BEASTmulch

BEASTmulch is an **AHRC (http://www.ahrc.ac.uk/)** funded research project exploring approaches to large-scale multichannel electroacoustic composition and presentation, lead by **Scott Wilson (http://www.music.bham.ac.uk/staff/wilson.shtml)** along with **Jonty Harrison (http://www.music.bham.ac.uk/staff/harrison.shtml)** and **Sergio Luque (http://www.sergioluque.com/)** .

The following downloads are available:

BEASTmulch System (http://www.download.bham.ac.uk/beast/BEASTmulch-System.zip)

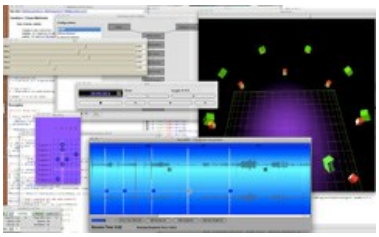
BEASTmulch System is a software tool for the presentation of electroacoustic music over multichannel systems. Designed primarily with a classic 'live diffusion' model in mind, it is nevertheless flexible enough to be adapted for a number of purposes, and can support input and output configurations of arbitrary complexity (i.e. live inputs, soundfiles with varying numbers of channels, etc.).

The software has numerous features (e.g. realtime reconfigurable routing, channel processing, automation, etc.), incorporates various standard and non-standard spatialisation techniques (VBAP, ambisonics, etc.), and adapts easily to both small and large (i.e. > 100 loudspeakers) systems.

BEASTmulch System is the software component of the BEAST concert system.

System Requirements: Mac OSX 10.4 - 10.5 (10.6 compatibility forthcoming)

BEASTmulchLib (http://www.download.bham.ac.uk/beast/BEASTmulchLib.zip)



BEASTmulchLib is a **SuperCollider (/facilities/beast/research/supercollider/index.aspx)** class library designed for use in the creation, processing and presentation of complex multichannel signal chains. Objects include sources, matrix routers and mixers, and sound processors and spatialisers. The latter are based on a simple user-extensible plugin architecture. Many classes have elegant GUI representations.

The library also includes classes which represent a variety of different controllers, including MIDI controllers, GUI Faders, EtherSense, etc., and provides support for controller automation (i.e automated mixing and diffusion).

It supports a number of common spatialisation techniques, such as Ambisonics, and includes SC ports of Ville Pullki's Vector Base Amplitude Panning (VBAP), and the Loris analysis resynthesis method. It also supports some idiosyncratic techniques, such as **Spatial Swarm Granulation (http://eprints.bham.ac.uk/237/1/cr1690.pdf)** , and provides utility classes for Speaker Array balancing and visualisation.

N.B. Currently the library is not fully cross-platform: GUI classes and UGens are OSX only.

De-Interleaver (http://www.download.bham.ac.uk/beast/De-Interleaver.zip)

A nice little Mac OSX app for interleaving mono audio files into a multichannel file, and splitting a multichannel file into separate mono ones. Supports arbitrary numbers of channels. Released under the GPL. Source available on request.

BEASTMulch SuperCollider UGens (http://www.download.bham.ac.uk/beast/BEASTmulchUGens.zip)

A collection of UGen plugins for **SuperCollider. (/facilities/beast/research/supercollider/index.aspx)** These are included with BEASTmulchLib, but also available as a separate download here. Contains:

Loris - A collection of classes and UGens supporting the **Loris Reassigned Bandwidth-Enhanced Additive Sound Model (http://www.cerlsoundgroup.org/Loris/)** for analysis-resynthesis within SC. Includes BEPartials, BEOsc, RBE_SDIF_File, and LorisPhaseGen.

PlayBufSendIndex - Like the regular version but sends the frame index as a /tr OSC message. Useful for making clocks, etc.

VBAP Classes - An implementation of Ville Pulkki's **Vector Base Amplitude Panning (http://www.acoustics.hut.fi/research/cat/vbap/)** for SC. Includes panner UGen and supporting classes.

CircleRamp - A wrapping linear lag UGen, similar to the normal Ramp. Useful for smoothing a control signal when VBAP panning around a ring, for instance.

PV_Decorrelate - Adds a different constant random phase offset scaled by the value of a scale argument to each bin. A trigger will select a new set of random phases. This is the same as PV_Diffuser but with the added scale factor. This version is adapted from techniques described in Kendall, G.S. 1995. "The decorrelation of audio signals and its impact on spatial imagery". Computer Music Journal 19(4): 71-87.

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