Mullein User Guide

July 13, 2009

1 Introduction

1.1 What is Mullein?

Mullein is set of modules for music description language written in Haskell. Mullein is primarily inspired by Paul Hudak's Haskore system, but Mullein has a different objective to Haskore: Mullein describes musical structures for rendering as printed scores; Haskore describes musical structures for *performance*, where a perfomance is typically rendered to a sound file.

Ideally Mullein would not be a separate system to Haskore, but an extension allowing Haskore to generate scores as well as performances. Unfortunately Haskore with its emphasis on performance is not well suited to describing scores. Valuable musical information for score printing is not readily available in Haskore. The most obvious example is duration - Haskore records note durations as absolute values, in printed scores durations are symbolic (a quarter note always has the same symbolic duration $\frac{1}{8}$ regardless of the tempo of the music). While is easy to recover note durations from simple Haskore performances it is very difficult to recover durations in if a score has trills or other ornaments.

An early prototype of Mullein tried to alleviate this problem by allowing Haskore performances to be augmented with rewriting rules to recover symbolic durations from absolute ones. But the additional machinary was excessive and hardly intuitive, strongly suggesting that abandoning compatibility with Haskore was best option for Mullein.

2 section b

unit note length
    pitch relative to scale

3 section c

Duration - where consecutive notes share the same duration, only the first duration needs to be specified.