

Genetdes

Here you can find the binaries and source code of the Genetdes software to design transcriptional networks. You can also find transcriptional networks that have been designed with Genetdes to have a given behaviour.

You should not click on the following SBML files but use the "save as" capability of your browser.

The notation is as follows:

genes (g)
 inputs activators (a)
 inputs repressors (r)
 outputs (o)
 transfer function number (q).

More information, see the README.pdf file.

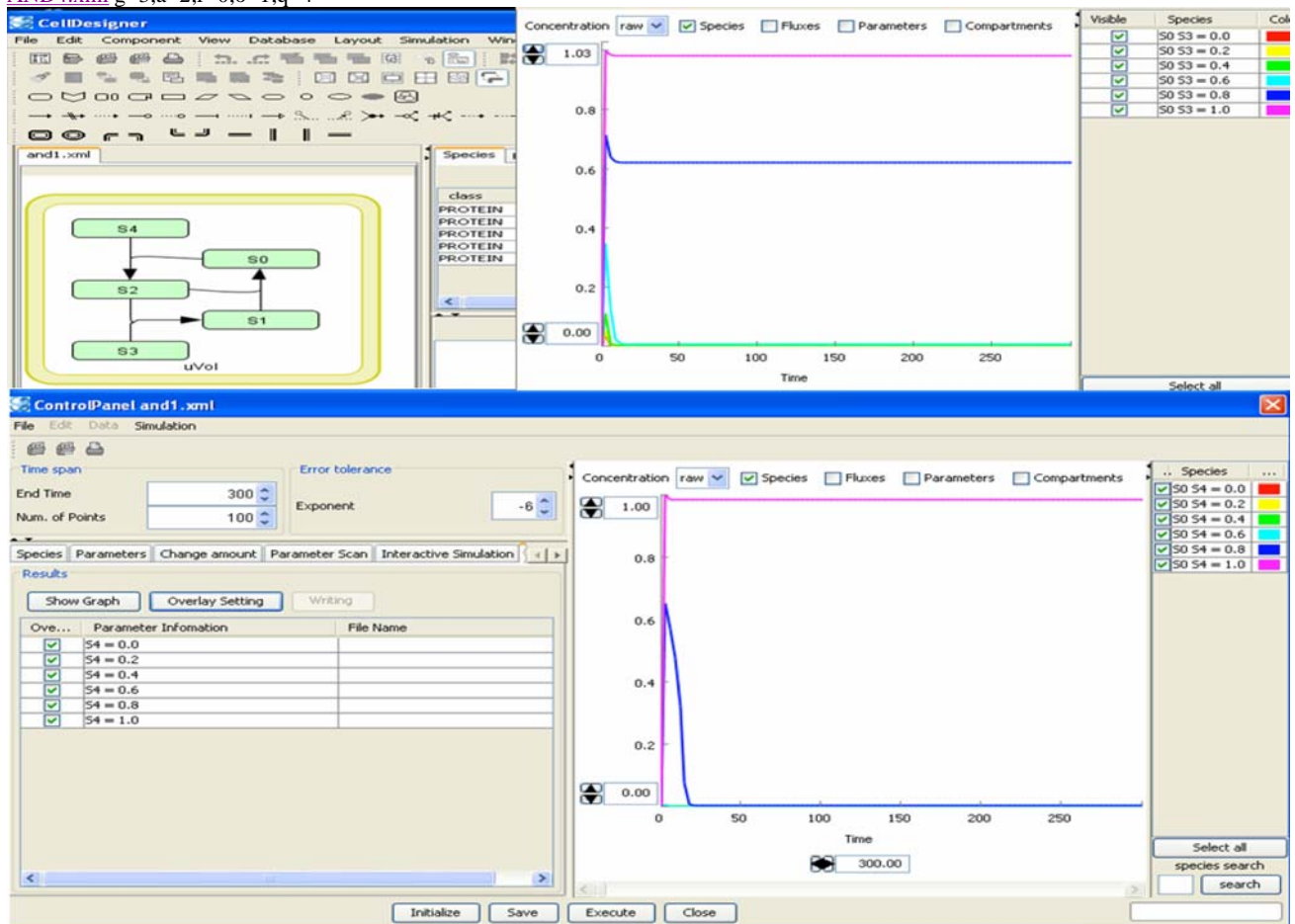
Examples of circuits with AND behaviour:

[AND1.xml](#) g=3;a=0;r=2;o=1;q=4

[AND2.xml](#) g=3;a=1;r=1;o=1;q=4

[AND3.xml](#) g=3;a=2;r=0;o=1;q=4

[AND4.xml](#) g=3;a=2;r=0;o=1;q=4



Simulation of AND1.xml with CellDesigner 3.51. In the simulation module, we have set the second input (specie S4) concentration to 1 and we have used the "Parameter scan" feature to change the concentration of the first input (S3) from 0 to 1. We see that we get a steady value of 1 only when both inputs are at 1.

Examples of a circuit with NAND behaviour:

[NAND1.xml](#) g=3;a=0;r=2;o=1;q=4

Examples of a circuit with NOR behaviour:

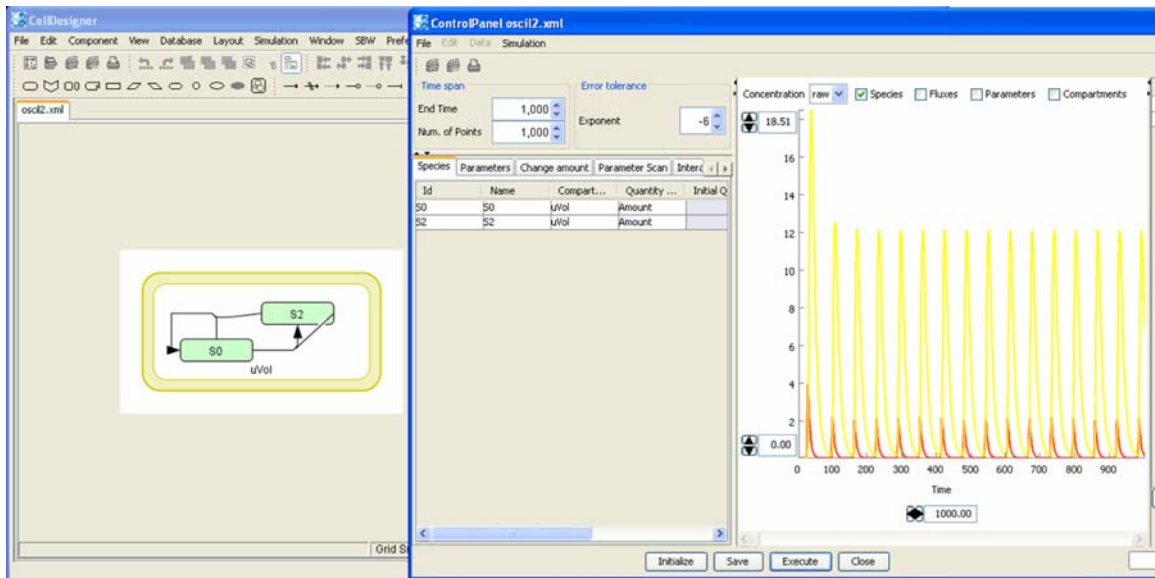
[NOR1.xml](#) g=4;a=0;r=2;o=1;q=4

Examples of circuits with oscillatory behaviour:

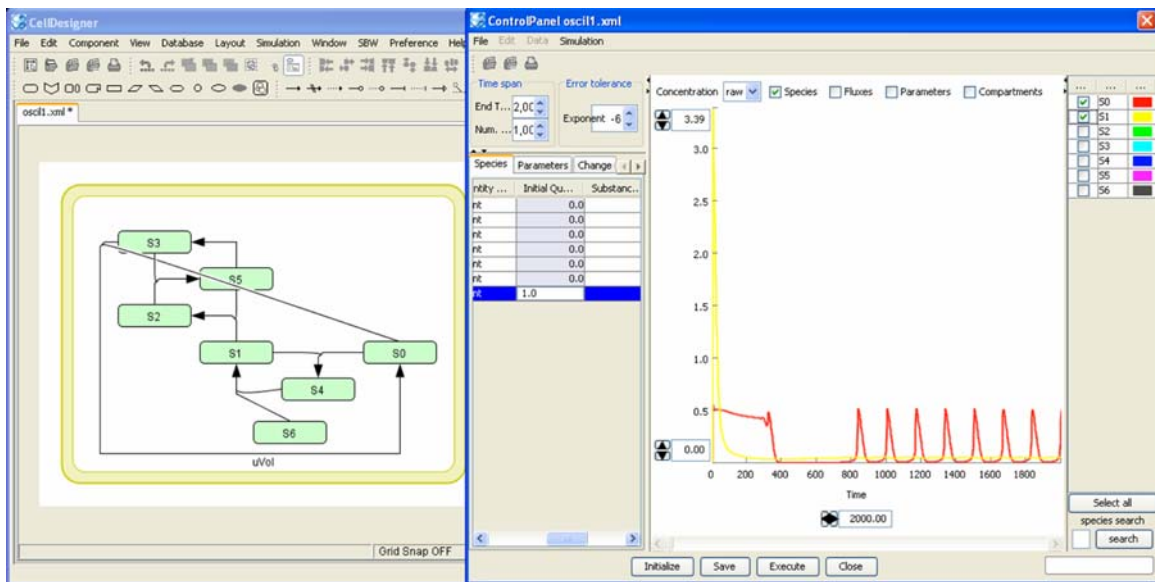
[OSCIL1.xml](#) g=2;a=0;r=0;o=1;q=1

[OSCIL3.xml](#) g=6;a=1;r=0;o=1;q=1

We have simulated the oscillatory SBML models with CellDesigner (v 3.51):



oscil1.xml



oscil3.xml

You can download the software, documentation and examples from [here \(tar.gz file\)](#). The printout of this webpage is [here \(PDF\)](#).