Abstract

Sheet music designed for pitched instruments does not translate well to drum music. Our prototype drum set music notation is designed to allow efficient display of information and easy interpretation especially by novice learners. The notation maps the instruments in the drum set horizontally to match the usual location in the drum set, and adds easily distinguishable icons that visually resemble the instrument. Sections with identical music are consolidated and marked in a timeline for the musician to follow.

Prototype

The music is read top to bottom, in order to allow a horizontal layout of instruments matching the usual drum set.

The timeline shows the overall flow of the musical piece, with sections that are called out to give details of the instruments to play.

Horizontal lines show the timing, with a thick line separating each bar, and a thin line for each beat.

Compare prototype (above) to traditional notation (right).

Demo: A webpage with print and import-export functionality, built using html/css/js.

Background

“an examination of the published resource materials and performance literature reveals that composers, arrangers, editors, authors and educators often embrace different views on the subject [of percussion notation]” (Weinberg 1994)

Design Notes

An ideal notation system would be easy to learn and to follow by sight while playing music, unambiguous, can be used on paper or on screen.

We came upon a few key insights during our designing and testing of the notation: Drum music is often very repetitive, and so can be easily broken into repeating sections. Learning a new drum groove often involves understanding the rhythm from the sheet and keeping track of changes in the pattern. Icons for each instrument needed to be designed so they were easy to distinguish while being glanced over but also visually relatable to the instruments (most of which were circular).

Evaluation

The players were asked to perform specific grooves with both positional and traditional notation (with the order counterbalanced). We recorded how many repetitions each subject took before performing the groove successfully.

Sample Size: 8 (6 without musical experience)

Conclusion

Flaws were undeniably found in the current notation for drums. Positional Drum Notation could be a viable path to solve them. More quantitative feedback is needed to gauge effectiveness, though initial experiments provide encouraging results.

Next Steps

- Expand experimentation base to get more reliable results
- Develop writing software further
- Explore teaching method based on notation
- Develop transition strategy from current notation