RHYTHMOS: An Interactive System for Exploring Notated Musical Rhythm

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June 2, 2005

Abstract

RHYTHMOS is an interactive software system designed as a tool for the analysis, exploration, and composition of musical notated (symbolic) rhythms. It has a graphical user interface (GUI) that allows the user to enter, view and analyze rhythms in a wide variety of geometric representations [2]. Its sound system allows the user to hear the rhythms at different tempos. More than one rhythm may be heard, and the timbre of the sounds can be made different for the different rhythms. One key innovative feature of the system is the ability to see both the rhythm represented as a cyclic necklace on the circle of time, and the full-intervallic content (histogram) of all the inter-onset durations [5]. This allows the user to dynamically control the shape of the histogram and to listen to the resulting shape. The system contains a library of different rhythmic distance (similarity) measures [4] that may be computed to obtain a distance matrix for a family of rhythms selected from its library. Given the distance matrix of a selected family of rhythms, the system allows the user to perform a phylogenetic analysis of the family using the program SplitsTree [3], [1]. In this presentation we will demonstrate RHYTHMOS in action.

References

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^{*}This research was supported by NSERC. e-mail: godfried@cs.mcgill.ca