UPDATING HELIOS
FROM
VERSION 1.4.2a
TO
VERSION 1.4.2b

S. de Graaf

Circuits and Systems Group
Faculty of Electrical Engineering
Delft University of Technology
The Netherlands

1. INTRODUCTION

This report describes the modifications made to the *helios* 1.4.2a (November version) after requests out of the SPACE users group.

This work is carried out for the SPACE project till 12 November 1999.
Some modifications are done by A.J. van Genderen.

REFERENCES

For SPACE see:

The usage of SPACE is described in the user manuals:

- Space Tutorial
- Space User's Manual

2. DISCUSSION OF CHANGES IN THE SOURCE FILES

For a list of changes see appendix B.

The following change requests are done:

2.1 Circuit Reduction Extract Options Form

Change

Retain nodes with at least [4] connections
into

Retain nodes with at least [4] resistor connections

Change

Omit coupling junction areas < [0.04] times ground
into

Omit coupling junction areas < [0.04] times ground area

2.2 Manual Page Window

Can not find *helios* manual page.

2.2.1 Default Value of Empty Text Fields
It is currently not possible to tell *helios*, that you want to use the *space* default value for an item. That this item must be left out the "helios.def.p" file. If a text field is left empty you get a zero value returned from function atoi() or atof(). If this value is not in the range for the item, you get the minimal accepted value.

2.2.2 The Value of net_node_sep
Why is a value of 't' not acceptable for the net_node_sep? The net_node_sep can only be a punctuation character.

2.2.3 Junction Cap. also for Accurate 3D
The junction capacitance setting must also be in the "Accurate Details" window. I added the "jun_caps3d" keyword for the *helios* defaults file.

2.2.4 Constant Strings
By some C++ compilers you may not change the contents of ''constant strings''. This gives a runtime bus error (core dump). I have changed the "adminvar.c" source file, thus that no constant strings need to be modified anymore. I use now the private function strTok() in place of strtok(). I use also another method for printing the spaces between the keywords and the values.

2.2.5 Initial Boolean Values
I have changed the initial specified boolean values from "off"/"on" into "0"/"1". This is shorter and easier to detect.

3. APPENDICES

APPENDIX A -- SCCS DELTA'S

FILE:	PREVIOUS:		NEW:	
name	bytes	delta/date	bytes	delta/date
Makefile	4065	3.3 98/12/03	--	--
README.helios	3011	3.5 99/11/02	--	--
adminvar.c	89362	3.9 99/11/01	89541	3.10 99/11/10
adminvar.c	--	--	89212	3.11 99/11/12
callbacks.c	127820	3.10 99/11/02	127798	3.11 99/11/10
elements.h	2397	3.1 98/04/01	--	--
externs.h	1087	3.2 99/10/01	--	--
get_db.c	1551	3.2 98/06/11	--	--
glue.c	250	3.1 98/04/01	--	--
helios.icon	4841	3.1 98/04/01	--	--
helios.message	80665	3.6 99/11/01	80740	3.7 99/11/12
helios.res	1457	3.4 99/11/01	--	--
option.h	3801	3.4 99/11/01	3827	3.5 99/11/12
realist.c	15313	3.15 99/11/01	15526	3.16 99/11/12
realist.h	1567	3.2 99/10/01	--	--
run_space.c	15926	3.4 99/11/01	15375	3.5 99/11/10
sram.xpm	68077	3.1 98/04/01	--	--
xmrealist.c	633387	3.11 99/11/01	636466	3.12 99/11/12
xmrealist.h	28054	3.5 99/11/01	28207	3.6 99/11/12
xmrealist.xd	285681	3.11 99/11/01	287056	3.12 99/11/12