Work in Progress, SynthScript and SynthServer

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Abstract

SynthScript is an interchange format that will allow the exchange of Software based synthesis "programs" (Patches) and Scores between various platforms.

SynthServer is a portable reference server, implemented in C with object oriented Programming techniques, that is used to realize SynthScript Patches in either non-real Time, or in Real time on various Platforms.

Current work, potential applications, and future directions for SynthScript/SynthServer will be discussed.

The Music Kit and Sondius need a way to:

- Run on more platforms, including those without DSPs
- Run on more operating systems, including those that   aren't Nextstep/Openstep (WinX, MacOS, IRIX, etc.)

[Graphic slide of Music Kit expanding out into new domains]

Therefore, we've created:

- SynthServer Toolkit (tentative name)
- SynthServer
- SynthScript

[Slide of this list]

1. "SynthServer Toolkit" is a library of routines for doing real-time and non-real-time sound synthesis and processing under MIDI control, as well as MIDI processing. It is similar to the music Kit, but is stripped-down and written entirely in C, using a object-oriented paradigm. It does not provide the full feature set of the Music Kit, but it allowssuch a feature set to be built on top of it. It includes the complete set of SynthBuilder and MusicKit unitgenerators and note filters. It currently runs on Intel/Nextstep and SGI/IRIX. Ports to many other popular platforms are in progress.

2. "SynthServer" is a SynthServer Toolkit-based application. This program is a server for sound synthesis/processing and MIDI processing. In addition to taking a performance MIDI stream and taking/putting out sound streams, SynthServer takes a patch-description via a patch-description language called "SynthScript". This "patch" includes both a signal processing network (unitgenerators) and a MIDI processing network (notefilters).

3. SynthScript is an ASCII (or binary) representation in the form of a net list that describes instantiation of elements, connections between elements, ug/nf instance variable settings and dynamic bindings of ug/nf instance variables and note "parameters".   SynthBuilder automatically generates SS code.

[Slide of VERY simple SynthScript code... e.g. an osc and an out2sum with a couple of notefilters. Talk about it for no more than 2 minutes. First show the SB patch, then the SS code]

Demo of 2 different good-sounding patches on both SGI and NeXT/Intel.