Simple DISSCO Project with LASSIE

by William Andrew Burnson and Benjamin D. Whiting

0) If you do not have DISSCO, check it out in Terminal using the command

svn co https://svn.code.sf.net/p/dissco/code/trunk DISSCO

1) Open the terminal and enter the following, pressing Enter after each line:

cd DISSCO
premake4 clean
premake4
make
./lassie

2) Create a new project in LASSIE

a) Choose Create a new project
b) Choose a folder, name your project *tutorial1*, and click Open
c) Set **Piece Duration** to *30* and click OK

3) Create a simple envelope

a) Click Envelope Library button at bottom-left
b) Right-click in the top area and choose Create New Envelope
c) Double-click envelope item labeled 1
d) Right-click in the center of the lower half of the window (the graph) and choose Insert Node
e) Drag the new node all the way up to the top of the graph, and click on it to make sure its Y value is 1.0000 (if it is not, simply type 1 into the Y value field and press Enter)
f) Click on the first and last nodes (X values 0.0000 and 1.0000, respectively) and ensure that both of their Y values are at 0.0000; if they are not, you will get clipping in your piece!
g) Close the envelope library window

4) Create a spatialization file

a) Click the Spatialization folder
b) Click the Create a new Object button in the toolbar
c) Name it *spac1* and click OK
d) Click the wedge next to the Spatialization folder to expand it and double-click *spac1*
e) Click the Insert Function button
f) Choose the *SPA* function (resize the window so you can see everything)
g) Click the fn function button
h) Choose the EnvLib function
i) Set Envelope Number to *1* (the envelope you created) and click OK twice.

5) Create a spectrum

a) Click the Spectrum folder
b) Click the Create a new Object button in the toolbar
c) Name it *sp1* and click OK
d) Click the wedge next to the Spectrum folder and double-click *sp1*
e) Set Deviation to *0*
f) Click Insert Function next to Partial 1
g) Choose the *EnvLib* function
h) Set Envelope Number to *1* (the envelope you created) and click OK

6) Create a bottom

a) Click the Bottom folder
b) Click the Create a new Object button in the toolbar
c) Name it *s1* and click OK (NOTE: ALL Bottom names must begin with a lower-case *s*!)
d) Click the wedge next to the Bottom folder and double-click *s1*
e) Set Number of Children to Create to *5*
f) Click Insert Function next to Child Start Time, choose *Random*, set Higher Bound to *25*, hit OK.
g) Set Child Type to *0*
h) Set Child Duration and Max Child Duration to *5*
i) Scrolling down, drag your Spectrum file *sp1* into the white box underneath where it says Child Type | Class |Name
j) Underneath Equal Tempered click the Insert Function button for the Value field
k) Choose *RandomInt* and set the Lower Bound to *30* and the Higher Bound to *90*
l) Click OK. (Side note: as a reference, 48 = the note C4)
k) Set Loudness to 192
l) Click Insert Function next to Spatialization and choose *ReadSPAFile*
m) Enter *spac1* for the File Name and Click OK
n) Click Insert Function next to Reverb and choose *REV_Simple*
o) Ensure the dialog box reads *0.5* next to Room Size and click OK

7) Define Top and add Bottom as child of Top

a) Click the wedge next to the Top folder and double-click *0*
b) Set Number of Children to Create to *1*
c) Enter *0* for Child Start Time
d) Set Child Type to *0*
e) Set Child Duration and Max Child Duration both to *30*
f) Drag the Bottom file *s1* into the white box underneath where it says Child Type |Class |Name

8) Save Project and Synthesize

a) Click the Save the project button in the toolbar
b) Select Synthesize from the Project menu in the menubar
c) Type *apple* (or any sequence of letters and/or numbers) into the Random Seed window
d) Click OK

The piece will be generated with periodic results displayed in the Terminal window. 5 sounds will be created. At the end of creation you can open the resulting .aiff file (found in *tutorial1/SoundFiles/tutorial11.aiff*) in a program like Audacity (or any sound editor/media player/digital audio workstation) and listen to the file. It might not sound too interesting at first, so reopen your project file and...

9) Make the following changes

a) Pull down the Project menu and select Properties
b) Change the Piece Duration from *30* to *60*
c) Click on the wedge next to the Top folder and select *0*
d) Change Number of Children to Create to *10*
e) Click Insert Function next to Child Start Time
f) Choose *Random*, set Higher Bound to *30*, and click OK
g) Save your project once again, synthesize (either with the same seed as before or something different), and open *tutorial1/SoundFiles/tutorial12.aiff*

50 sounds will now be generated, and you will likely hear something far more interesting. Congratulations, you just created your first DISSCO piece!