phrase detection

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inspirations

band-in-a-box

turntable/samplers

what is a phrase?

not a phoneme, not a syllable, not even a word.

a sentence. or at least a signficant portion of a sentence.

for instance,

i am going

i am going to walk

i am going to walk my dog

i am going to walk my dog around the block

*i am okay with any of these variants of a "phrase" for now…
*the actual content of this definition changes drastically between genres/styles/people

how do we tell a computer to recognize these?

combination of:
-onset detection
+
-amplitude tracking (threshold, maximum rest time, minimum phrase length)

requires manual "coaxing" to achieve useful results

design choices

ability to produce interesting results

>

flexibility (applicability to "all" musical styles)

manual > automatic

advantages/disadvantages

- slow to process an entire file (has to be done in real-time) :(

+ however, this comes with the advantage of being able to process audio in real time (from a file currently being recorded) :)

+ can be used as a real-time, buffer-based audio effect :)

- user has to manually monitor settings :(

audio flow

load recording
record audio
monitor levels (onset pitch, onset amplitude, maximum rest, minimum length, amplitude threshold) while watching "onset detected" LED
write phrase data to text file
play back phrases with MIDI notes (0-127)

*because it is designed to be used manually, the results will be biased toward the users ear (what they think constitutes a phrase in the given context)

applications

-as a way to generate new material from recorded sounds (as an instrument in the way that a turntable is an instrument)
-as a live audio effect

examples:
clarinetCm
altofluteCm
bass
avm
mazurka
clownmusicbox

live demo: djt