This is Roger's score following algorithm :)

My submission is not likely to win any awards, and is included primarily to find out how far its performance lags behind the current state of the art. The score follower and pitch tracker are the ones used in the Pd Repertory Project (PDRP). The score following algorithm works at the note level, not directly on the signal. It is a slight generalization of the original dynamic programming algorithm shown by Dannenberg in 1984.

The PDRP system has many parameters that may be tweaked one way or another depending on the instrument and the style of writing. Here one particular tweak was used: I decided to see how low I could possibly get the latency, liberally trading off accuracy and/or robustness. The pitch tracker (the new sigmund~ object) is given a window size of only 512 samples (11 msec at 44K1 sample rate). The lowest pitch that can be reasonably matched is about MIDI 52 or 53. Of the example scores provided here, the flute should work fine, the violin and clarinet at least OK, and the guitar, badly (its lowest pitch, 40, is an octave too low to track at this window size!)

Notes are reported if the pitch is stable for 30 msec. Tto make things more reactive, the next expected note may be reported even before the note stabilizes; this can theoretically happen even before the note is 10 msec old (although on average the latency seems to be about 15.)