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Application Paper (Non-Technical Paper)

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An algebraic representation of Labanotation for retrieval and other operations

Abstract

Widely used computer applications for Labanotation do not contain search facilities although Labanotation teachers and researchers have long been awaiting a software application with a retrieval feature. Prospective users usually describe the requirements of such software only in an intuitive manner, expecting the software to have some semantic knowledge.

The requirements have to be defined in a precise and formal way: a) 'what' functions the software should and should not have (on the users' side), and b) 'how' to perform search operations (on the developers' side). To obtain the most effective results, it can also be helpful for the user to understand what is happening "behind the scenes" during a search.

The paper will define equalities for Laban kinetograms on graphic, syntactic and semantic levels, and similar pattern matchings on Labanotation to clarify various concepts for searches. Additionally, it will suggest using other operations on kinetograms.

The paper will show an algebraic representation of Labanotation that is suitable for operations on a level that is higher than the graphic level and closest to the syntactic level. (Handling the semantic level will be reachable by applying certain notation conventions or performing complex queries on the simple representation.) Some advantages and disadvantages of this data representation will be discussed. The paper will suggest solutions for some of these problems.

The concepts defined in the paper have been tried in practice. A software application named 'Labanatory', which works with the above concepts, was used successfully in the analysis of three traditional Hungarian male dance scores.

Projector for a notebook (PC/Windows compatible) is requested.