSI as UTF-8   INS

9. Open the file "ParametersXML\_OptiSPICE5\_1.txt" (included with this procedure) with the same text editor (see below)



```
1 UPDATE PART 1 =====
2
3 <CATEGORY NAME="Main" DYNAMIC="FALSE">
4   <PARAMETER SYMBOL="SIMULATIONTYPE" DYNAMIC="FALSE" OPTIONAL="TRUE">
5     <NAME>Simulation type</NAME>
6     <TYPE>CHOICE</TYPE>
7     <VALUE>Transient</VALUE>
8     <RANGE>Transient;AC;DC;Operating point;None</RANGE>
9     <UNIT></UNIT>
10    <ENABLE>TRUE</ENABLE>
11    <DELIMITER>=</DELIMITER>
12    <SHOW_SYMBOL>TRUE</SHOW_SYMBOL>
13    <DISPLAY>FALSE</DISPLAY>
14    <DESCRIPTION></DESCRIPTION>
15    <HIDE>FALSE</HIDE>
16  </PARAMETER>
17  <PARAMETER SYMBOL="SWEEP" DYNAMIC="FALSE" OPTIONAL="FALSE">
18    <NAME>Enable sweep</NAME>
19    <TYPE>BOOL</TYPE>
20    <VALUE>FALSE</VALUE>
21    <UNIT></UNIT>
22    <ENABLE>TRUE</ENABLE>
23    <DELIMITER>=</DELIMITER>
24    <SHOW_SYMBOL>TRUE</SHOW_SYMBOL>
25    <DISPLAY>FALSE</DISPLAY>
26    <DESCRIPTION></DESCRIPTION>
27    <HIDE>FALSE</HIDE>
28  </PARAMETER>
29  <PARAMETER SYMBOL="SC" DYNAMIC="FALSE" OPTIONAL="FALSE">
30    <NAME>Spice Command</NAME>
31    <TYPE>MLSTRING</TYPE>
32    <VALUE></VALUE>
33    <UNIT></UNIT>
34    <ENABLE>TRUE</ENABLE>
35    <DELIMITER>=</DELIMITER>
36    <SHOW_SYMBOL>FALSE</SHOW_SYMBOL>
37    <DISPLAY>FALSE</DISPLAY>
38    <DESCRIPTION></DESCRIPTION>
39    <HIDE>FALSE</HIDE>
40  </PARAMETER>
41 </CATEGORY>
```

Normal text file      length : 2397   lines : 72      Ln : 1   Col : 1   Sel : 0 | 0      Dos\Windows      ANSI as UTF-8      INS

10. Starting just below "UPDATE PART 1", select all the text (from <CATEGORY NAME="Main" DYNAMIC="FALSE"> all the way to </CATEGORY>). See below for example of selected text.

```
UPDATE PART 1 =====
<CATEGORY NAME="Main" DYNAMIC="FALSE">
  <PARAMETER SYMBOL="SIMULATIONTYPE" DYNAMIC="FALSE" OPTIONAL="TRUE">
    <NAME>Simulation type</NAME>
    <TYPE>CHOICE</TYPE>
    <VALUE>Transient</VALUE>
    <RANGE>Transient;AC;DC;Operating point;None</RANGE>
    <UNIT></UNIT>
    <ENABLE>TRUE</ENABLE>
    <DELIMITER>=</DELIMITER>
    <SHOW_SYMBOL>TRUE</SHOW_SYMBOL>
    <DISPLAY>FALSE</DISPLAY>
    <DESCRIPTION></DESCRIPTION>
    <HIDE>FALSE</HIDE>
  </PARAMETER>
  <PARAMETER SYMBOL="SWEEP" DYNAMIC="FALSE" OPTIONAL="FALSE">
    <NAME>Enable sweep</NAME>
    <TYPE>BOOL</TYPE>
    <VALUE>FALSE</VALUE>
    <UNIT></UNIT>
    <ENABLE>TRUE</ENABLE>
    <DELIMITER>=</DELIMITER>
    <SHOW_SYMBOL>TRUE</SHOW_SYMBOL>
    <DISPLAY>FALSE</DISPLAY>
    <DESCRIPTION></DESCRIPTION>
    <HIDE>FALSE</HIDE>
  </PARAMETER>
  <PARAMETER SYMBOL="SC" DYNAMIC="FALSE" OPTIONAL="FALSE">
    <NAME>Spice Command</NAME>
    <TYPE>MLSTRING</TYPE>
    <VALUE></VALUE>
    <UNIT></UNIT>
    <ENABLE>TRUE</ENABLE>
    <DELIMITER>=</DELIMITER>
    <SHOW_SYMBOL>FALSE</SHOW_SYMBOL>
    <DISPLAY>FALSE</DISPLAY>
    <DESCRIPTION></DESCRIPTION>
    <HIDE>FALSE</HIDE>
  </PARAMETER>
</CATEGORY>
```

11. Copy the selected text and proceed to the tab/document which contains the XML script for the Schematic to be updated

12. Select the XML script starting from `<CATEGORY NAME="Main" DYNAMIC="FALSE">` all the way to `</CATEGORY>`. Note: The line right after `</CATEGORY>` should be: `<CATEGORY NAME="Transient" DYNAMIC="FALSE">`. See below for example of selected text – before pasting.

```
<OptiSPICE_device_parameters version="1.0">
  <CATEGORY NAME="Main" DYNAMIC="FALSE">
    <PARAMETER SYMBOL="TRANSIENT" DYNAMIC="FALSE" OPTIONAL="FALSE">
      <NAME>Transient</NAME>
      <TYPE>BOOL</TYPE>
      <VALUE>TRUE</VALUE>
      <UNIT></UNIT>
      <ENABLE>TRUE</ENABLE>
      <DELIMITER>=</DELIMITER>
      <SHOW_SYMBOL>TRUE</SHOW_SYMBOL>
      <DISPLAY>FALSE</DISPLAY>
      <DESCRIPTION></DESCRIPTION>
      <HIDE>FALSE</HIDE>
    </PARAMETER>
    <PARAMETER SYMBOL="AC" DYNAMIC="FALSE" OPTIONAL="FALSE">
      <NAME>AC</NAME>
      <TYPE>BOOL</TYPE>
      <VALUE>FALSE</VALUE>
      <UNIT></UNIT>
      <ENABLE>TRUE</ENABLE>
      <DELIMITER>=</DELIMITER>
      <SHOW_SYMBOL>TRUE</SHOW_SYMBOL>
      <DISPLAY>FALSE</DISPLAY>
      <DESCRIPTION></DESCRIPTION>
      <HIDE>FALSE</HIDE>
    </PARAMETER>
    <PARAMETER SYMBOL="OP" DYNAMIC="FALSE" OPTIONAL="FALSE">
      <NAME>Operating point</NAME>
      <TYPE>BOOL</TYPE>
      <VALUE>FALSE</VALUE>
      <UNIT></UNIT>
      <ENABLE>TRUE</ENABLE>
      <DELIMITER>=</DELIMITER>
      <SHOW_SYMBOL>TRUE</SHOW_SYMBOL>
      <DISPLAY>FALSE</DISPLAY>
      <DESCRIPTION></DESCRIPTION>
      <HIDE>FALSE</HIDE>
    </PARAMETER>
    <PARAMETER SYMBOL="SWEEP" DYNAMIC="FALSE" OPTIONAL="FALSE">
      <NAME>Enable sweep</NAME>
      <TYPE>BOOL</TYPE>
      <VALUE>FALSE</VALUE>
      <UNIT></UNIT>
      <ENABLE>TRUE</ENABLE>
      <DELIMITER>=</DELIMITER>
      <SHOW_SYMBOL>TRUE</SHOW_SYMBOL>
      <DISPLAY>FALSE</DISPLAY>
      <DESCRIPTION></DESCRIPTION>
      <HIDE>FALSE</HIDE>
    </PARAMETER>
  </CATEGORY>
  <CATEGORY NAME="Transient" DYNAMIC="FALSE">
    <PARAMETER SYMBOL="TSTEP" DYNAMIC="FALSE" OPTIONAL="FALSE">
```

13. Return to "ParametersXML\_OptiSPICE5\_1.txt" and starting just below "UPDATE PART 2", select all the text from `<PARAMETER SYMBOL="AllMon" DYNAMIC="FALSE" OPTIONAL="TRUE">` to `</PARAMETER>`. See below for example of selected text.

```
43 UPDATE PART 2 =====
44
45 <PARAMETER SYMBOL="AllMon" DYNAMIC="FALSE" OPTIONAL="TRUE">
46   <NAME>JobControl AllMon</NAME>
47   <TYPE>CHOICE</TYPE>
48   <VALUE>0</VALUE>
49   <RANGE>0;1;2</RANGE>
50   <UNIT></UNIT>
51   <ENABLE>TRUE</ENABLE>
52   <DELIMITER>=</DELIMITER>
53   <SHOW_SYMBOL>TRUE</SHOW_SYMBOL>
54   <DISPLAY>FALSE</DISPLAY>
55   <DESCRIPTION></DESCRIPTION>
56   <HIDE>FALSE</HIDE>
57 </PARAMETER>
58
```

14. Copy the selected text and proceed to the tab/document which contains the XML script for the Schematic to be updated
15. Proceed to the line `<CATEGORY NAME="Parameters" DYNAMIC="FALSE"/>` and paste the contents just above this line (see below for example of pasted content)

```
<PARAMETER SYMBOL="AddDCtoPWL" DYNAMIC="FALSE" OPTIONAL="TRUE">
  <NAME>Add DC offset to PWL transient source function</NAME>
  <TYPE>CHOICE</TYPE>
  <VALUE>0</VALUE>
  <RANGE>0;1</RANGE>
  <UNIT></UNIT>
  <ENABLE>FALSE</ENABLE>
  <DELIMITER>=</DELIMITER>
  <SHOW_SYMBOL>TRUE</SHOW_SYMBOL>
  <DISPLAY>FALSE</DISPLAY>
  <DESCRIPTION></DESCRIPTION>
  <HIDE>FALSE</HIDE>
</PARAMETER>
</CATEGORY>
<PARAMETER SYMBOL="AllMon" DYNAMIC="FALSE" OPTIONAL="TRUE">
  <NAME>JobControl AllMon</NAME>
  <TYPE>CHOICE</TYPE>
  <VALUE>0</VALUE>
  <RANGE>0;1;2</RANGE>
  <UNIT></UNIT>
  <ENABLE>TRUE</ENABLE>
  <DELIMITER>=</DELIMITER>
  <SHOW_SYMBOL>TRUE</SHOW_SYMBOL>
  <DISPLAY>FALSE</DISPLAY>
  <DESCRIPTION></DESCRIPTION>
  <HIDE>FALSE</HIDE>
</PARAMETER>
<CATEGORY NAME="Parameters" DYNAMIC="FALSE"/>
<CATEGORY NAME="Libraries" DYNAMIC="FALSE">
  <PARAMETER SYMBOL="LIBRARIES" DYNAMIC="FALSE" OPTIONAL="TRUE">
```

16. Return to "ParametersXML\_OptiSPICE5\_1.txt" and starting just below "UPDATE PART 3", select all the text from `<PARAMETER SYMBOL="LIBRARIES" DYNAMIC="FALSE" OPTIONAL="TRUE">` to `</PARAMETER>`. See below for example of selected text.

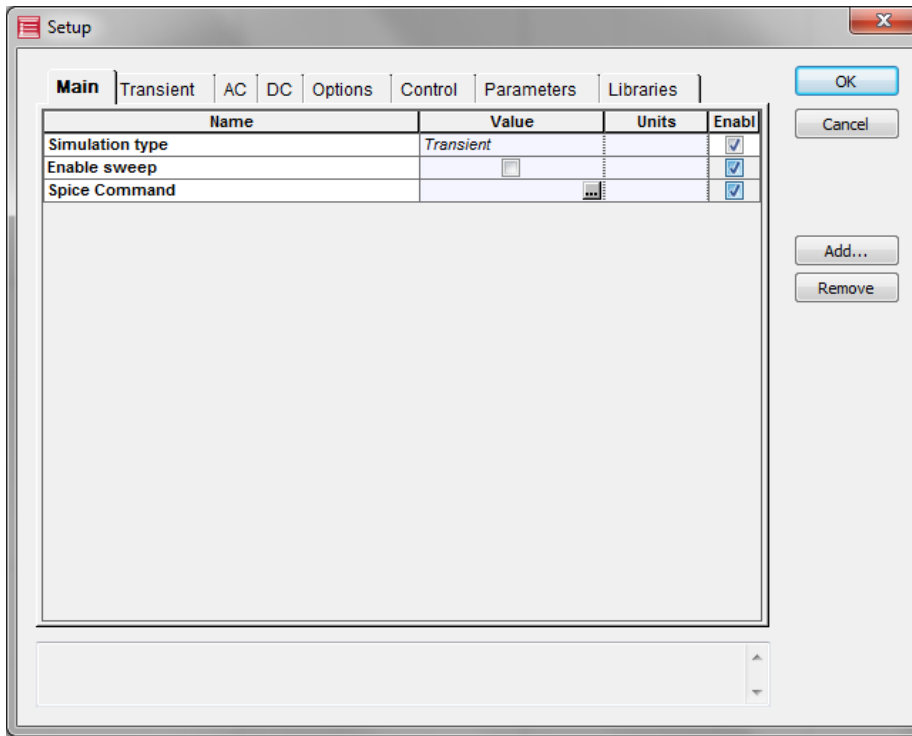
```
UPDATE PART 3 =====
<PARAMETER SYMBOL="LIBRARIES" DYNAMIC="FALSE" OPTIONAL="TRUE">
  <NAME>Model libraries</NAME>
  <TYPE>FILELIST</TYPE>
  <VALUE>Electrical.libx;Optical.libx;Optoelectronic.libx;Subcircuits.libx</VALUE>
  <UNIT></UNIT>
  <ENABLE>TRUE</ENABLE>
  <DELIMITER>=</DELIMITER>
  <SHOW_SYMBOL>TRUE</SHOW_SYMBOL>
  <DISPLAY>FALSE</DISPLAY>
  <DESCRIPTION></DESCRIPTION>
  <HIDE>FALSE</HIDE>
</PARAMETER>
```

17. Copy the selected text and proceed to the tab/document which contains the XML script for the Schematic to be updated
18. Proceed to the line `<CATEGORY NAME="Libraries" DYNAMIC="FALSE">` and replace the contents below this line, starting from `<PARAMETER SYMBOL="LIBRARIES" DYNAMIC="FALSE" OPTIONAL="TRUE">` to `</PARAMETER>` (see below for example of selected text – before pasting)

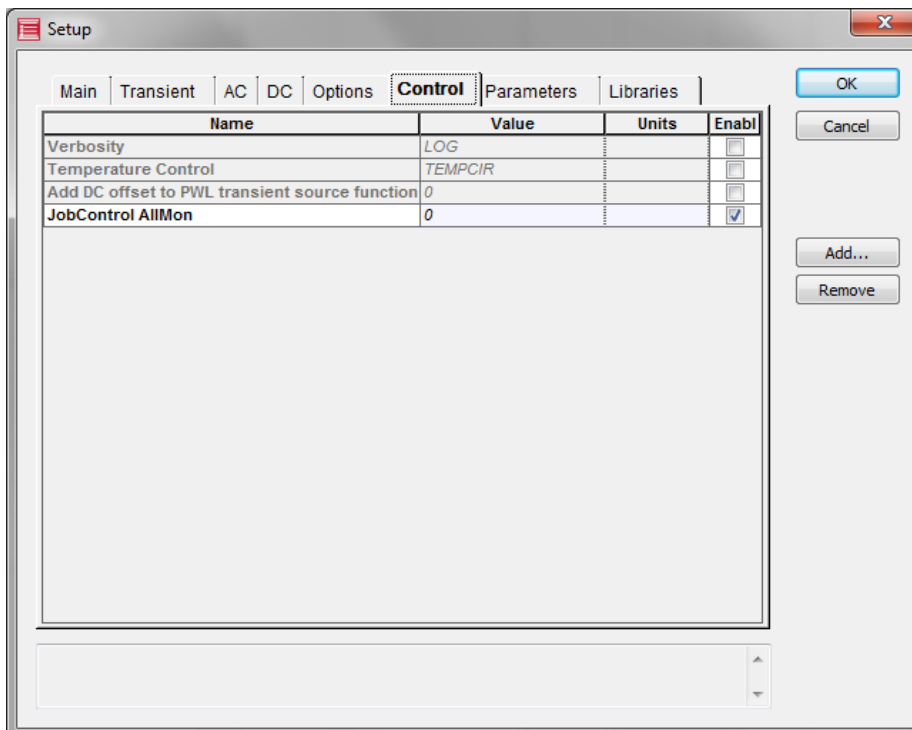
```
<CATEGORY NAME="Parameters" DYNAMIC="FALSE"/>
<CATEGORY NAME="Libraries" DYNAMIC="FALSE">
  <PARAMETER SYMBOL="LIBRARIES" DYNAMIC="FALSE" OPTIONAL="TRUE">
    <NAME>Model libraries</NAME>
    <TYPE>FILELIST</TYPE>
    <VALUE>Master.libx</VALUE>
    <UNIT></UNIT>
    <ENABLE>TRUE</ENABLE>
    <DELIMITER>=</DELIMITER>
    <SHOW_SYMBOL>TRUE</SHOW_SYMBOL>
    <DISPLAY>FALSE</DISPLAY>
    <DESCRIPTION></DESCRIPTION>
    <HIDE>FALSE</HIDE>
  </PARAMETER>
  <PARAMETER SYMBOL="INCLUDE" DYNAMIC="FALSE" OPTIONAL="TRUE">
    <NAME>Include files</NAME>
```

19. Select CTRL A (to select all the text) and then CTRL C
20. Return to the OptiSPICE Schematic and proceed to the lower window of the Attribute values dialog box (which contains the XML script)
21. Right-click and select "Select all" from the drop down menu (the XML script should be highlighted in BLUE font)
22. Right-click again and select "Paste"
23. Select the "Done" button and close the properties window for the schematic

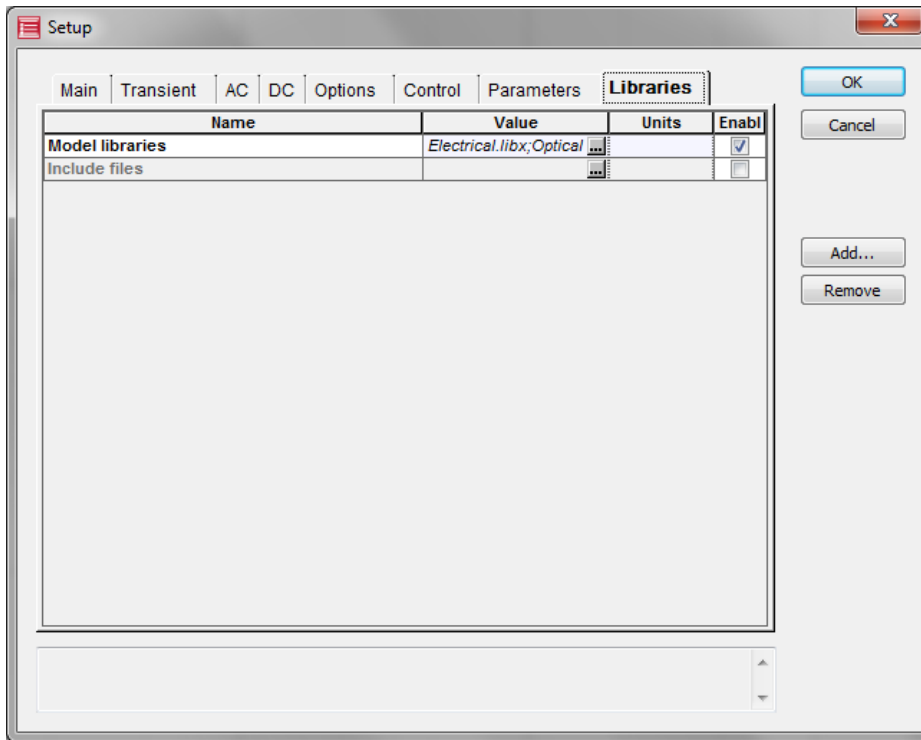
24. Double left-click on the schematic canvas. The Setup properties Main tab should appear as follows (the pull down menu for *Simulation type* should include “Transient, AC, DC, Operating point, None” and a new *Spice Command* field should be present):



25. Select the “Control” tab. The Setup properties Control tab should look as follows (there should be a new *JobControl AllMon* field):



26. Select the “Libraries” tab. The Setup properties Libraries tab should look as follows (new libraries should be present for Electrical.libx, Optical.libx, Optoelectronic.libx, Subcircuits.libx):



***End of Procedure***